

PDIG Final Report

Don't Give Up on Grammar

Project Goals and Project Description

Our project goal was to develop an effective Grade 6 ESL grammar/ vocabulary toolkit. We wanted to develop grammar and vocabulary exercises based on Grade 6 content areas as opposed to traditional grammar and vocabulary exercises taught out of context. The overall goal was to improve student writing.

Based on writing samples of our Grade 6 students, along with the Ministry's Progression of Written Language Competencies, we created a bookmark listing the targeted skills. This bookmark was to be the framework for the evaluation rubric.

We developed grammar and vocabulary exercises for the following science topics: matter, energy, forces in motion, Earth and space, and biometrics. Our original plan was to develop similar exercises for GHC and LA, however given time constraints we soon realized that we had been somewhat overzealous in our intentions.

Project Outcomes

In the five days that we worked on our project we developed a science-based toolkit. The toolkit consists of a variety of carefully chosen, context-based grammar and vocabulary exercises, as well as a compilation of grammar and spelling rules to be used by students as daily reference. We were pleased to learn that it is possible to develop a language arts toolkit directly related to the science curriculum resulting in more pertinent grammar and vocabulary.

Reinvestment

Our Grade 6 toolkit could be useful and implemented by any Grade 6 science teacher using the *Science-Tech: Science and Technology* textbook and science program. We believe the toolkit could be equally useful for students and teachers following the Quebec curriculum no matter what texts they are using.

Please see attached for supporting documents.

Vocabulary

Synonyms:

Antonyms:

Homonyms:

Prefixes:

Suffixes:

Contractions:

Compound Words:

Figurative Language:

Sentences

Incomplete:

Types:

Subjects/Predicates:

Compound:

Run-On:

Expanding:

Grammar

Nouns:

Singular/Plural:

Possessive:

Apostrophes:

Verb Tenses:

Irregular Verbs:

Pronouns:

Adjectives:

Adverbs:

Prepositions:

Conjunctions:

Interjections:

Capitalization/Punctuation

Capitalization:

Punctuation:

Commas:

Quotation Marks:

Colons/Hyphens:

Paragraph Writing/Organizers

Topic Sentences:

Supporting Details:

Sequencing:

Transitioning:

Spelling

Rules:

Spelling and grammar rules

A **synonym** is a word that has the same or nearly the same meaning as one or more other words.

Examples: joy – happiness; choose – pick

An **antonym** is a word that has the opposite meaning of another word.

Examples: hot – cold; late – early

A **homonym** is a word that sounds the same as another word but has a different spelling and a different meaning.

Examples: to – two; sum – some

A **prefix** added to the beginning of a root word changes the meaning of the word.

Examples: un (meaning “not”) + root word done = undone (meaning *not done*)

Some prefixes have one meaning, and others have more than one meaning.

Examples:	prefix	meaning
	im-, in-, non-, -un-	not
	dis-, in-, non-	opposite of, lack of, not
	mis-	bad, badly, wrong, wrongly
	pre-	before
	re-	again

A **suffix** added to the end of a root word changes the meaning of the word.

Examples: -ful (meaning "full of") + root word joy = joyful (meaning *full of joy*)

Some suffixes have one meaning, and others have more than one meaning.

Examples:	suffix	meaning
	-able	able to be, suitable or inclined to
	-al	relating to, like

-ful	as much as will fill, full of
-less	without, that does not
-ous	full of
-y	having, full of

A **contraction** is a word formed by joining two other words using an apostrophe.

An **apostrophe** shows where a letter or letters have been left out in order to form that word.

Example: do not = don't

will not = won't*

A compound word is a word that is made up of two or more words. The meaning of a compound word is related to the meaning of each individual word.

Example: sun + glasses = sunglasses, meaning "glasses to wear in the sun"

Note: Compound words may be written as one word, as hyphenated words, or as two separate words.

Examples: highway (one word) out-patient (hyphenated word) high school (two words)

A **declarative** sentence makes a statement that communicates information or ideas. Use a period at the end of a declarative sentence (.)

Examples: It is warm today.

I like volleyball, but basketball is my favourite sport.

An **imperative** sentence gives a command or makes a request. Use a period at the end of an imperative sentence (.)

Examples: Close the door.

Wait for the traffic light to change before you cross the street.

An **exclamatory** sentence expresses any strong emotion, or a strong and sudden feeling. Use an exclamation point at the end of an exclamatory sentence (!)

Examples: Our boat is sinking!

You're dripping paint everywhere!

An **interrogative** sentence asks a question. Use a question mark at the end of an interrogative sentence (?)

Examples: Are you sure you remembered to lock the front door?

You're going on vacation next week, aren't you?

The **complete subject** contains all the words in a sentence that tell who or what the sentence is about.

Example: **A brown squirrel** ran along the fence.

The house with the green roof burned down last week.

The **simple subject** contains the main word in a sentence that tells who or what the sentence is about.

Example: A brown **squirrel** ran along the fence.

The **house** with the green roof burned down last week.

A **compound subject** has two or more simple subjects. All the simple subjects have the same predicate.

Example: My best **friend** and my **sister** attended my piano recital.

The **complete predicate** includes the verb and all the words that tell about what happened in the sentence.

Example: Fluffy clouds **drifted across the sky**.

The **simple predicate** is the verb that tells what the subject is doing in the sentence.

Example: Fluffy clouds **drifted** across the sky.

Note: The simple predicate also includes any helping verbs that are used in the main verb that tells what the subject is doing.

Example: My aunt and uncle will be going to Cuba in the winter.

A **compound predicate** has two or more simple predicates. All the simple predicates have the same subject.

Example: The audience **clapped and cheered after the performance**.

A **compound sentence** is made up of two shorter sentences which are joined by a joining word such as and, but, or so. There is a comma before the joining words.

Example: The clouds disappeared, and sun shone brightly.

The tomatoes are ready to pick, but the grapes aren't ripe yet.

A **run-on sentence** is when two or more sentences run together without the correct punctuation.

An **expanded sentence** is a sentence where details have been added to make it clearer and more interesting.

Example: The child waved. The child *in the blue hat* waved *timidly to me*.

A **noun** is a word that names a person, place, thing, or quality.

Example: girl, forest, car, kindness

*A **common noun** is a word that names a person, place, thing, or quality that is not specific.

Example: month

city

person

queen

car

*A **proper noun** is a word that names a specific person, place, or thing.

Example: September

Montreal

Mr. Smith

Queen Elizabeth

Tesla

Rules for **plural nouns**:

- Add **-s** to most nouns. Example *dog/ dogs; toy/ toys*
- Some nouns ending in **f or fe**, change -f to **-ves**: *life/ lives; wolf/ wolves; leaf/ leaves*
- Add **-es** to nouns ending in **-ch, -sh, -s, or -x**. Example *bus/ buses; lunch/ lunches*
- A noun ending in a **consonant and a y**: change the **y** to **i** and add **es**. Example: *city/ cities*
- Nouns ending in **eo, io, oo, uo** – add **s (a vowel and an o, add s)**. Example: *radio/ radios*
- Some nouns ending in a **consonant and an o**, add **es**. Example: *potato/ potatoes*.

Some nouns ending in a **consonant and an o**, add **s**. Example: *piano/ pianos*.

- Some nouns have **irregular plural forms**: *child/ children; woman/ women; ox/ oxen*
- Some nouns have the **same form for singular and plural**: *deer/ deer; trout/ trout*

A **possessive noun** shows possession of the noun that follows.

Example for a singular noun, add **'s** : *the cat's tail; James's book*

Example for a plural noun ending in s, add **'** : *her sisters' names; the Smiths' home*

An **appositive** is a noun or phrase that identifies or explains the noun it follows.

Example: When Henry, **our uncle**, came to visit, we had lots of fun.

A **verb** is a word that expresses action, being, or state of being.

- An **action verb** identifies the action that someone or something is doing

Example: The hungry cat **pounced** on the mouse.

Huge waves **crash** against the rocks.

- A **linking verb** does not show action, but it links the subject with information in the predicate.

Example: The sky **was** grey.

Fred **seems** happy with his new computer.

Vanessa **is** my cousin.

Subject + linking verb + (an adjective that describes the subject)

Subject + linking verb + (a noun that is another name for the subject)

- A **verb phrase** consists of a main verb and one or more other verbs.

Example: The children **are singing**.

Where **have** you **been**?

- The last word in a verb phrase is the main verb. The other word or words are **helping verbs**.

	helping verb	main verb
	↓	↓
Examples: Beth and Jon	were	sitting on the bench.
Apples	are	displayed by the produce manager.
Bill	should have	taken the bus.
The grass	has been	growing very quickly.

A **possessive pronoun** is a pronoun that shows ownership of something.

- The possessive pronouns hers, mine, ours, theirs, and yours stand alone.

Examples: The coat is **mine**. The shoes are **yours**.

- The possessive pronouns her, its, my, our, their, and your must be used before nouns.

Examples: **Her** car is red. **Our** cat is black.

- The pronoun his may be used either way.

Example: That is **his** dog. The dog is **his**.

An **indefinite pronoun** is a pronoun that does not refer to a specific person or thing.

Examples: **Someone** is coming to speak to the group.

Does **anyone** know what time it is?

Everybody is looking forward to the trip.

Some indefinite pronouns are negative.

Examples: **Nobody** has a ticket.

No one was waiting at the bus stop.

Singular indefinite pronouns that take singular verbs: anybody, anyone, anything, each, everyone, everybody, everything, nobody, no one, nothing, somebody, someone, something.

Example: **Everyone is** ready.

Plural indefinite pronouns that take plural verbs: both, few, many, several, and some.

Example: **Several** of us **are** ready.

A **subject pronoun** is used as the subject or as part of the subject of a sentence.

Subject pronouns are I, you, he, she, it, we, and they.

Example: **It** has beautiful wings.

When the pronoun I is used with nouns or other pronouns, it is always last.

Example: Marie and **I** caught a butterfly.

An **object pronoun** is used after an action verb or a preposition such as *after, against, at, between, except, for, from, in, of, to, and with*.

Object pronouns are me, you, him, her, it, us, and them.

Example: The gift was for **him**.

When the pronoun me is used with nouns or other pronouns, it is always last.

Example: The books were for Kay and **me**.

Using **Who/Whom**:

- Use who as a subject pronoun.

Example: **Who** came to the party?

- Use whom as an object pronoun.

Example: **Whom** did the nurse help? (The nurse did help **whom**?)

To **whom** did you wish to speak? (You wished to speak to **whom**?)

An **adjective** is a word that describes a noun or a pronoun.

Example: The sky is spotted with **white** clouds.

- Adjectives usually tell *what kind, which one, or how many*.

Examples: *white* roses, *that* mitten, *fifteen* cents.

- The articles a, an, and the are called limiting adjectives.

Use a before words beginning with a consonant sound.

Examples: a trumpet, a mountain, a sail.

Use an before words beginning with a vowel sound.

Example: an oboe, an island, an hour.

A **proper adjective** is an adjective formed from a proper noun. It always begins with a capital letter.

Examples:	Proper Noun	Proper Adjective
	Poland	Polish
	Germany	German
	Paris	Parisian

A **demonstrative adjective** is an adjective that points out a specific person or thing.

- This and that describe singular nouns. This points to a person or thing nearby. That points to a person or thing farther away.

Examples: This room is my favourite. That man is running very fast.

- These and those describe plural nouns. These points to persons or things nearby. Those points to persons or things farther away.

Examples: These women are the best players. Those houses need painting.

- The word them is a pronoun. Never use it to describe a noun.

Comparing with adjectives:

Positive	Comparative	Superlative
(simple form)	(when two people or things are being compared)	(when three or more people are being compared)
Adjectives of one syllable (usually)	(add -er)	(add -est)

Anita is **tall**.

Anita is **taller** than Sarah.

Anita is the **tallest** in the group.

Adjectives ending in -y

Change the **y** to **i** and add **-er**.

Change the **y** to **i** and add **-est**.

This gem is **tiny**.

This gem is **tinier** than that one.

This gem is the **tiniest** of all of them.

Some two syllable adjectives and all adjectives of three syllables or more

(use **more + adjective**)

(use **most + adjective**)

I am **energetic**.

I am **more** energetic than Fred.

I am the **most** energetic one here.

(use **less + adjective**)

(use **least + adjective**)

I am **less** energetic than Fred.

I am the **least** energetic one here.

An **adverb** is a word that describes a verb, an adjective, or another adverb.

Examples: The parade moved **slowly**.

Your tie is **very** colourful.

You did this **too** quickly.

- An adverb usually tells *how, when, where, or how often*.
- Many adverbs end in -ly

Comparing with adverbs:

Positive

(simple form)

Adverbs of one syllable
(usually)

Anita worked **hard**.

Longer adverbs and
adverbs that end in -ly

I danced **gracefully**.

Comparative

(when two people or things are
being compared)

(add **-er**)

Anita worked **harder** than
Sarah.

(use **more + adverb**)

I danced **more** gracefully than
Fred.

(use **less + adjective**)

I danced **less** gracefully than
Fred.

Superlative

(when three or more people
are being compared)

(add **-est**)

Anita worked **hardest** of all.

(use **most + adjective**)

I danced **the most** gracefully
of all.

(use **least + adjective**)

I danced **the least** gracefully
of all.

A **preposition** is a word that shows the relationship of a noun or a pronoun to another word in the sentence.

Examples: Put the package **on** the desk.

Place the package **in** the desk.

- These are some commonly used prepositions:

about against at between from of through under
above among behind by in on to upon
across around beside for into over toward with

A **conjunction** is a word used to join words or groups of words.

Examples: Sally **and** Barb worked late. We worked **until** he arrived.

- These are some commonly used conjunctions:

although because however or that until whether
and but if since though when while
as for nor than unless whereas as yet

- Some conjunctions are used in pairs. These include:

Either...or. Example: We **either** take the bus **or** call a taxi.

Neither...nor. Example: I **neither** want to take the bus **nor** call a taxi. I'd rather
walk.

Not only...but also. Example: **Not only** should we leave early, **but** we should **also** call
to make reservations.

An **interjection** is a word or a group of words that expresses emotion.

Examples: **Yay!** Our team won the tournament. (An exclamation mark after the interjection shows sudden or strong feeling.)

Oh, I guess our team didn't do as well as we hoped. (A comma after the interjection shows mild emotion.)

- These are some commonly used interjections:

Ah	good grief	oh	ugh
Aha	great	oops	well
Alas	hurrah	sh	whew

Capitalize:

- the **first word of a sentence**: Let's walk to the park.
- the **first word of a quotation**: Joseph said, "It's time for lunch."

- the **first word of every line of poetry**: The strong winds whipped

The sails of the ship

- The **first, last, and all important words** in the titles of books, poems, songs, and stories:

*The **G**irl with the **D**ragon **T**attoo "**H**appy **B**irthday to **Y**ou"*

- all **proper nouns**: **A**melie, **L** Laurentia **E**lementary, **A**rctic **O**cean
- all **proper adjectives**: the **S**panish language, **C**anadian sports
- a **person's title** when it comes before a name: **J**udge Anne Smith, **R**everend Wilson
- **abbreviations** of titles: **D**r. Lalonde, **M**s. Cynthia
- abbreviations of days and months, titles of members of the military, letters in postal codes, and abbreviations for provinces:

Tues., Apr. 17 457 Fillion, Qc, Gen. Dallaire Yellowknife, NWT

Using End Punctuation

Use a **period** at the end of a **declarative** sentence.

Use a **period** or an **exclamation mark** at the end of an **imperative**.

Use a **question mark** at the end of an **interrogative**.

Use an **exclamation** point after some **interjections**.

Commas

Use a comma:

- **between words or groups of words in a series.**

Example: Be sure your business letter is brief, courteous, and correct.

- **before a conjunction in a compound sentence.**

Example: Neil sketched the cartoon, and Amy wrote the caption.

- **to set off a quotation from the rest of the sentence.**

Example: Mom said, "We must get up early."

"We must get up early," Mom said.

- to **set off the name of a person who is being addressed.**

Example: Philippe, did you find the answer to your question?

- to **set off words** like yes, no, well, and oh **at the beginning of a sentence.**

Example: No, I haven't seen Jack today.

- to **set off an appositive.**

Example: Jack, Nora's brother, is going to university next fall.

Using Quotation Marks

Use **quotation marks** to show the *exact words of the speaker*. Use a comma or another punctuation mark to separate the quotation from the rest of the sentence.

Examples: "Do you have a book on submarines?" asked Tom. (quotation at beginning)

James said, "It's right here." (quotation at end of sentence)

“Alicia,” asked Sam, “have you read this novel?” (quotation divided)

Using Apostrophes

Use an apostrophe:

- in a **contraction** to show where a letter or letters have been taken out.

Examples: Amelia **didn't** answer the phone. (did not) **I've** found my wallet. (I have)

- to form a possessive noun (see p.6 for details)

Using Colons and Hyphens

Use a **colon**:

- after the greeting in a **business letter**.

Example: Dear Sir: Dear Ms. Franklin:

- between the hour and minute when writing time.

Examples: 2:00 p.m. 7:45 a.m. 17:50

- to **introduce a list**, after a noun only

Example: The following items were stolen from his locker: wallet, car keys, and laptop.

(After a verb or a preposition, use a comma. Example: Missing from his locker were his wallet, car keys, and laptop)

Use a **hyphen**:

- between parts of **some compound** words

Example: thirty-six, brother-in-law, well-known

- To **separate the syllables** of a word that is carried over from one line to the next

Example: After eating dinner, we watched a tele-

vision show about tornadoes.

Topic Sentences:

A **topic sentence** is the sentence within a paragraph that **states the main idea**. It is often placed at the beginning of a paragraph.

Example: *There are many things to consider when caring for a pet goldfish.*

Supporting Details:

The idea expressed in a topic sentence can be developed with sentences containing supporting details which include facts, examples and reasons.

Example: *A pet goldfish needs clean water. A pump should be placed in the water to supply fresh air. The water temperature must be constant, and it must not go below 27° C(80° F). The goldfish should be fed flaked fish food or small insects.*

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Examples: un (meaning “not”) + root word done = undone (meaning *not done*)

Some prefixes have one meaning, and others have more than one meaning.

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The complete predicate includes the verb and all the words that tell about what happened in the sentence.

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The simple predicate is the verb that tells what the subject is doing in the sentence.

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A noun is a word that names a person, place, thing, or quality.

Example: girl, forest, car, kindness

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Example: month

city

person

queen

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***A proper noun is a word that names a specific person, place, or thing.**

Example: September

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Mr. Smith

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- Add –es to nouns ending in –ch, -sh, -s, or –x. Example *bus/ buses; lunch/ lunches*
- A noun ending in a consonant and a y: change the y to i and add es. Example: *city/ cities*
- Nouns ending in eo, io, oo, uo – add s (a vowel and an o, add s). Example: *radio/ radios*
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Some nouns ending in a consonant and an o, add s. Example: *piano/ pianos.*

- Some nouns have irregular plural forms: *child/ children; woman/ women; ox/ oxen*
- Some nouns have the same form for singular and plural: *deer/ deer; trout/ trout*

A possessive noun shows possession of the noun that follows.

Example for a singular noun, add 's : *the cat's tail; James's book*

Example for a plural noun ending in s, add ' : *her sisters' names; the Smiths' home*

An appositive is a noun or phrase that identifies or explains the noun it follows.

Example: When Henry, our uncle, came to visit, we had lots of fun.

A verb is a word that expresses action, being, or state of being.

- **An action verb identifies the action that someone or something is doing**

Example: The hungry cat pounced on the mouse.

Huge waves crash against the rocks.

- **A linking verb does not show action, but it links the subject with information in the predicate.**

Example: The sky was grey.

Fred seems happy with his new computer.

Vanessa is my cousin.

Subject + linking verb + (an adjective that describes the subject)

Subject + linking verb + (a noun that is another name for the subject)

- **A verb phrase consists of a main verb and one or more other verbs.**

Example: The children are singing.

Where have you been?

- **The last word in a verb phrase is the main verb. The other word or words are helping verbs.**

	helping verb	main verb
	↓	↓
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Plural indefinite pronouns that take plural verbs: both, few, many, several, and some.

Example: Several of us are ready.

A subject pronoun is used as the subject or as part of the subject of a sentence.

Subject pronouns are I, you, he, she, it, we, and they.

Example: It has beautiful wings.

When the pronoun I is used with nouns or other pronouns, it is always last.

Example: Marie and I caught a butterfly.

An object pronoun is used after an action verb or a preposition such as *after*, *against*, *at*, *between*, *except*, *for*, *from*, *in*, *of*, *to*, and *with*.

Object pronouns are me, you, him, her, it, us, and them.

Example: The gift was for him.

When the pronoun me is used with nouns or other pronouns, it is always last.

Example: The books were for Kay and me.

Using *Who/Whom*:

- Use who as a subject pronoun.

Example: Who came to the party?

- Use whom as an object pronoun.

Example: Whom did the nurse help? (The nurse did help whom?)

To whom did you wish to speak? (You wished to speak to whom?)

An adjective is a word that describes a noun or a pronoun.

Example: The sky is spotted with white clouds.

- Adjectives usually tell *what kind, which one, or how many*.

Examples: *white* roses, *that* mitten, *fifteen* cents.

- The articles a, an, and the are called limiting adjectives.

Use a before words beginning with a consonant sound.

Examples: a trumpet, a mountain, a sail.

Use an before words beginning with a vowel sound.

Example: an oboe, an island, an hour.

A proper adjective is an adjective formed from a proper noun. It always begins with a capital letter.

Examples:	Proper Noun	Proper Adjective
	Poland	Polish
	Germany	German
	Paris	Parisian

A demonstrative adjective is an adjective that points out a specific person or thing.

- This and that describe singular nouns. This points to a person or thing nearby. That points to a person or thing farther away.

Examples: This room is my favourite. That man is running very fast.

- These and those describe plural nouns. These points to persons or things nearby. Those points to persons or things farther away.

Examples: These women are the best players. Those houses need painting.

- The word them is a pronoun. Never use it to describe a noun.

Comparing with adjectives:

Positive

Comparative

Superlative

(simple form)

(when two people or things are being compared)

(when three or more people are being compared)

Adjectives of one syllable (usually)

(add -er)

(add -est)

Anita is tall.

Anita is taller than Sarah.

Anita is the tallest in the group.

Adjectives ending in -y

Change the y to i and add -er.

Change the y to i and add -est.

This gem is tiny.

This gem is tinier than that one.

This gem is the tiniest of all of them.

**Some two syllable adjectives
and all adjectives of three
syllables or more**

(use more + adjective)

(use most + adjective)

I am energetic.

**I am more energetic
than Fred.**

**I am the most
energetic one here.**

(use less + adjective)

(use least + adjective)

**I am less energetic than
Fred.**

**I am the least
energetic one here.**

An adverb is a word that describes a verb, an adjective, or another adverb.

Examples: The parade moved slowly.

Your tie is very colourful.

You did this too quickly.

- **An adverb usually tells *how, when, where, or how often*.**
- **Many adverbs end in -ly**

Comparing with adverbs:

Positive

(simple form)

Comparative

**(when two people or
things are being
compared)**

Superlative

**(when three or more
people are being
compared)**

Adverbs of one syllable (usually) (add -er)

(add -est)

Anita worked hard.

Anita worked harder than Sarah.

Anita worked hardest of all.

Longer adverbs and adverbs that end in -ly

(use more + adverb)

(use most + adjective)

I danced gracefully.

I danced more gracefully than Fred.

I danced the most gracefully of all.

(use less + adjective)

(use least + adjective)

I danced less gracefully than Fred.

I danced the least gracefully of all.

A preposition is a word that shows the relationship of a noun or a pronoun to another word in the sentence.

Examples: Put the package on the desk.

Place the package in the desk.

- **These are some commonly used prepositions:**

about under	against	at	between	from	of	through
above upon	among	behind	by	in	on	to
across with	around	beside	for	into	over	toward

A conjunction is a word used to join words or groups of words.

Examples: Sally and Barb worked late. We worked until he arrived.

- **These are some commonly used conjunctions:**

although whether	because	however	or	that	until	
and while	but	if	since	though	when	
as yet	for	nor	than	unless	whereas	as

- **Some conjunctions are used in pairs. These include:**

Either...or. Example: We either take the bus or call a taxi.

Neither...nor. Example: I neither want to take the bus nor call a taxi. I'd rather walk.

Not only...but also. Example: Not only should we leave early, but we should also call to make reservations.

An interjection is a word or a group of words that expresses emotion.

Examples: Yay! Our team won the tournament. (An exclamation mark after the interjection

shows sudden or strong feeling.)

Oh, I guess our team didn't do as well as we hoped. (A comma after the interjection

shows mild emotion.)

- **These are some commonly used interjections:**

Ah	good grief	oh	ugh
Aha	great	oops	well
Alas	hurrah	sh	whew

Capitalize:

- the first word of a sentence: Let's walk to the park.
- the first word of a quotation: Joseph said, "It's time for lunch."
- the first word of every line of poetry: The strong winds whipped
The sails of the ship
- The first, last, and all important words in the titles of books, poems, songs, and stories:

The Girl with the Dragon Tattoo "Happy Birthday to You"

- all proper nouns: Amelie, Laurentia Elementary, Arctic Ocean
- all proper adjectives: the Spanish language, Canadian sports
- a person's title when it comes before a name: Judge Anne Smith, Reverend Wilson
- abbreviations of titles: Dr. Lalonde, Ms. Cynthia
- abbreviations of days and months, titles of members of the military, letters in postal codes, and abbreviations for provinces:

Tues., Apr. 17 457 Fillion, Qc, Gen. Dallaire Yellowknife, NWT

Using End Punctuation

Use a period at the end of a declarative sentence.

Use a period or an exclamation mark at the end of an imperative.

Use a question mark at the end of an interrogative.

Use an exclamation point after some interjections.

Commas

Use a comma:

- between words or groups of words in a series.

Example: Be sure your business letter is brief, courteous, and correct.

- before a conjunction in a compound sentence.

Example: Neil sketched the cartoon, and Amy wrote the caption.

- to set off a quotation from the rest of the sentence.

Example: Mom said, "We must get up early."

"We must get up early," Mom said.

- to set off the name of a person who is being addressed.

Example: Philippe, did you find the answer to your question?

- to set off words like yes, no, well, and oh at the beginning of a sentence.

Example: No, I haven't seen Jack today.

- to set off an appositive.

Example: Jack, Nora's brother, is going to university next fall.

Using Quotation Marks

Use quotation marks to show the *exact words of the speaker*. Use a comma or another punctuation mark to separate the quotation from the rest of the sentence.

Examples: "Do you have a book on submarines?" asked Tom. (quotation at beginning)

James said, "It's right here." (quotation at end of sentence)

"Alicia," asked Sam, "have you read this novel?" (quotation divided)

Using Apostrophes

Use an apostrophe:

- in a contraction to show where a letter or letters have been taken out.

Examples: Amelia didn't answer the phone. (did not) I've found my wallet. (I have)

- to form a possessive noun (see p.6 for details)

Using Colons and Hyphens

Use a colon:

- after the greeting in a business letter.

Example: Dear Sir: Dear Ms. Franklin:

- between the hour and minute when writing time.

Examples: 2:00 p.m. 7:45 a.m. 17:50

- to introduce a list, after a noun only

Example: The following items were stolen from his locker: wallet, car keys, and laptop.

(After a verb or a preposition, use a comma. Example: Missing from his locker were his wallet, car keys, and laptop)

Use a hyphen:

- between parts of some compound words

Example: thirty-six, brother-in-law, well-known

- To separate the syllables of a word that is carried over from one line to the next

Example: After eating dinner, we watched a tele-

vision show about tornadoes.

Topic Sentences:

A topic sentence is the sentence within a paragraph that states the main idea. It is often placed at the beginning of a paragraph.

Example: *There are many things to consider when caring for a pet goldfish.*

Supporting Details:

The idea expressed in a topic sentence can be developed with sentences containing supporting details which include facts, examples and reasons.

Example: *A pet goldfish needs clean water. A pump should be placed in the water to supply fresh air. The water temperature must be constant, and it must not go below 27° C(80° F). The goldfish should be fed flaked fish food or small insects.*

(Science - Tech - Matter - Theme 1/2)

Vocabulary

Vocabulary:

solution, solute, solvent, solubility, combustion, fuel, oxidant, chemical change, electric circuit, current source, open and closed circuit, voltages, volts, magnetite, gravity, force, equilibrium, nuclear energy, centripetal force, properties of matter, classify, absorption, mass, gravitational force, mixture, solid, liquid, gas, chemical changes, combustion, energy sources, components of a simple electric circuit, attraction, repulsion,

Which answer does not belong?

1. How can you classify objects?
color, shape, size, real, texture, smell
2. Which materials are absorbent?
paper, sand, sponge, paper towel
3. How can we describe a substance?
weight, color, texture, shape, solubility
4. Which of these substances are not soluble in water?
pepper, jello powder, hot chocolate crystals, sugar
5. What are the states of matter?
liquid, solid, gas, air
6. What can change the properties of matter?
Combustion, erosion, water, oxidation,
7. What are different forms of energy?
heat, sound, water, nuclear, chemical
8. What are the components of a simple electric circuit?
battery, wire, light bulb, switch, source
9. What involves the force of friction?
Rolling an object, sliding an object, playing with a yo-yo, pushing an object
10. What are measuring instruments?
ruler, basket, balance, thermometer, chronometer

Think-Pair-Share

1. List many physical properties of an object, a substance or a material.
2. List as many mixtures in your environment.
3. List as many substances that are soluble in water.
4. List matter that can be changed by chemical changes.

5. List different forms of energy.
6. List electrical conductors.
7. List electrical insulators.
8. List ways we can conserve energy.
9. List ways we use magnets.
10. List examples of when we use force.

(Topics Writing- electricity, magnets, energy, mixtures, fire, circuits, free falling)

Although I already knew that _____, I have learned some new facts about _____. For example, I learned that _____. I also learned that _____. Another fact I learned is _____. However, the most interesting thing I learned was _____.

Make a check if the definition is correct

1.

magnetic pole	either of the two points of a magnet where the lines of magnetic force meet and are strongest.
----------------------	--

2.

combustion	the act or process of combining solids with liquids
-------------------	---

3.

saturate	to use friction in pulling or pushing
-----------------	---------------------------------------

4.

fuel	anything such as wood or gasoline that is burned as a source of energy
-------------	--

4.

circuit breaker	a switch or other device that automatically breaks an electric circuit when too much electricity flows through it.
------------------------	--

6.

electromagnet	an iron or steel core with wire wound around it. It becomes magnetic when an electric current is passed through the wire.
----------------------	---

5.

compass	an instrument for showing temperature of heat
----------------	---

8.

equilibrium	a state of balance between two or more forces
--------------------	---

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9.

<u>atmosphere</u>	the gases inside the earth
-------------------	----------------------------

10.

<u>uranium</u>	a heavy, silver-white radioactive metal that is used to produce nuclear energy.
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What type of energy are we talking about?(light, sound, kinetic, electrical, chemical)

Let us consider the following energy transformations that we encounter on daily basis in our everyday activities.

- When we turn on our flashlight, _____ energy stored in the batteries is converted into _____ energy.
- When we turn on the television, _____ energy changes into _____ and _____. Even though undesirable, some amount of heat is also produced.
- When we move a vehicle, the engine converts the _____ energy stored in the fuel into _____, _____ and kinetic energy.
- When we talk on the telephone, the sound we produce is first transformed into _____ energy by the microphone that is transmitted along wires. In the case of cellular phones, the sound is converted into _____ waves and transmitted through the air. The speaker of the phone on the other end changes the electrical energy/ electromagnetic waves back into _____ energy.
- An electric cooker in our homes changes _____ electrical energy into heat and light. (As the hot plate gets hotter and hotter we see it glowing).
- A fireworks display is one of the most spectacular energy transformations; you can not only see it but also hear, feel and smell it. When fireworks are ignited, the energy stored in the substances inside them is quickly transformed into movement (_____ energy), _____ energy, _____ energy and thermal energy .
- Lighting a match is an example of a _____ energy.
- Your house appliances use _____ energy.
- A microwave changes electrical energy to _____ to heat food.
- A ball dropped from a height is an example of a change of energy from potential to _____ energy.

True or False

1. Dark-colored objects tend to absorb light and radiant heat. Their temperatures increase quickly when heat reaches them by radiation. _____
2. Using less energy for heating and cooling also conserves valuable resources such as coal and natural gas that are used to generate electricity. _____
3. A burning candle converts some of the chemical energy stored in wax into sound energy. _____
4. Our bodies convert chemical energy from food into mechanical and electrical energy to allow us to move. _____
5. Chemical energy stored within batteries can be converted to electrical energy. _____

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Snappy Words/ Visuwords

Synonyms:

Cross out the word that is NOT a synonym.

- Dissolve (melt, liquefy, combine, break apart, scatter)
- Dilute (make thinner, reduce, weaken, thicken)
- Accelerate (hurry, quicken, pedal, speed, push on)
- Saturate (pour, drench, fill full, soak)
- Accumulate (pile up, count, collect, gather up, bring together)
- Erosion (eating away, breaking down, gather, crumble)
- Ignite (kindle, set fire to, set on fire, heat, inflame)
- Eliminate (choose, exclude, remove, expel, reject)
- Transform (change the form of, convert, change, robot)
- Insulate (protect, close off, shield, to freeze, wrap)
- Consume (use up, to close, drain, put away, spend)
- Generate (make, create, to push, produce, form)
- Resistance (fighting, opposition, refusal, to agree)
- Mass (body of matter, portion, lot, tiny)
- Disperse (break up, to join, separate, distribute, circulate)
- Diagrams (sketch, plan, outline, design, boxes)
- Quantity (load, sum, size, smallness)
- Observe (look at, ignore, pay attention to, note)
- Classify (organize, arrange, file, disorganize)

Methods (break, approach, form, manner)
 Effective (useful, helpless, able, forceful)
 Evaporation (wet, disappear, escape, fade)
 Combustion (ignition, flaming, calm, on fire)
 Fuel (gas, food, electricity, something removing energy)
 Facilitate (block, aid, help, speed)
 Insert (pop in, forget, fill in, inject)
 Insulate (uncover, line, tape, wrap)
 Harness (check, free, tackle, tie)
 Adhere (attach, fasten, glue, loosen)
 Force (relaxation, power, physical power, effort)
 Equilibrium (balance, evenness, rest, excitement)

Antonyms:

Write an antonym for each word below:

Increase, _____	heavy _____
Repel _____	dull _____
Push _____	thick _____
Temporary _____	early _____
Ancient _____	full _____
Curved _____	near _____
Effect _____	always _____
Flexible _____	strong _____
Escape _____	first _____
Obstruct _____	

Write the words with ing and ed suffixes.

marry	_____	_____
study	_____	_____
carry	_____	_____
reply	_____	_____
copy	_____	_____
worry	_____	_____
cry	_____	_____
supply	_____	_____

bury	_____	_____
identify	_____	_____
multiply	_____	_____

Study each group of words. Write S for synonyms, A for antonyms and H for homophones.

Empty full _____	quick slow _____
Odd unusual _____	throne thrown _____
Warm hot _____	difficult easy _____
Rapid quick _____	cheerful gay _____
Top bottom _____	to, too, two _____
Strong powerful _____	sick well _____
Wring ring _____	silent quiet _____
Huge big _____	there their _____
Stone rock _____	herd heard _____

Homophones

Choose the correct word for the sentence.

1. How much do these pulleys (way, weigh)?
2. Do I have (to, two, too) dissolve the jello powder in the (two, too, to) cups of boiling water (to,two,too)?
3. The student (knew, new) that the sun had evaporated the water in the glass.
4. (There, their, they're) having difficulty lighting (there, their, they're) campfire.
5. If a fire starts in a deep-fryer, the (write, right) thing to do is to disconnect the appliance and put the lid on to cut the oxygen supply.
6. You should (bye, by, buy) a fire extinguisher for your kitchen.
7. A flashlight includes (won,one) battery, electrical wires, a switch and a bulb.
8. Please (clothes, close) the switch.
9. Did you (know,no) that rubber is a good electrical insulator?
10. My (stationary, stationery) bike is in the basement.
11. Do you know the (weight,wait) of the generator?
12. Is this statement (based, baste) on facts?
13. How will a change in water temperature (effect, affect) the salt?
14. These devices all consume lots of energy (accept, except) for the solar powered calculator.
15. The magnet picked up a (peace, piece) of steel.

16. We bury radioactive (waist, waste) in very deep holes in the ground in carefully chosen locations.
17. Did you (know, no) that energy can be transferred even though there are no particles to transfer the energy? This type of energy transfer is called radiation. Radiation is the transfer of energy without any movement of matter.
18. A greenhouse can extend a plant's growing season (bye, buy, by) a few weeks, or it can create a complete microclimate that's a successful substitute for the plant's native environment.

List the base word, prefix and suffix of each word.

	Root	Prefix	Suffix
Unbeatable	_____	_____	_____
Overflowing	_____	_____	_____
Inspecting	_____	_____	_____
Exportation	_____	_____	_____
Reduction	_____	_____	_____
Transportable	_____	_____	_____
Unlawful	_____	_____	_____
Induction	_____	_____	_____
Irresponsibly	_____	_____	_____
Impossible	_____	_____	_____
Malformed	_____	_____	_____

Prefixes:

Add the prefix un, im, non re pre inter or mis to the base word in parenthesis. Write the new word in the sentence. Then write the definition of the new word.

- Magnetite was the _____(cursor) of the magnets we know today.

- It is _____(safe) to leave a campfire unattended.

- It is _____(possible) for a magnet to attract a piece of paper.

- I will _____(read) the test question again because I do not understand it.

5. This very simple experiment _____(produces) the functioning of a well-known instrument.

6. Air resistance is the force that can _____(vent)
you _____ from advancing quickly on your bike.

7. You must take _____(caution) when working with electrical wires.

8. The wires on this circuit board all seem to be _____(connected).

9. We will _____(new) our online membership to the Science Club.

10. Please place the new _____(used) batteries on the shelf.

Circle the prefix in the following words.

Reproduce decode disassemble ecosystem hypothesis input
Malfunction mismatched interdependence regenerate recycle
Nonliving decompose unimportant preview misplace disagree

Suffixes:

Slightest, portable, extremely, carefully, transformation, regardless, artificially,
immediately, enjoyable, comforting,

Able,al,ful,less,ous,y,fully

Add a suffix from the list above to the base word in

parenthesis. Write the new word. Then write the definition of the new word on the line after the sentence.

1. When a solution is saturated, _____ of how much stirring you do,
the solvent no longer dissolves in the in the solute.(regard)

2. To put out a campfire, you can eliminate the fuel by _____
removing the unburned logs, (
care) _____

3. Never put water on oil to put out flames. You should _____

use the fire extinguisher. (immediate)

4. If you see an electrical wire that is _____ cut or stripped of its protective covering, do not touch it. You could get an electric shock. (slight)

5. Windfarms are an example of an environmentally friendly way to produce electricity from the wind - a _____ resource. (renew)

Underline the suffix. Write the meaning of each word that has a suffix.

breakable bottle _____

endless pressure _____

hazardous materials _____

inflatable rocket _____

Poisonous liquid _____

dependable source _____

Careless smoker _____

enjoyable experience _____

natural resource _____

Contractions

Underline each contraction. Write the words that make up each contraction on the line.

1. There's much controversy about nuclear energy as there's been several large nuclear meltdowns in history that released radioactive waste that had lasting negative impacts on the environment and surrounding communities.

2. The more students know about which things rely on electricity, the more aware of the potential dangers they'll become, and the more likely they'll be to use it safely.

3. It 's been proven by experiments that like magnetic poles repel each other whereas unlike poles attract each other.

4. Kicking a soccer ball isn't an example of centripetal force. Playing with a yo-yo is.

5.If you keep pouring salt into water, at some point the water won't be able to dissolve the salt anymore. Saturation has occurred.

6. They'd use small sticks or crumpled paper to light a fire.

7.I've never had a kitchen fire.

8. She'll buy new batteries for the flashlight.

9. The portable radio doesn't work anymore.

10. Once you've mixed a powder with a liquid, you are preparing what is called a solution.

Compound Words:

Draw a line between the two words that make up the compound word.

Firefighters, classmates, flashlight, pathways, shortcut, hydroelectric, thumbtack, everything, campfire, safety, brainchild, radioactive, fallout, throughout, shipwrecks, landmarks, showerhead, keyboard, sunrise, overdue, payoff,

Figurative Language:

In talking about electricity we can describe electrons passing along a wire and make the comparison to water flowing through a pipe. The words 'flow' and 'current' used to describe moving water help us to describe electrons moving through a conductive metal. Thus in learning this metaphor the student has also learnt some scientific words.

Sentences

Write S in front of each group of words that IS a sentence.

1. _____ When the solute is dissolved.
2. _____ The water in rivers can cause erosion.

3. _____ From the very beginning of the science class.
4. _____ On the way to the campsite.
5. _____ In order for combustion to occur.
6. _____ Leaves turning red in the fall is an example of a chemical change.
7. _____ Sometimes the electric current in the device.
8. _____ A switch is a component that opens or closes an electric circuit.
9. _____ Set of Christmas lights connected in series.
10. _____ A short circuit in a wall outlet may cause a fire or electrocution.

Types of Sentences:

Write D before each declarative sentence, IN before each interrogative sentence,

IM before each imperative sentence, and E before each exclamatory sentence.

Put the correct punctuation at the end of each sentence.

1. _____ Solutions can be liquid, solid, or gas
2. _____ What type of mixture is a solution
3. _____ In a salt water solution, what substance is considered the solvent
4. _____ Never use electrical appliances near water
5. _____ Turn off the light
6. _____ Every time you eat, your body uses chemical reactions to break down your food into energy
7. _____ Do you think that 6 teaspoons of sugar would dissolve in a cup of tea
8. _____ A magnet creates an invisible area of magnetism all around it called a magnetic field
9. _____ when was the magnet first discovered
10. _____ Be more careful with the chemicals

Subjects/Predicates Agreement

A solution (is, are) a mixture made up of at least 2 substances: a solute and a solvent.

The solute (is, are) the substance that (dissolve, dissolves) in the mixture .

Not all substances (dissolve, dissolves) with the same ease.

The solubility of a substance (depend, depends) on the temperature of the solution.

A saturated solution (contain, contains) the maximum quantity solute that the solvent can dissolve.

Every day, the water in rivers (cause, causes) erosion and carries various substances to the ocean.

Rapid combustion (produce, produces) flames, light and heat.

Burning paper, wood and alcohol (is, are) examples of rapid combustion.

Electric current (flow, flows) through wires.

Metals such as copper and aluminum (serve, serves) as good electrical conductors.

In electricity, there (is, are) always a danger of short-circuits.

A magnet always (has, have) two poles: a north pole and a south pole.

Rewrite the sentences by combining them into one sentence.

1. I will dissolve some crystals in the glass. I will dissolve the fruit-flavored crystals in a glass of water.
2. Sugar dissolves easily. It dissolves much more easily than salt.
3. We will put out the fire. We will cover it with sand.
4. Everyone should have a carbon dioxide extinguisher. Everyone should have one in their kitchen in case of a kitchen fire.
5. A flashlight is a small device. It is a perfect example of a simple electrical circuit.
6. A switch is a component. It can open or close an electric circuit.
7. We have electrical wires in our homes. They are made of copper or aluminum wrapped in a protective covering made of rubber or plastic.
8. Thomas Edison was a great inventor. He invented the first light bulb.
9. Magnetite is a rock. Magnetite attracts objects containing iron.
10. Every year fires cause damage. Every year fires cause enormous danger to forest flora and fauna.

Run-On Sentences:

Add punctuation where needed.

Gravity or gravitational forces are forces of attraction it's like the Earth pulling on you and keeping you on the ground that pull is gravity at work.

Every object in the universe that has mass exerts a gravitational pull or force on every other mass the size of the pull depends on the masses of the objects you exert a gravitational force on the people around you but that force isn't very strong since people aren't very massive when you look at really large masses like the Earth

and Moon the gravitational pull becomes very impressive the gravitational force between the Earth and the molecules of gas in the atmosphere is strong enough to hold the atmosphere close to our surface.

Hydro energy is the energy from falling water the greater the falling height of the water, the greater the energy hydro-electric generating stations are the largest electrical generating stations in the world the largest electric generating station in the world is in China it is a massive power station, with a length of 2.3 kilometers and a height of 180 meters it is capable of generating 22,500 megawatts, which is enough electricity to supply a typical north American city with a population of 6 million people.

Hydro-electric stations consist of a dam which stretches across a flowing body of water, such as a river the purpose of the dam is to "trap" a large amount of water behind it, and then release that water gradually and in a controlled way to produce electricity the water behind the dam falls from a height equal to the height of the dam upon falling, this water travels to the bottom of the dam through a channel built into the dam at the bottom of the dam the water impinges onto the blades of special turbines this causes the turbines to turn and produce electricity.

Nouns:

Underline all the nouns.

Combustion (or burning) is a chemical process in which fuel reacts with an oxidant to produce heat. The release of heat can produce light in the form of flame.

A car engine and a rocket engine both work by combustion. Combustion in a car motor is different to combustion in a rocket engine. Car combustion is gas catching on fire and exploding in cylinders again and again to push them up and down, making the car move. Rocket

combustion is made by rocket fuel exploding out of the back of the rocket moving it up. The burning of most substances is bad for the environment and the ozone layer because it can let off greenhouse gases such as Carbon dioxide. Hydrogen burns cleanly and gives off a lot of heat, but it does not produce much power, and is hard to find. Fuel reacts with oxygen and releases energy. Complete combustion happens in a plentiful supply of air. Incomplete combustion occurs when the supply of air is limited. Complete combustion releases more energy than incomplete combustion. Incomplete combustion also creates carbon monoxide, and more soot.

The following text can be used for any grammar concept.

Michael Faraday

Michael Faraday was one of the most famous scientists in history, and is known as the 'Father of Electricity'.

He discovered many things...read on to find out more about this amazing man.

Michael Faraday was born on September 22, 1791 in London, England, UK and died on August 25 in 1867 at the age of 75.

Early Life and Education

His father was a blacksmith who wasn't healthy at all. Before they got married, his mother had been a servant. They weren't rich and lived in poverty.

Michael Faraday attended a local school until he was 13. Due to money, he received a very basic education. To earn some money for his family, he started working as a delivery boy for a bookshop. He worked super hard, and eventually he was promoted to become a trainee bookbinder.

How he Learnt about Science

- As a bookbinder, you would never think that this young man would become interested in science, especially as he was very poor and hadn't had a very good education. But he did, and it was all thanks to his work at the bookshop.
- Instead of just binding books, Michael Faraday would read them from cover to cover as he wanted to learn more about the world around him.
- He started reading more and more about science. He heard that a very famous scientist John Tatum was going to be giving some lectures and he really wanted to go. He unfortunately couldn't afford the money that

was needed to get his spot. Luckily his brother was very impressed with Michael, and gave him the money to go!

More Interesting Experiments

Michael Faraday was given a great opportunity to attend lectures by the world famous Sir Humphrey Davy, which made him even more interested in science. He started creating more difficult experiments in his lab at the back of the bookshop. He built an electric battery using copper coins and zinc discs separated by moist, salty paper.

Sir Humphrey Davy

Sir Humphrey Davy was one of Michael Faraday's heroes, and he had an unfortunate accident in his lab. He asked Michael to come and work for him writing notes for a couple of days a week. This was like a dream come true for him!

- He became so interested in science that he used some of his money, which was very little, to buy some apparatus and chemicals as he wanted to check that what he was reading was true.
- The he was made chemical assistant at the Royal Institute for one of the most well-known scientists in the world. As the years went by, so he got promoted, and eventually landed up being a professor.

Interesting Facts about Michael Faraday

- He invented the toy balloon
- He got Albert Einstein his first job.
- Michael Faraday had been offered to be buried at Westminster Abbey with all the important kings and queens, but he decided against that. There is a plaque at Westminster Abbey that is dedicated to him and is placed beneath the grave of Sir Isaac Newton.

Singular/Plural:

Write the plural for each noun below:

Technology_____	battery _____
Solubility_____	energy _____
Hero_____	quantity _____
Wire _____	classify _____
Supply_____	penny _____
Key_____	discovery _____

Guess _____	valley _____
Body _____	crash _____
Loss _____	copy _____
Knife _____	half _____
Life _____	foot _____
Switch _____	compass _____
Solid _____	gas _____
Genius _____	surface _____
Radio _____	trolley _____
Hobby _____	moose _____
Turkey _____	

Possessive:

Complete each sentence with the possessive form of the word in parenthesis.

1. (machine) The washing _____ spin cycle uses centripetal force to remove water from clothing.
2. (showerhead) The _____ water falls because of gravitational force.
3. (class) It is this _____ turn to take the test.
4. (pigeons) It is the _____ ability to cover surprising distances with incredible precision that have made them useful to human in finding shipwrecks and boats in danger.
5. (Earth) Uranium is a metal found in the _____ crust.
6. (people) _____ ideas lead to wonderful inventions.
7. (students) The _____ opinions are important.
8. (person) That _____ science experiment was very interesting.
9. (girls) It is the _____ turn to use the ipads.
10. (object) An _____ shape and texture has an impact on how fast it falls.

Use apostrophes to show possession in the following sentences.

1. The students basic understanding of how electricity works can help them recognize the need for safe practices when around electricity.
2. The students posters and charts illustrated that they had a good understanding of electrical safety.
3. Teachers will explore students explanations for why objects may attract, while other times they repel.
4. Jenny wrote Marks initials on their poster about magnets.
5. The buzzers bell was not working.

6. Liz's interview with her grandfather about life without electricity was very interesting.
7. Each persons attention was on the electrical device.
8. All the doors locks were broken.

Verb Tenses:

Underline the verb or verb phrase in each sentence. Then write present, past or future for the tense of each verb.

1. We prepared a drink with strawberry fruit-flavored crystals . _____
2. I will try to dissolve twice the amount of recommended sugar in my porridge. _____
3. Observe the following illustrations on page 4. _____
4. I compared my answers with my classmates. _____
5. Next time I will dissolve the salt in warmer water. _____
6. He drew his own conclusions from the experiment. _____
7. Many devices in our homes are powered by electricity. _____
8. In electricity, there is always a danger of short-circuits. _____
9. We read about magnets yesterday. _____
10. Next time you will use your calculators. _____

Irregular Verbs:

Fill in the chart.

<u>Present</u>	<u>Past</u> (with/without helper)	<u>Future</u>
See	_____	_____
Do	_____	_____
Come	_____	_____
Eat	_____	_____
Drink	_____	_____
Sing	_____	_____
Ring	_____	_____
Freeze	_____	_____
Choose	_____	_____
Speak	_____	_____
Break	_____	_____
Know	_____	_____
Blow	_____	_____
Grow	_____	_____
Fly	_____	_____
Take	_____	_____

Write _____
Give _____
Go _____

Fill in a verb in each sentence.

1. A solution is a specific type of mixture where one substance is _____ into another.
2. Salt water is a mixture of water and salt. You cannot _____ the salt and the salt and water will stay a solution if left _____ alone.
3. Solutions _____ be liquid, solid, or gas.
4. Solubility _____ with temperature.
6. During the experiment, remember to _____ down your observations.
7. Substances that do NOT form solutions when they are mixed with water are _____ insoluble substances.
8. You should always try to _____ out the answers to your questions.
9. Children often _____ melting and dissolving and this may be a point of discussion. Melting requires heat and dissolving requires a solvent. In making a jelly both are happening when it is added to hot water.
10. Some solids like sand do not _____ in water.

:

Adjectives:

Underline the adjective/adjectives in each sentence.

1. At the spa, we dipped into the ice-cold water and then into what felt like boiling water.
2. I prefer ketchup chips to the salt and vinegar chips.
3. We has a wonderful evening singing around the warm campfire.
4. Rotting vegetables, red leaves in the fall and brown rust on the body of a car are all examples of chemical changes.
5. Electric current flows through wires.
6. Thomas Edison was an amazing inventor who invented the first modern light bulb.
7. Many new appliances have greater energy efficiency than their predecessors.
8. There was a strong wind causing the huge waves at the beach.

9. The first electrical battery was invented by the renowned physicist Alessandro Volta.
10. Scientists must adopt effective work habits.

Write a or an in each blank.

___ air	___ animal	___ energy	___ magnet
___ liquid	___ force	___ axis	___ experiment
___ mass	___ adaptation	___ friction	___ environment
___ erosion	___ investigation	___ mixture	___ chemical
___ pulley	___ atom	___ charge	___ energy
___ variable	___ circuit	___ series	___ base

Adverbs

Write the correct degree of comparison for the adjective in comparison.

1. (effective) Which is _____ in dissolving the jello powder at the bottom of the glass with water - just stirring it or heating it?
2. (easy) Sugar dissolves _____ than salt.
3. (warm) This is the _____ water I have ever touched.
4. (salty) The water in the oceans is _____ today than it was thousands of years ago.
10. (fast) What is the _____ way to make a fire?
11. (useful) What is _____, electric lights or a cell phone?
12. (small) What is the _____ battery used for?
13. (good) This is the _____ science experiment at the show.
14. (difficult) It is _____ to cycle against the wind.

Interjections:

Rewrite the sentence, using the correct punctuation after each interjection.

1. hurry the house is on fire _____
2. o.k. i'll come right over _____
3. ouch that hurt _____
4. Oh is your brother going too _____
5. Help my foot is caught in the fence _____
6. Hey did you see johns new telescope _____

Tell whether the underlined word in each sentence is a noun, verb, pronoun, adverb, adjective, preposition, conjunction or interjection.

1. The students diluted their sugar in the bowl. _____
2. I'll be able to make my conclusions tomorrow. _____
3. The campers ran away from the fire and ran toward the tent.

4. We will see the Northern Lights out West this summer. _____
5. Whew! I am glad that science test is over. _____
6. Which is the third planet from the sun? _____
7. The firemen are spraying the burning building. _____
8. Please leave the flashlight on the kitchen counter. _____
9. I looked up and saw dark clouds. _____
10. He quickly turned off the switch. _____
11. You should try to save electrical energy in your home. _____
12. Did you try to fix the washing machine? _____
13. The electric heater is behind the door. _____
14. A wind farm was built in Cap-Chat in Gaspé because it is very windy there.

15. We'd better hurry or we will miss the presentation. _____
16. A feather falls slowly because it is greatly affected by air resistance.

17. They were pushing their stalled car down the street. _____
18. Alessandro Volta was an Italian physicist who made the first electric battery.
19. Since the accident at the Chernobyl Nuclear Plant, nuclear safety measures have improved around the world. _____
20. We are studying the unknown potential of nuclear energy.

Capitalization/Punctuation

Capitalization:

Circle each letter that should be capitalized.

1. we use the book science-tech in our grade 6 science class with mrs. graham.
2. antoine lives on main street near the edmund hospital.
3. we will be leaving for florida on thursday, april 3.
4. remember to turn off the christmas lights before you leave.
5. thomas edison lived from 1847-1931.

6. In quebec, electricity is produced mainly by dams and hydroelectric stations.
7. mr. and mrs.white will attend the science fair at mantis high school next saturday.
8. james watt was a scottish inventor who made improvements to the steam engine during the late 1700s.
9. without electricity, you would never be able to watch your favorite tv show or listen to your mp3 player.
10. electricity is measured in units of power called watts, named to honor james watt, the inventor of the steam engine.

Punctuation:

Commas:

1. Rapid combustion produces flames light and heat.
2. For example tap water contains a certain quantity of oxygen nitrogen and other gases.
3. When you throw a ball the force of your throw moves it forwards. The force of gravity pulls it down and the force of air resistance slows it down.
4. Electricity comes from power stations the wind the sun water and seriously even animal poop!
5. Thomas Edison was certainly a great inventor. He came up with more than 2,000 inventions which includes almost everything that we need to use electricity in our homes including switches fuses sockets and meters.
6. There is zero gravity in outer space so you would be weightless if you were floating out in space!
7. Conductors are materials such as aluminum that electricity flows freely through.
8. Resisters like rubber slow down the flow of electrons and electricity.
9. Why I never knew that!
10. Unfortunately we lost electricity during the storm.
11. Of course you can start the campfire.
12. Anyway the wood is too damp to use in the firepit.
13. Dad may I add this paper to the fire?
14. Would you try to fix the fax Mom?
15. Thomas Edison was a scientist mathematician and astronomer.
16. He was born January 4 1643 in Wools Thorpe England.
17. He died March 31 1727 in London England.
18. A dim flickering light came from the basement.

19. Centrifugal force the force that enables an object to follow a circular motion and to maintain it is what causes the water from a showerhead to fall.

20. Some animals are major travelers. The pigeon for example can cover surprising distances.

21. Heat energy also referred to as thermal energy is really the effect of moving molecules.

22. Well I never thought I would live to see such a great meteor shower.

23. Donald and Randy by the way are science teachers.

24. To do your best you need to study daily.

25. Crying I ran to the next house but the house was dark and empty.

There was no power on in my house.

Paragraph Writing/Organizers

Topic Sentences:

There are two types of electrical circuits: parallel and series.

In Quebec, electricity is produced primarily by dams and hydroelectrical stations.

Galileo was an inventor in the 1600's.

There are four forms of energy.

(Use this text below for a grammar concept.)

Galileo Galilei was born in the year 1564 in the town of Pisa, Italy. When he was 20 years old, he was studying in Pisa. His father wanted him to be a doctor, but Galileo was bored with school except for math. Because math was the one subject where he was doing well, the court mathematician offered to tutor him privately so he could become a qualified mathematician. Galileo's father was disappointed, but he agreed.

Because he needed to earn money, Galileo began experimenting with different things, trying to come up with some sort of invention that he could sell for money. He had a little bit of success with his invention that was like a compass that could be used to measure plots of land. He had already experimented with pendulums, thermometers, and magnets.

When he heard that a Dutch inventor had invented something called a spyglass, but was keeping it a secret, Galileo decided to work on one of his own. Within 24 hours, he had invented a telescope that could magnify things to make them appear ten times larger than real life.

One night, he pointed his telescope toward the sky, and made his first of many space observations: the moon was not smooth, like everyone thought. The moon was

covered in bumps and craters. As technology has improved, first Galileo, and then many others, have made improvements on the telescope, the wonderful device that allows us to see from a distance.

Biometrics

Vocabulary

Biometrics, identity, physical characteristics, gait, optical sensor, ink pad, databank, iris, automated banking machines, DNA, arthritis, rheumatism, palm, blindfold, magnetic strip, advantages, disadvantages, fingerprint,

How many syllables?

fingerprint _____ voice _____ recognition _____ gait _____
veins _____ photograph _____ matching _____ movement _____
height _____ biometrics _____ screening _____ motion _____
verification _____ criminals _____ identity _____

Biometrics involve both physiological and behavioral features of a person. Biometric identifiers are the distinctive, measurable characteristics used to label and describe individuals. Categorize these identifiers.

fingerprint, voice, odor, face recognition, iris recognition, walking gait, palm veins, typing patterns, shape of the face, retina scanning, facial features, photograph, height and hair color, DNA matching, movement of the pen when you sign your name,

Physiological

Behavioral

True or False

1. _____Fingerprints are much harder to fake than identity cards.
2. _____You can't guess a fingerprint pattern like you can guess a password.
3. _____You can't misplace your fingerprint, like you can misplace an access card.
4. _____You can't forget your fingerprints like you can forget a password.
- 5._____Biometric technology is less secure than _____ traditional passwords.
- 6._____Since biometric identifiers are unique to individuals, they are more reliable in verifying identity than token and knowledge-based methods, such as identity cards and passwords.
- 7._____Biometrics is a field of study which aims to identify or recognize people based on traits they have.

Is this an example of biometrics? Yes or No

_____At Walt Disney World in Florida ,biometric measurements _____ are taken from the fingers of guests to ensure that a ticket s used by the same person from day to day.

_____ At the grocery store, people swipe their _____ credit cards when paying for their purchases.

_____ Using a photo ID at the library to borrow books

_____ Using a spoken pass code

_____ Opening and starting a car with fingerprints, _____ pulse or voice, making keys unnecessary.

_____Using your license with a photo ID

_____ Using fingerprint scans to enter a building

_____ Using facial recognition instead of a passcode _____ or signature to make payments in stores.

_____ Using fingerprints scan to unlock a car
_____ Using iris identification to allow people to vote
_____ Using my photograph on a travel passport
_____ Fingerprint recognition on an Apple Touch phone
_____ You need to open the door of your house. But
you _____ do not use a key. Instead, you just place
your thumb _____ on the small machine mounted on the side
wall and click - _____ the door opens.

Check what biometrics could help prevent:

_____ identify thieves
_____ criminals coming into the country
_____ identity theft
_____ illegal immigrants coming into the country
_____ your computer being hacked
_____ long lineups in a library

Choose the best word to fit the sentence.

recognition, fingerprints, camera, database,
iris, convenience, identity, change, identification, photograph, security,
biometrics, traits,

1. _____ are recognized internationally as one of the most reliable identification tools and are used by immigration and law enforcement agencies around the world.
2. The Canadian Air Transport Security Authority has required fingerprints and _____ scans for staff working in secure areas at major airports since 2006.
3. The use of biometrics in Canada's immigration program will help visa officers establish the _____ of applicants with greater confidence.

4. Since 2013, certain people seeking visas to enter Canada are required to give their fingerprints and have their _____ taken as part of their application.

5. Biometric screening will give Canada Border Services Agency officials the tools they need to verify the identity of travelers and further improve the _____ of our borders.

6. _____ is the measurement and statistical analysis of people's unique physical and behavioral characteristics.

7. The basic premise of biometric authentication is that every person can be accurately identified by his or her intrinsic physical or behavioral _____.

8. A _____ securely stores biometric data for comparison.

9. Fingerprint _____ like on the Apple's Touch ID for the iPhone, is the first mass market application of a biometric authentication factor.

10. Fingerprints do not _____ over a lifetime, while facial appearance can change drastically with age, illness or other factors.

11. Biometrics may scan a person's fingerprint, face, retina, ear and even DNA, using a sensor or _____.

12. Smartphones, tablets and laptops are more portable than desktop PCs, making them easier to be lost or stolen, so biometric _____ can greatly improve security.

13. Biometric verification is becoming popular because of its _____.

What is the most common type of biometrics device in the enterprise?

___ Lie detectors that measure pulse rate

___ Fingerprint scanners and readers

___ Iris and retinal scanners

___ Voice and face recognition scanners

Synonyms

Which word is NOT a synonym of the first word?

unique	exclusive, one and only, lone, similar
verify	confuse, check, find out, test
data	evidence, information, date, facts
secure	protected, unsafe, guarded, out of harm's way
authenticate	prove, justify, certify, disprove
permanent	changing, long-lasting, fixed, for keeps
accessible	available, possible, useless, usable
convenient	available, helpful, handy, unpleasant
law enforcement	criminals, police, cops, constables
scan	look away, examine, look through, browse
privacy	secrecy, one's space, quiet, public
features	appearance, face, back, looks
analyze	ignore, inspect, figure out, investigate
eliminate	get rid of, add, wipe out, stamp out
fraud	scam, cheat, fake, truth

Antonyms

Which word is the opposite of the first word?

identical	different	exact	look alike	same
copy	model	image	original	photograph
safe	okay	protected	dangerous	out of danger
request	reply	demand	call	invitation
reliable	good	honest	undependable	positive
concern	disinterest	care	interest	worry
observe	detect	examine	neglect	look at
increase	decrease,	rise,	gain,	step-up

Homonyms

Choose the correct word.

1. Technology that identifies you (by, bye, buy) "something you are" is showing up in e-passports, laptop login screens, smart firearms and even consumer products like the iPhone.

2. Biometrics will also play an increasingly significant (roll,role)as one of the factors in multi-factor authentication.
3. 3.Like all new technologies, advances in biometrics will bring (knew,new) advantages and also (knew,new) risks.
4. I needed a password (ate, eight)characters long.
5. The global biometrics market is growing at a rapid pace (dew,due)to the need for increasing security.
6. Physiological biometric identifiers are related to a person's physicality and include: fingerprint recognition, hand geometry, odour/(sent, scent), iris scans, DNA, palm print and facial recognition.
7. You can get your fingerprints taken once you cut (heels, heals).
8. The students did not get (there, their)homework assignments because they were talking.
9. The computer remained (idol, idle) for 20 minutes.
- 10.. You are asking (too, two, to) many questions.

Find the two words in each sentence that can make a contraction and underline them. Then, write the contraction on the line.

1. If dad finds out I lost my credit card, he will be mad.

2. Our school does not use biometrics.

3. I will find out about the alarm system.

4. These fingerprints are not yours.

5. If I were you, I would get an e passport.

- 11.Please do not use the same password.

8. Let us check the signature on the check.

Compound Words

Draw a line between the two words that make up the compound word.

fingerprint	everything	databases
forever	photobooth	keyboard
password	handwriting	worldwide
teamwork	smartphone	withdrew
widespread	workforce	barcode
laptop	hardware	misplace
lineup	foolproof	overseas
overview	ourselves	commonplace
safeguard	foolproof	

Idioms

An idiom is a word or phrase that has a different meaning than what it actually says. For example, to eat like a horse means to eat a lot.

Use the provided context clues to determine the meaning of the bolded idioms.

1. I had **a chip on my shoulder** about an old argument with my best friend.

2. Biometric technology is becoming increasingly more powerful and cost-effective. It is becoming a **piece of cake**.

3. Educational institutions are **racing against the clock** to adopt biometric identification systems.

4. The test questions looked **all Greek** to me since I did not study.

5. The security company wants **an arm and a leg** to install the new surveillance cameras.

5. I was high as a kite when I opened the box and saw a Touch Apple Phone.

6. I would change passwords for finger scans at the drop of a hat.

7. We cracked up when my grandparents tried taking a selfie with their new cell phone.

7. My dad uses iris recognition at the airport because he has zero tolerance for line ups.

8. Once I lost my science project, I knew I would have to start from scratch.

Put an X in front of each run-on sentence. Then correct the sentence.

1. Biometrics is the measurement and analysis of people's unique physical and behavioral characteristics it is used mainly for identification .

2. Biometric verification is any means by which a person can be identified by evaluating one or more biological traits like fingerprints, hands ,earlobes, retina and iris patterns, voice waves, DNA, and signatures the oldest form f biometric verification is fingerprinting.

3. Facial-recognition technology has been used by police to pick out individuals in large crowds with considerable reliability hand geometry is being used in industry to provide physical access to buildings.

4. Though the field of biometrics is still new many people believe that biometrics will play an important role in future computers, and personal computers of the future might include a *fingerprint scanner* where you could place your index finger instead of a password to open your computer.

5. There are a huge number of ways that biometric technology can be used it is safer than using passwords at the bank or on your phone or tablet and here are even uses for it in health care that help doctors keep better patient health records.
6. Biometrics help law enforcement agents catch criminals and are making our airports more convenient they help keep lunch lines moving quickly in schools and make sure no students get lost on field trips.
7. Biometrics technology is considered one of the best security methods of user information and data and is becoming more widely used in consumer applications and it has been used in hospitals, airports, government and law enforcement to keep people safe from a variety of situations.
8. Everyone has a unique, unchanging fingerprint and a fingerprint is made of a series of ridges and furrows on the surface of the finger and these are used to see the uniqueness of the fingerprint and once registered on the fingerprint scanner, the image of these patterns is converted into a code which becomes a digital form of you and this is stored on a database.
9. You should learn about where and how to give biometrics when applying for a visa, study or work permit and this process is fast and safe, and will help to reduce identity fraud.
10. Magnetic cards, bank cards passwords and keys can easily be stolen and biometrics technology identifies an individual on the basis of their fingerprints, face, signature, DNA, iris, typing rhythms etc and provides secure authentication.

Nouns

Underline the nouns in each sentence.

1. Schools in the UK have experimented with fingerprinting pupils then using that data for tasks including library books and lunch payments.

2. Police have been fingerprinting for over 100 years and have used digital biometric databases since the 1980s.
3. Iris recognition has been used in a number of large airports for several years.
4. In prehistoric caves that were inhabited over 30,000 years ago, cave painters used handprints as signatures. It's thought that the handprint was used as a unique signifier.
5. The shape of your ear is just as unique as your fingerprints; no two ears, even on the same person, are alike.
6. Scientists are working on measuring gait - the way people walk and move.
7. Biometrics is gaining widespread use in the business world as means to make the workplace more secure. The technology promises almost foolproof security for facilities and computer networks.
8. Handwriting, voiceprints and even the geometry of your veins are other biometrics that are uniquely yours and useful for security.
9. 689 million people across 21 countries were the victims of cybercrime last year.
10. In an increasingly digital world, protecting confidential information is becoming more difficult.

Singular/Plural

Write the plural of the following words.

study _____

trait _____

people _____

body _____

industry _____

study _____

scanner _____

country _____

process _____

opportunity _____

city _____

flash _____

photograph _____

glasses _____

match _____

technology _____

business _____

access _____

breach _____

address _____

Rewrite the following groups of words in possessive form.

1. the sounds of the scanner
2. the generosity of the elders
3. the hands of the thief
4. the scene of the movie
5. the peaks of the mountains
6. the fingerprints of the children
7. the history of biometrics
8. the sisters of Alex
9. the rivers of the South
10. the property of the villagers
11. the voice of the people
12. the photos of the citizens
3. the problems of society
14. the traditions of the families

Verbs

Underline the verb in each sentence.

1. Smartboards, laptops and real-time internet resources are just a part of a student's everyday experience.
2. Finger printing captures rolled images of all ten fingers.
3. Many areas in a school require identification.
4. School libraries store thousands of dollars of schools' assets such as books, periodicals, recordings and pieces of art.
5. Governments around the world turn to biometrics in an attempt to increase security at airports and border crossings.
6. The Touch ID in Apple devices uses fingerprint biometrics.
7. Yankee Stadium has announced plans to roll out new "Fast Access" entries that will, as the name suggests, get visitors into the stadium faster.

8. Airports and border authorities face an unprecedented challenge in balancing the demands for excellent security with passengers' desire to get through the airport as easily as possible.

9. You can't misplace your fingerprint, like you can misplace an access card.

10. Canada has decided to implement Biometrics as part of the screening of persons entering Canada.

Verbs- Past Tense

1. Manual fingerprints recognition studies _____ as early as the end of the 19th Century. (to begin)

2. Apple's latest smartphone has _____ biometric identification. (to introduce)

3. Apple

and Samsung _____ news

when

they utilized fingerprint technologies on their phones. (

to make)

Read the sentence below, making the correct choices from the words in parentheses so that subjects and their verbs agree.

1. Jose (want, wants) to learn about biometrics.

2. You (shop, shops) for a new computer each year in May.

3. Bill (know, knows) that home security is important.

4. His grandparents (tell, tells) Joe all about different kinds of alarms they sell.

5. Biometrics is a field of study which (aim, aims) to identify or recognize people based on traits they have.

6. Jose (offer, offers) his hand in the scanner.

7. The term "biometrics" (is, are) derived from the Greek words "bio" (life) and "metrics" (to measure)..

8. Automated biometric systems (has, have) only become available over the last few decades, due to significant advances in the field of computer processing.

9. Privacy issues (is, are)very, very important.
10. Examples of biometric information (include, incldes) fingerprint scans, palm scans, retina or iris scans, facial geometry scans, and voiceprints.
11. Everyday most of us (has, have) to identify ourselves on numerous occasions.
12. We are living in a world that (is, are) going paperless.
13. Biometric technology (is, are) able to recognize a person on the basis of their unique features .
14. Voice recognition systems (work, works) by measuring the characteristics of a person's speech .
15. Mobile users (has, have) become comfortable using tools such as fingerprint identification for access.
16. Two of the biggest drawbacks of biometrics over the years—high costs and privacy concerns— (is, are) still issues.
17. Organizations today (is, are) realizing the advantages of using biometric security devices for protecting work computers
18. Businesses (has, have) been exploring the biometrics technology as a way to finally stop fraud and cybersecurity problems.
19. 52 percent of consumers (want, wants) biometrics to replace passwords, and 80 percent believe it's more secure than passwords.
20. Fingerprint readers (has, have)been fooled using Play-Doh and facial scanners using a special pair of glasses.
21. PINs and passwords (is, are) still the most common way to secure mobile devices.
22. A familiar voice, face, or manner of moving (help, helps)to identify members of our family.
23. Where (was , were) the computer show held?
24. Government(has, have) no business collecting biometric data on children.
25. Biometrics technology(is, are) also helping forensic science, data sharing over networks and reducing identification errors in hospitals.

Adjectives

Underline the adjectives.

1. In 1974, in Ethiopia, scientists discovered an unidentified skeleton. It was too small to belong to the human race. A closer examination of the bones led to the smart conclusion that this species climbed trees.
2. He has a pale narrow face, long brown hair and brown eyes.
3. Biometrics provide an extremely reliable way of identifying individuals.
4. The iris of the eye has complex patterns.
5. That card with the magnetic strip gives you access to an automated banking service.
6. With biometrics, it can be extremely difficult for someone to break into a security system.
7. Smartphones now have fingerprint sensors that replace PIN numbers.

Punctuation

Insert commas where needed.

1. Going as far back as prehistoric times man already had a feeling that certain characteristics such as the trace of his finger were sufficient to identify him and he "signed" with his finger. (3)
2. Biometrics is growing fast particularly in the field of identity documents. (1)
3. In contrast to passwords badges or documents biometric data cannot be forgotten exchanged or stolen and cannot be forged. (6)
4. Law enforcement agencies process store search and retrieve fingerprint images and subject records. (3)
5. The New Zealand Companion Animal Register a nonprofit service dedicated to reuniting lost pets with their owners has announced that it is now using biometric technology to help track lost dogs and cats. (2)

6. Thankfully biometric technology is more accessible than ever before ready to bring better security and greater convenience to whatever needs protecting from a door to your car to the PIN on your phone. (4)

7. Devices that store biometrics such as finger scanners need to be secure. (2)

8. Airports hospitals hotels grocery stores and even Disney theme parks increasingly use **biometrics**. (3)

9. Unlike keys and passwords your personal traits are extremely difficult to lose or forget. (1)

Sentences

Check if it is a complete sentence.

1. _____ Fingerprints, facial measurements, the patterns that your veins make and even the way you walk .

2. _____ Sometimes that means proving to a computer that you are you.

3. _____ Some biometric measurements are easy to see and others are not.

4. _____ The FBI's Photo System allows law enforcement officials to scan biometrics and have them compared to those associated with wanted criminals.

5. _____ There are a huge number of applications for biometric technology and more are being invented constantly.

6. _____ Applications in healthcare that help doctors and clinicians keep better patient health records.

7. _____ Biometrics are making our smartphones more usable.

8. _____ Airline and airport administrators are increasingly looking.

9. _____ Just a couple months after becoming the first smartphone maker to make a device with a fingerprint sensor.

10. _____ The company says that in the first seven days of its use.

11. _____ Fingerprints at a crime scene can help catch a villain!

12. ____ So if someone steals your ticket!
13. ____ So be careful who you give it to.
14. ____ Keep hair and scarves away from your face to ensure that your face can be seen clearly.
15. ____ What a wonderful discovery that was!

Capitalize words where necessary and add the ending punctuation.

1. we now have the tech to fingerprint babies - but should we
2. taking babies' fingerprints could help monitor vaccinations and identify infants swapped at birth
3. could taking infants' fingerprints could help find missing children
4. what happens to the biometric data in the long run
5. what are some physical characteristics that are unique to each individual
6. you can cancel a library card or not use a PIN but you cannot cancel your unique features
7. in what ways are biometric systems convenient
8. can any two people have same fingerprints
9. is your photograph on your health insurance card
10. dna contains your gene, that are unique to you

Read this paragraph. Add the capitals and punctuation that are missing.

biometric security is on the rise in today's highly digitized words users prefer biometric fingerprint recognition and biometric facial recognition for identification and access to their gadgets this saves them from the task of remembering passwords for almost all the accounts they have on the cloud biometrics security applications are not only limited to this

Rewrite the passage, correcting all capitalization and punctuation mistakes.

police have historically used fingerprints to identify suspects and to prosecute criminals but now using new technology and the science of biometrics scientists have developed a different and potentially more advanced way of identifying people

Put an X in front of each sentence that is a compound sentence. For those sentences, circle the word that joins the two shorter sentences.

_____1. This is the idea behind biometrics, which was once confined to the realm of spy movies and high-security facilities, but is now increasingly common in everyday security checks at borders, for secure payments and logging in to mobile devices.

_____2. While fingerprints and retina patterns are the most well-known biometric identifiers, they are not the only characteristics that can be used for biometric identification.

_____3. Biometrics is essentially ready for mass application.

_____4. The main challenge in the biometrics field is, needless to say, security.

_____5. Patient misidentification is a real problem, even in countries with advanced health systems.

_____6. The current identification systems in use in healthcare mostly rely on wristbands, which usually include the patient's name and an assigned number or code.

_____7. If you have a **temporary** injury or medical condition on your face or hands, you should wait until it has healed before you give your biometrics.

_____8. In the United States, more than 1 million students are using biometrics every day in the cafeteria, attendance and throughout their schools.

_____9. The ancient Babylonians used fingerprints on clay tablets for business transactions and the ancient Egyptians used bodily characteristics to identify workers .

_____10. With the quick swipe of a finger, students in Berkeley County are able to pay for lunch in less than a second.

Proofread each sentence. Then rewrite the sentence using the correct punctuation for dialogue.

1. My grandmother said do you remember a time when mobile devices and technology weren't a part of your daily activities.
2. The security guard Kevin asked Will you be please put your finger on the scanner
3. I'd love to have my photograph taken said Eva
4. Kevin said I'll pick you up at six o'clock
5. Take me, too yelled Sarah
6. Write about what you know said Mrs. DeMarco
7. Nothing ever happens on this street yelled Eva
8. Are you all right asked Eva
9. Why do I have to give my biometrics (fingerprints and photograph) when I apply for a visitor visa, study permit, or work permit asked the traveler
10. I asked the scientist at what age would you fingerprint children

(Science-Tech-Matter-Theme1/2)

Vocabulary

Vocabulary:

solution, solute, solvent, solubility, combustion, fuel, oxidant, chemical change, electric circuit, current source, open and closed circuit, voltages, volts, magnetite, gravity, force, equilibrium, nuclear energy, centripetal force, properties of matter,

classify, absorption, mass, gravitational force, mixture, solid, liquid, gas, chemical changes, combustion, energy sources, components of a simple electric circuit, attraction, repulsion,

Which answer does not belong?

1. How can you classify objects?
color, shape, size, real, texture, smell
2. Which materials are absorbent?
paper, sand, sponge, paper towel
3. How can we describe a substance?
weight, color, texture, shape, solubility
4. Which of these substances are not soluble in water?
pepper, jello powder, hot chocolate crystals, sugar
5. What are the states of matter?
liquid, solid, gas, air
6. What can change the properties of matter?
Combustion, erosion, water, oxidation,
7. What are different forms of energy?
heat, sound, water, nuclear, chemical
8. What are the components of a simple electric circuit?
battery, wire, light bulb, switch, source
9. What involves the force of friction?
Rolling an object, sliding an object, playing with a yo-yo, pushing an object
10. What are measuring instruments?
ruler, basket, balance, thermometer, chronometer

Think-Pair-Share

1. List many physical properties of an object, a substance or a material.
2. List as many mixtures in your environment.
3. List as many substances that are soluble in water.
4. List matter that can be changed by chemical changes.
5. List different forms of energy.
6. List electrical conductors.

7. List electrical insulators.
8. List ways we can conserve energy.
9. List ways we use magnets.
10. List examples of when we use force.

(Topics Writing- electricity, magnets, energy, mixtures, fire, circuits, free falling)

Although I already knew that _____, I have learned some new facts about _____. For example, I learned that _____. I also learned that _____. Another fact I learned is _____. However, the most interesting thing I learned was _____.

Make a check if the definition is correct

1.

magnetic pole	either of the two points of a magnet where the lines of magnetic force meet and are strongest.
----------------------	---

2.

<u>combustion</u>	the act or process of combining solids with liquids
--------------------------	--

3.

<u>saturate</u>	to use friction in pulling or pushing
------------------------	--

4.

<u>fuel</u>	anything such as wood or gasoline that is burned as a source of energy
--------------------	---

4.

<u>circuit breaker</u>	a switch or other device that automatically breaks an electric circuit when too much electricity flows through it.
------------------------	--

6.

<u>electromagnet</u>	an iron or steel core with wire wound around it. It becomes magnetic when an electric current is passed through the wire.
----------------------	---

5.

<u>compass</u>	an instrument for showing temperature of heat
----------------	---

8.

<u>equilibrium</u>	a state of balance between two or more forces

9.

<u>atmosphere</u>	the gases inside the earth
-------------------	----------------------------

10.

<u>uranium</u>	a heavy, silver-white radioactive metal that is used to produce nuclear energy.
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What type of energy are we talking about?(light, sound, kinetic, electrical, chemical)

Let us consider the following energy transformations that we encounter on daily basis in our everyday activities.

- When we turn on our flashlight, _____ energy stored in the batteries is converted into _____ energy.
- When we turn on the television, _____ energy changes into _____ and _____. Even though undesirable, some amount of heat is also produced.

- When we move a vehicle, the engine converts the _____ energy stored in the fuel into _____, _____ and kinetic energy.
- When we talk on the telephone, the sound we produce is first transformed into _____ energy by the microphone that is transmitted along wires. In the case of cellular phones, the sound is converted into _____ waves and transmitted through the air. The speaker of the phone on the other end changes the electrical energy/ electromagnetic waves back into _____ energy.
- An electric cooker in our homes changes _____ electrical energy into heat and light. (As the hot plate gets hotter and hotter we see it glowing).
- A fireworks display is one of the most spectacular energy transformations; you can not only see it but also hear, feel and smell it. When fireworks are ignited, the energy stored in the substances inside them is quickly transformed into movement (_____ energy), _____ energy, _____ energy and thermal energy .
- Lighting a match is an example of a _____ energy.
- Your house appliances use _____ energy.
- A microwave changes electrical energy to _____ to heat food.
- A ball dropped from a height is an example of a change of energy from potential to _____ energy.

True or False

1. Dark-colored objects tend to absorb light and radiant heat. Their temperatures increase quickly when heat reaches them by radiation. _____

2. Using less energy for heating and cooling also conserves valuable resources such as coal and natural gas that are used to generate electricity. _____
3. A burning candle converts some of the chemical energy stored in wax into sound energy. _____
4. Our bodies convert chemical energy from food into mechanical and electrical energy to allow us to move. _____
5. Chemical energy stored within batteries can be converted to electrical energy. _____

Learnquebec site...science and technology...curated resources.....many online games using the required vocabulary
Snappy Words/ Visuwords

Synonyms:

Cross out the word that is NOT a synonym.

- Dissolve (melt, liquefy, combine, break apart, scatter)
- Dilute (make thinner, reduce, weaken, thicken)
- Accelerate (hurry, quicken, pedal, speed, push on)
- Saturate (pour, drench, fill full, soak)
- Accumulate (pile up, count, collect, gather up, bring together)
- Erosion (eating away, breaking down, gather, crumble)
- Ignite (kindle, set fire to, set on fire, heat, inflame)
- Eliminate (choose, exclude, remove, expel, reject)
- Transform (change the form of, convert, change, robot)
- Insulate (protect, close off, shield, to freeze, wrap)
- Consume (use up, to close, drain, put away, spend)
- Generate (make, create, to push, produce, form)
- Resistance (fighting, opposition, refusal, to agree)
- Mass (body of matter, portion, lot, tiny)
- Disperse (break up, to join, separate, distribute, circulate)
- Diagrams (sketch, plan, outline, design, boxes)

Quantity (load, sum, size, smallness)
Observe (look at, ignore, pay attention to, note)
Classify (organize, arrange, file, disorganize)
Methods (break, approach, form, manner)
Effective (useful, helpless, able, forceful)
Evaporation (wet, disappear, escape, fade)
Combustion (ignition, flaming, calm, on fire)
Fuel (gas, food, electricity, something removing energy)
Facilitate (block, aid, help, speed)
Insert (pop in, forget, fill in, inject)
Insulate (uncover, line, tape, wrap)
Harness (check, free, tackle, tie)
Adhere (attach, fasten, glue, loosen)
Force (relaxation, power, physical power, effort)
Equilibrium (balance, evenness, rest, excitement)

Antonyms:

Write an antonym for each word below:

Increase, _____	heavy _____
Repel _____	dull _____
Push _____	thick _____
Temporary _____	early _____
Ancient _____	full _____
Curved _____	near _____
Effect _____	always _____
Flexible _____	strong _____
Escape _____	first _____
Obstruct _____	

Write the words with ing and ed suffixes.

marry	_____	_____
study	_____	_____
carry	_____	_____
reply	_____	_____
copy	_____	_____
worry	_____	_____
cry	_____	_____
supply	_____	_____
bury	_____	_____
identify	_____	_____
multiply	_____	_____

Study each group of words. Write S for synonyms, A for antonyms and H for homophones.

Empty full _____	quick slow _____
Odd unusual _____	throne thrown _____
Warm hot _____	difficult easy _____
Rapid quick _____	cheerful gay _____
Top _____	
bottom _____	to, too, two _____
Strong powerful _____	sick well _____
Wring ring _____	silent quiet _____
Huge big _____	there their _____
Stone rock _____	herd heard _____

Homophones

Choose the correct word for the sentence.

- How much do these pulleys (way, weigh)?
- Do I have (to, two, too) dissolve the jello powder in the (two, too, to) cups of boiling water (to,two,too)?

3. The student (knew, new) that the sun had evaporated the water in the glass.
4. (There, their, they're) having difficulty lighting (there, their, they're) campfire.
5. If a fire starts in a deep-fryer, the (write, right) thing to do is to disconnect the appliance and put the lid on to cut the oxygen supply.
6. You should (bye, by, buy) a fire extinguisher for your kitchen.
7. A flashlight includes (won, one) battery, electrical wires, a switch and a bulb.
8. Please (clothes, close) the switch.
9. Did you (know, no) that rubber is a good electrical insulator?
10. My (stationary, stationery) bike is in the basement.
11. Do you know the (weight, wait) of the generator?
12. Is this statement (based, baste) on facts?
13. How will a change in water temperature (effect, affect) the salt?
14. These devices all consume lots of energy (accept, except) for the solar powered calculator.
15. The magnet picked up a (peace, piece) of steel.
16. We bury radioactive (waist, waste) in very deep holes in the ground in carefully chosen locations.
17. Did you (know, no) that energy can be transferred even though there are no particles to transfer the energy? This type of energy transfer is called radiation. Radiation is the transfer of energy without any movement of matter.
18. A greenhouse can extend a plant's growing season (bye, buy, by) a few weeks, or it can create a complete microclimate that's a successful substitute for the plant's native environment.

List the base word, prefix and suffix of each word.

	Root	Prefix	Suffix
Unbeatable	_____	_____	_____

Overflowing	_____	_____	_____

Inspecting	_____	_____	_____

Exportation	_____	_____	_____

Reduction	_____	_____	_____

Transportable	_____	_____	_____

Unlawful	_____	_____	_____

Induction	_____	_____	_____

Irresponsibly	_____	_____	_____

Impossible	_____	_____	_____

Malformed	_____	_____	_____

Prefixes:

Add the prefix un, im, non re pre inter or mis to the base word in parenthesis. Write the new word in the sentence. Then write the definition of the new word.

1. Magnetite was the _____(cursor) of the magnets we know today.

— 2. It is _____(safe) to leave a campfire unattended.

— 3. It is _____(possible) for a magnet to attract a piece of paper.

— 4. I will _____(read) the test question again because I do not understand it.

— 5. This very simple experiment _____(produces) the functioning of a well-known instrument.

— 6. Air resistance is the force that can _____(vent) you from advancing quickly on your bike.

— 7. You must take _____(caution) when working with electrical wires.

— 8. The wires on this circuit board all seem to be _____(connected).

— 9. We will _____(new) our online membership to the Science Club.

— 10. Please place the new _____(used) batteries on the shelf.

Circle the prefix in the following words.

Reproduce decode disassemble ecosystem hypothesis in
put

Malfunction mismatched interdependence regenerate recycle

Nonliving decompose unimportant preview misplace disagree

Suffixes:

Slightest, portable, extremely,
carefully, transformation, , regardless, artificially, immediately,
enjoyable, comforting,
Able,al,ful,less,ous,y,fully

Add a suffix from the list above to the base word in
parenthesis. Write the new word. Then write the definition of the new
word on the line after the sentence.

1. When a solution is saturated, _____ of how much stirring
you do, the solvent no longer dissolves in the in
the solute.(regard)

-
2. To put out a campfire, you can eliminate the fuel by

_____ removing the unburned logs, (
care) _____

-
3. Never put water on oil to put out flames. You should

use the fire extinguisher. (immediate)

4. If you see an electrical wire that is _____ cut or stripped of its protective covering, do not touch it. You could get an electric shock. (slight)

5. Windfarms are an example of an environmentally friendly way to produce electricity from the wind - a _____ resource. (renew)

Underline the suffix. Write the meaning of each word that has a suffix.

breakable bottle _____

endless pressure _____

hazardous materials _____

inflatable rocket _____

Poisonous liquid _____

dependable source _____

Careless smoker _____

enjoyable experience _____

natural resource _____

Contractions

Underline each contraction. Write the words that make up each contraction on the line.

1. There's much controversy about nuclear energy as there's been several large nuclear meltdowns in history that released radioactive

waste that had lasting negative impacts on the environment and surrounding communities.

2. The more students know about which things rely on electricity, the more aware of the potential dangers they'll become, and the more likely they'll be to use it safely.

3. It 's been proven by experiments that like magnetic poles repel each other whereas unlike poles attract each other.

4. Kicking a soccer ball isn't an example of centripetal force. Playing with a yo-yo is.

5.If you keep pouring salt into water, at some point the water won't be able to dissolve the salt anymore. Saturation has occurred.

6. They'd use small sticks or crumpled paper to light a fire.

7.I've never had a kitchen fire.

8. She'll buy new batteries for the flashlight.

9. The portable radio doesn't work anymore.

10. Once you've mixed a powder with a liquid, you are preparing what is called a solution.

Compound Words:

Draw a line between the two words that make up the compound word.

Firefighters, classmates, flashlight, pathways, shortcut, hydroelectric, thumbtack, everything, campfire, safety, brainchild, radioactive, fallout, throughout, shipwrecks, landmarks, showerhead, keyboard, sunrise, overdue, payoff,

Figurative Language:

In talking about electricity we can describe electrons passing along a wire and make the comparison to water flowing through a pipe. The words 'flow' and 'current' used to describe moving water help us to describe electrons moving through a conductive metal. Thus in learning this metaphor the student has also learnt some scientific words.

Sentences

Write S in front of each group of words that IS a sentence.

1. _____ When the solute is dissolved.
2. _____ The water in rivers can cause erosion.
3. _____ From the very beginning of the science class.
4. _____ On the way to the campsite.
5. _____ In order for combustion to occur.
6. _____ Leaves turning red in the fall is an example of a chemical change.
7. _____ Sometimes the electric current in the device.
8. _____ A switch is a component that opens or closes an electric circuit.
9. _____ Set of Christmas lights connected in series.
10. _____ A short circuit in a wall outlet may cause a fire or electrocution.

Types of Sentences:

Write D before each declarative sentence, IN before each interrogative sentence,

IM before each imperative sentence, and E before each exclamatory sentence.

Put the correct punctuation at the end of each sentence.

1. _____ Solutions can be liquid, solid, or gas
2. _____ What type of mixture is a solution
3. _____ In a salt water solution, what substance is considered the solvent
4. _____ Never use electrical appliances near water
5. _____ Turn off the light
6. _____ Every time you eat, your body uses chemical reactions to break down your food into energy
7. _____ Do you think that 6 teaspoons of sugar would dissolve in a cup of tea
8. _____ A magnet creates an invisible area of magnetism all around it called a magnetic field
9. _____ when was the magnet first discovered
10. _____ Be more careful with the chemicals

Subjects/Predicates Agreement

A solution (is, are) a mixture made up of at least 2 substances: a solute and a solvent.

The solute (is, are) the substance that (dissolve, dissolves) in the mixture .

Not all substances (dissolve, dissolves) with the same ease.

The solubility of a substance (depend, depends) on the temperature of the solution.

A saturated solution (contain, contains) the maximum quantity solute that the solvent can dissolve.

Every day, the water in rivers (cause, causes) erosion and carries various substances to the ocean.

Rapid combustion (produce, produces) flames, light and heat.

Burning paper, wood and alcohol (is, are) examples of rapid combustion.

Electric current (flow, flows) through wires.

Metals such as copper and aluminum (serve, serves) as good electrical conductors.

In electricity, there (is, are) always a danger of short-circuits.

A magnet always (has, have) two poles: a north pole and a south pole.

Rewrite the sentences by combining them into one sentence.

1. I will dissolve some crystals in the glass. I will dissolve the fruit-flavored crystals in a glass of water.
2. Sugar dissolves easily. It dissolves much more easily than salt.
3. We will put out the fire. We will cover it with sand.
4. Everyone should have a carbon dioxide extinguisher. Everyone should have one in their kitchen in case of a kitchen fire.
5. A flashlight is a small device. It is a perfect example of a simple electrical circuit.
6. A switch is a component. It can open or close an electric circuit.
7. We have electrical wires in our homes. They are made of copper or aluminum wrapped in a protective covering made of rubber or plastic.
8. Thomas Edison was a great inventor. He invented the first light bulb.
9. Magnetite is a rock. Magnetite attracts objects containing iron.
10. Every year fires cause damage. Every year fires cause enormous danger to forest flora and fauna.

Run-On Sentences:

Add punctuation where needed.

Gravity or gravitational forces are forces of attraction it's like the Earth pulling on you and keeping you on the ground that pull is gravity at work.

Every object in the universe that has mass exerts a gravitational pull or force on every other mass the size of the pull depends on the masses of the objects you exert a gravitational force on the people around you but that force isn't very strong since people aren't very massive when you look at really large masses like the Earth and Moon the gravitational pull becomes very impressive the gravitational force between the Earth and the molecules of gas in the atmosphere is strong enough to hold the atmosphere close to our surface.

Hydro energy is the energy from falling water the greater the falling height of the water, the greater the energy hydro-electric generating stations are the largest electrical generating stations in the world the largest electric generating station in the world is in China it is a massive power station, with a length of 2.3 kilometers and a height of 180 meters it is capable of generating 22,500 megawatts, which is enough electricity to supply a typical north American city with a population of 6 million people.

Hydro-electric stations consist of a dam which stretches across a flowing body of water, such as a river the purpose of the dam is to "trap" a large amount of water behind it, and then release that water gradually and in a controlled way to produce electricity the water behind the dam falls from a height equal to the height of the dam upon falling, this water travels to the bottom of the dam through a channel built into the dam at the bottom of the dam the water impinges onto the blades of special turbines this causes the turbines to turn and produce electricity.

Nouns:

Underline all the nouns.

Combustion (or burning) is a chemical process in which fuel reacts with an oxidant to produce heat. The release of heat can produce light in the form of flame.

A car engine and a rocket engine both work by combustion. Combustion in a car motor is different to combustion in a rocket engine. Car combustion is gas catching on fire and exploding in cylinders again and again to push them up and down, making the car move. Rocket combustion is made by rocket fuel exploding out of the back of the rocket moving it up. The burning of most substances is bad for the environment and the ozone layer because it can let off greenhouse gases such as Carbon dioxide. Hydrogen burns cleanly and gives off a lot of heat, but it does not produce much power, and is hard to find. Fuel reacts with oxygen and releases energy. Complete combustion happens in a plentiful supply of air. Incomplete combustion occurs when the supply of air is limited. Complete combustion releases more energy than incomplete combustion. Incomplete combustion also creates carbon monoxide, and more soot.

The following text can be used for any grammar concept.

Michael Faraday

Michael Faraday was one of the most famous scientists in history, and is known as the 'Father of Electricity'.

He discovered many things...read on to find out more about this amazing man.

Michael Faraday was born on September 22, 1791 in London, England, UK and died on August 25 in 1867 at the age of 75.

Early Life and Education

His father was a blacksmith who wasn't healthy at all. Before they got married, his mother had been a servant. They weren't rich and lived in poverty.

Michael Faraday attended a local school until he was 13. Due to money, he received a very basic education. To earn some money for his family, he started working as a delivery boy for a bookshop. He worked super hard, and eventually he was promoted to become a trainee bookbinder.

How he Learnt about Science

- As a bookbinder, you would never think that this young man would become interested in science, especially as he was very poor and hadn't had a very good education. But he did, and it was all thanks to his work at the bookshop.
- Instead of just binding books, Michael Faraday would read them from cover to cover as he wanted to learn more about the world around him.
- He started reading more and more about science .He heard that a very famous scientist John Tatum was going to be giving some lectures and he really wanted to go. He unfortunately couldn't afford the money that was needed to get his spot. Luckily his brother was very impressed with Michael, and gave him the money to go!

More Interesting Experiments

Michael Faraday was given a great opportunity to attend lectures by the world famous Sir Humphrey Davy, which made him even more interested in science.

He started creating more difficult experiments in his lab at the back of the bookshop. He built an electric battery using copper coins and zinc discs separated by moist, salty paper.

Sir Humphrey Davy

Sir Humphrey Davy was one of Michael Faraday's heroes, and he had an unfortunate accident in his lab. He asked Michael to come and work for him writing notes for a couple of days a week. This was like a dream come true for him!

- He became so interested in science that he used some of his money, which was very little, to buy some apparatus and chemicals as he wanted to check that what he was reading was true.

- The he was made chemical assistant at the Royal Institute for one of the most well-known scientists in the world. As the years went by, so he got promoted, and eventually landed up being a professor.

Interesting Facts about Michael Faraday

- He invented the toy balloon
- He got Albert Einstein his first job.
- Michael Faraday had been offered to be buried at [Westminster Abbey](#) with all the important kings and queens, but he decided against that. There is a plaque at Westminster Abbey that is dedicated to him and is placed beneath the grave of Sir [Isaac Newton](#).

Singular/Plural:

Write the plural for each noun below:

Technology_____	battery _____
Solubility_____	energy _____
Hero_____	quantity _____
Wire _____	classify _____
Supply_____	penny _____
Key_____	discovery _____
Guess _____	valley _____
Body_____	crash _____
Loss _____	copy_____
Knife_____	half_____
Life_____	foot _____
Switch _____	compass _____
Solid _____	gas _____
Genius _____	surface _____
Radio _____	trolley_____

Hobby _____

moose _____

Turkey _____

Possessive:

Complete each sentence with the possessive form of the word in parenthesis.

1. (machine) The washing _____ spin cycle uses centripetal force to remove water from clothing.
- 2 (showerhead) The _____ water falls because of gravitational force.
3. (class) It is this _____ turn to take the test.
4. (pigeons) It is the _____ ability to cover surprising distances with incredible precision that have made them useful to human in finding shipwrecks and boats in danger.
5. (Earth) Uranium is a metal found in the _____ crust.
6. (people) _____ ideas lead to wonderful inventions.
- 7, (students) The _____ opinions are important.
- 8.(person) That _____ science experiment was very interesting.
9. (girls) It is the _____ turn to use the ipads.
10. (object) An _____ shape and texture has an impact on how fast it falls.

Use apostrophes to show possession in the following sentences.

1. The students basic understanding of how electricity works can help them recognize the need for safe practices when around electricity.
2. The students posters and charts illustrated that they had a good understanding of electrical safety.
3. Teachers will explore students explanations for why objects may attract, while other times they repel.
4. Jenny wrote Marks initials on their poster about magnets.
5. The buzzers bell was not working.

6. Lizs interview with her grandfather about life without electricity was very interesting.
7. Each persons attention was on the electrical device.
8. All the doors locks were broken.

Verb Tenses:

Underline the verb or verb phrase in each sentence. Then write present, past or future for the tense of each verb.

1. We prepared a drink with strawberry fruit-flavored crystals

2. I will try to dissolve twice the amount of recommended sugar in my porridge. _____
3. Observe the following illustrations on page 4. _____
4. I compared my answers with my classmates. _____
5. Next time I will dissolve the salt in warmer water. _____
6. He drew his own conclusions from the experiment. _____
7. Many devices in our homes are powered by electricity.

8. In electricity, there is always a danger of short-circuits. _____
9. We read about magnets yesterday. _____
10. Next time you will use your calculators. _____

Irregular Verbs:

Fill in the chart.

<u>Present</u>	<u>Past (with/without helper)</u>	<u>Future</u>
See _____	_____	_____
Do _____	_____	_____
Come _____	_____	_____

Eat

Drink

Sing

Ring

Freeze

Choose

Speak

Break

Know

Blow

Grow

Fly

Take

Write

Give

Go

Fill in a verb in each sentence.

1. A solution is a specific type of mixture where one substance is _____ into another.
2. Salt water is a mixture of water and salt. You cannot _____ the salt and the salt and water will stay a solution if left _____ alone.
3. Solutions _____ be liquid, solid, or gas.
4. Solubility _____ with temperature.
6. During the experiment, remember to _____ down your observations.
7. Substances that do NOT form solutions when they are mixed with water are _____ insoluble substances.
8. You should always try to _____ out the answers to your questions.
9. Children often _____ melting and dissolving and this may be a point of discussion. Melting requires heat and dissolving requires a solvent. In making a jelly both are happening when it is added to hot water.
10. Some solids like sand do not _____ in water.

:

Adjectives:

Underline the adjective/adjectives in each sentence.

1. At the spa, we dipped into the ice-cold water and then into what felt like boiling water.
2. I prefer ketchup chips to the salt and vinegar chips.
3. We has a wonderful evening singing around the warm campfire.
4. Rotting vegetables, red leaves in the fall and brown rust on the body of a car are all examples of chemical changes.
5. Electric current flows through wires.
6. Thomas Edison was an amazing inventor who invented the first modern light bulb.

7. Many new appliances have greater energy efficiency than their predecessors.
8. There was a strong wind causing the huge waves at the beach.
9. The first electrical battery was invented by the renowned physicist Alessandro Volta.
10. Scientists must adopt effective work habits.

Write a or an in each blank.

_____ air _____ animal _____
 energy _____ magnet
 _____ liquid _____
 force _____ axis _____ experiment
 _____ mass _____ adaptation _____
 friction _____ environment

 erosion _____ investigation _____ mixture _____ chemical
 _____ pulley _____ atom _____ charge _____ ene
 rgy
 _____ variable _____ circuit _____ series _____ bas
 e

Adverbs

Write the correct degree of comparison for the adjective in comparison.

1. (effective) Which is _____ in dissolving the jello powder at the bottom of the glass with water - just stirring it or heating it?
2. (easy) Sugar dissolves _____ than salt.
3. (warm) This is the _____ water I have ever touched.

4. (salty) The water in the oceans is _____ today than it was thousands of years ago.

10. (fast) What is the _____ way to make a fire?

11. (useful) What is _____, electric lights or a cell phone?

12. (small) What is the _____ battery used for?

13. (good) This is the _____ science experiment at the show.

14. (difficult) It is _____ to cycle against the wind.

Interjections:

Rewrite the sentence, using the correct punctuation after each interjection.

1. hurry the house is on fire _____

2. o.k. i'll come right over _____

3. ouch that hurt _____

4. Oh is your brother going too _____

5. Help my foot is caught in the fence _____

6. Hey did you see johns new telescope _____

Tell whether the underlined word in each sentence is a noun, verb, pronoun, adverb, adjective, preposition, conjunction or interjection.

1. The students diluted their sugar in the bowl. _____

2. I'll be able to make my conclusions tomorrow. _____

3. The campers ran away from the fire and ran toward the tent.

4. We will see the Northern Lights out West this summer. _____
5. Whew! I am glad that science test is over. _____
6. Which is the third planet from the sun? _____
7. The firemen are spraying the burning building. _____
8. Please leave the flashlight on the kitchen counter. _____
9. I looked up and saw dark clouds. _____
10. He quickly turned off the switch. _____
11. You should try to save electrical energy in your home. _____
12. Did you try to fix the washing machine? _____
13. The electric heater is behind the door. _____
14. A wind farm was built in Cap-Chat in Gaspé because it is very windy there.

15. We'd better hurry or we will miss the presentation. _____
16. A feather falls slowly because it is greatly affected by air resistance.

17. They were pushing their stalled car down the street. _____

18. Alexandro Volta was an Italian physicist who made the first electric battery.
 19. Since the accident at the Chernobyl Nuclear Plant, nuclear safety measures have improved around the world.
-
20. We are studying the unknown potential of nuclear energy.

Capitalization/Punctuation

Capitalization:

Circle each letter that should be capitalized.

1. we use the book science-tech in our grade 6 science class with mrs. graham.
2. antoine lives on main street near the edmund hospital.
3. we will be leaving for florida on thursday, april 3.
4. remember to turn off the christmas lights before you leave.
5. thomas edison lived from 1847-1931.
6. In quebec, electricity is produced mainly by dams and hydroelectric stations.
7. mr. and mrs.white will attend the science fair at mantis high school next saturday.
8. james watt was a scottish inventor who made improvements to the steam engine during the late 1700s.
9. without electricity, you would never be able to watch your favorite tv show or listen to your mp3 player.
10. electricity is measured in units of power called watts, named to honor james watt, the inventor of the steam engine.

Punctuation:

Commas:

1. Rapid combustion produces flames light and heat.
2. For example tap water contains a certain quantity of oxygen nitrogen and other gases.

3. When you throw a ball the force of your throw moves it forwards. The force of gravity pulls it down and the force of air resistance slows it down.
4. Electricity comes from power stations the wind the sun water and seriously even animal poop!
5. Thomas Edison was certainly a great inventor. He came up with more than 2,000 inventions which includes almost everything that we need to use electricity in our homes including switches fuses sockets and meters.
6. There is zero gravity in outer space so you would be weightless if you were floating out in space!
7. Conductors are materials such as aluminum that electricity flows freely through.
8. Resistors like rubber slow down the flow of electrons and electricity.
9. Why I never knew that!
10. Unfortunately we lost electricity during the storm.
11. Of course you can start the campfire.
12. Anyway the wood is too damp to use in the firepit.
13. Dad may I add this paper to the fire?
14. Would you try to fix the fax Mom?
15. Thomas Edison was a scientist mathematician and astronomer.
16. He was born January 4 1643 in Wools Thorpe England.
17. He died March 31 1727 in London England.
18. A dim flickering light came from the basement.
19. Centrifugal force the force that enables an object to follow a circular motion and to maintain it is what causes the water from a showerhead to fall.
20. Some animals are major travelers. The pigeon for example can cover surprising distances.
21. Heat energy also referred to as thermal energy is really the effect of moving molecules.

22. Well I never thought I would live to see such a great meteor shower.
23. Donald and Randy by the way are science teachers.
24. To do your best you need to study daily.
25. Crying I ran to the next house but the house was dark and empty. There was no power on in my house.

Paragraph Writing/Organizers

Topic Sentences:

There are two types of electrical circuits: parallel and series.

In Quebec, electricity is produced primarily by dams and hydroelectrical stations.

Galileo was an inventor in the 1600's.

There are four forms of energy.

(Use this text below for a grammar concept.)

Galileo Galilei was born in the year 1564 in the town of Pisa, Italy.

When he was 20 years old, he was studying in Pisa. His father wanted him to be a doctor, but Galileo was bored with school except for math.

Because math was the one subject where he was doing well, the court mathematician offered to tutor him privately so he could become a qualified mathematician. Galileo's father was disappointed, but he agreed.

Because he needed to earn money, Galileo began experimenting with different things, trying to come up with some sort of invention that he could sell for money. He had a little bit of success with his invention that was like a compass that could be used to measure plots of land. He had already experimented with pendulums, thermometers, and magnets.

When he heard that a Dutch inventor had invented something called a spyglass, but was keeping it a secret, Galileo decided to work on one of his own. Within 24 hours, he had invented a telescope that could magnify things to make them appear ten times larger than real life.

One night, he pointed his telescope toward the sky, and made his first of many space observations: the moon was not smooth, like everyone thought. The moon was covered in bumps and craters. As technology has improved, first Galileo, and then many others, have made improvements on the telescope, the wonderful device that allows us to see from a distance.

Biometrics

Vocabulary

Biometrics, identity, physical characteristics, gait, optical sensor, ink pad, databank, iris, automated banking machines, DNA, arthritis, rheumatism, palm, blindfold, magnetic strip, advantages, disadvantages, fingerprint,

How many syllables?

fingerprint _____ voice _____ recognition _____ gait _____
veins _____ photograph _____ matching _____ movement _____
height _____ biometrics _____ screening _____ motion _____
verification _____ criminals _____ identity _____

Biometrics involve both physiological and behavioral features of a person. Biometric identifiers are the distinctive, measurable characteristics used to label and describe individuals. Categorize these identifiers.

fingerprint, voice, odor, face recognition, iris recognition, walking gait, palm veins, typing patterns, shape of the face, retina scanning, facial features, photograph, height and hair color, DNA matching, movement of the pen when you sign your name,

Physiological

Behavioral

True or False

1. Fingerprints are much harder to fake than identity cards.
2. You can't guess a fingerprint pattern like you can guess a password.
3. You can't misplace your fingerprint, like you can misplace an access card.
4. You can't forget your fingerprints like you can forget a password.
5. Biometric technology is less secure than traditional passwords.
6. Since biometric identifiers are unique to individuals, they are more reliable in verifying identity than token and knowledge-based methods, such as identity cards and passwords.
7. Biometrics is a field of study which aims to identify or recognize people based on [traits](#) they have.

Is this an example of biometrics? Yes or No

At [Walt Disney World](#) in [Florida](#), biometric measurements are taken from the fingers of guests to ensure that a ticket is used by the same person from day to day.

At the grocery store, people swipe their credit cards when paying for their purchases.

Using a photo ID at the library to borrow books

Using a spoken pass code

Opening and starting a car

with fingerprints, pulse or voice, making keys unnecessary.

Using your license with a photo ID

Using fingerprint scans to enter a building

_____ Using facial recognition instead of a passcode _____ or signature to make payments in stores.

_____ Using fingerprints scan to unlock a car

_____ Using iris identification to allow people to vote

_____ Using my photograph on a travel passport

_____ Fingerprint recognition on an Apple Touch phone

_____ You need to open the door of your house. But

you _____ do not use a key. Instead, you just place your thumb _____ on the small machine mounted on the side wall and click - _____ the door opens.

Check what biometrics could help prevent:

_____ identify thieves

_____ criminals coming into the country

_____ identity theft

_____ illegal immigrants coming into the country

_____ your computer being hacked

_____ long lineups in a library

Choose the best word to fit the sentence.

recognition, fingerprints, camera, database, iris, convenience, identity, change, identification, photograph, security, biometrics, traits,

1. _____ are recognized internationally as one of the most reliable identification tools and are used by immigration and law enforcement agencies around the world.

2. The Canadian Air Transport Security Authority has required fingerprints and _____ scans for staff working in secure areas at major airports since 2006.

3. The use of biometrics in Canada's immigration program will help visa officers establish the _____ of applicants with greater confidence.
4. Since 2013, certain people seeking visas to enter Canada are required to give their fingerprints and have their _____ taken as part of their application.
5. Biometric screening will give Canada Border Services Agency officials the tools they need to verify the identity of travelers and further improve the _____ of our borders.
6. _____ is the measurement and statistical analysis of people's unique physical and behavioral characteristics.
7. The basic premise of [biometric authentication](#) is that every person can be accurately identified by his or her intrinsic physical or behavioral _____.
8. A _____ securely stores biometric data for comparison.
9. Fingerprint _____ like on the Apple's [Touch ID](#) for the iPhone, is the first mass market application of a biometric authentication factor.
10. Fingerprints do not _____ over a lifetime, while facial appearance can change drastically with age, illness or other factors.
11. [Biometrics](#) may scan a person's fingerprint, face, retina, ear and even DNA, using a sensor or _____.
12. Smartphones, tablets and laptops are more portable than desktop PCs, making them easier to be lost or stolen, so biometric _____ can greatly improve security.
13. Biometric verification is becoming popular because of its _____.

What is the most common type of biometrics device in the enterprise?

- Lie detectors that measure pulse rate
- Fingerprint scanners and readers
- Iris and retinal scanners
- Voice and face recognition scanners

Synonyms

Which word is NOT a synonym of the first word?

unique	exclusive, one and only, lone, similar
verify	confuse, check, find out, test
data	evidence, information, date, facts
secure	protected, unsafe, guarded, out of harm's way
authenticate	prove, justify, certify, disprove
permanent	changing, long-lasting, fixed, for keeps
accessible	available, possible, useless, usable
convenient	available, helpful, handy, unpleasant
law enforcement	criminals, police, cops, constables
scan	look away, examine, look through, browse
privacy	secrecy, one's space, quiet, public
features	appearance, face, back, looks
analyze	ignore, inspect, figure out, investigate
eliminate	get rid of, add, wipe out, stamp out
fraud	scam, cheat, fake, truth

Antonyms

Which word is the opposite of the first word?

identical	different	exact	look alike	same
copy	model	image	original	photograph
safe	okay	protected	dangerous	out of danger
request	reply	demand	call	invitation
reliable	good	honest	undependable	positive
concern	disinterest	care	interest	worry
observe	detect	examine	neglect	look at
increase	decrease,	rise,	gain,	step-up

Homonyms

Choose the correct word.

1. Technology that identifies you (by, bye, buy) "something you are" is showing up in e-passports, laptop login screens, smart firearms and even consumer products like the iPhone.
2. Biometrics will also play an increasingly significant (roll,role)as one of the factors in multi-factor authentication.
3. Like all new technologies, advances in biometrics will bring (knew,new) advantages and also (knew,new) risks.
4. I needed a password (ate, eight)characters long.
5. The global biometrics market is growing at a rapid pace (dew,due)to the need for increasing security.
6. Physiological biometric identifiers are related to a person's physicality and include: fingerprint recognition, hand geometry, odour/(sent, scent), iris scans, DNA, palm print and facial recognition.
7. You can get your fingerprints taken once you cut (heels, heals).
8. The students did not get (there, their)homework assignments because they were talking.
9. The computer remained (idol, idle) for 20 minutes.
10. . You are asking (too, two, to) many questions.

Find the two words in each sentence that can make a contraction and underline them. Then, write the contraction on the line.

1. If dad finds out I lost my credit card, he will be mad.

2. Our school does not use biometrics.

3. I will find out about the alarm system.

4. These fingerprints are not yours.

5. If I were you, I would get an e passport.

11. Please do not use the same password.

8. Let us check the signature on the check.

Compound Words

Draw a line between the two words that make up the compound word.

fingerprint	everything	databases
forever	photobooth	keyboard
password	handwriting	worldwide
teamwork	smartphone	withdrew
widespread	workforce	barcode
laptop	hardware	misplace
lineup	foolproof	overseas
overview	ourselves	commonplace
safeguard	foolproof	

Idioms

An idiom is a word or phrase that has a different meaning than what it actually says. For example, to eat like a horse means to eat a lot.

Use the provided context clues to determine the meaning of the bolded idioms.

1. I had **a chip on my shoulder** about an old argument with my best friend.

2. Biometric technology is becoming increasingly more powerful and cost-effective. It is becoming a **piece of cake**.

3. Educational institutions are **racing against the clock** to adopt biometric identification systems.
4. The test questions looked **all Greek** to me since I did not study.

5.
The security company wants an arm and a leg to install the new surveillance cameras.

5. I was high as a kite when I opened the box and saw a Touch Apple Phone.

6. I would change passwords for finger scans at the drop of a hat.

7.
We cracked up when my grandparents tried taking a selfie with their new cell phone.

7. My dad uses iris recognition at the airport because he has zero tolerance for line ups.

8. Once I lost my science project, I knew I would have to start from scratch.

Put an X in front of each run-on sentence. Then correct the sentence.

1. Biometrics is the measurement and analysis of people's unique physical and behavioral characteristics it is used mainly for identification .
2. Biometric verification is any means by which a person can be identified by evaluating one or more biological traits like fingerprints, hands ,earlobes, retina and iris patterns, voice waves, DNA, and signatures the oldest form f biometric verification is fingerprinting.
3. Facial-recognition technology has been used by police to pick out individuals in large crowds with considerable reliability hand geometry is being used in industry to provide physical access to buildings.
4. Though the field of biometrics is still new many people believe that biometrics will play an important role in future computers,

and personal computers of the future might include a *fingerprint scanner* where you could place your index finger instead of a password to open your computer.

5. There are a huge number of ways that biometric technology can be used it is safer than using passwords at the bank or on your phone or tablet and here are even uses for it in health care that help doctors keep better patient health records.
6. Biometrics help law enforcement agents catch criminals and are making our airports more convenient they help keep lunch lines moving quickly in schools and make sure no students get lost on field trips.
7. Biometrics technology is considered one of the best security methods of user information and data and is becoming more widely used in consumer applications and it has been used in hospitals, airports, government and law enforcement to keep people safe from a variety of situations.
8. Everyone has a unique, unchanging fingerprint and a fingerprint is made of a series of ridges and furrows on the surface of the finger and these are used to see the uniqueness of the fingerprint and once registered on the fingerprint scanner, the image of these patterns is converted into a code which becomes a digital form of you and this is stored on a database.
9. You should learn about where and how to give biometrics when applying for a visa, study or work permit and this process is fast and safe, and will help to reduce identity fraud.
10. Magnetic cards, bank cards passwords and keys can easily be stolen and [biometrics technology](#) identifies an individual on the basis of their fingerprints, face, signature, DNA, iris, typing rhythms etc and provides secure authentication.

Nouns

Underline the nouns in each sentence.

- 1.Schools in the UK have experimented with [fingerprinting pupils](#) then using that data for tasks including library books and lunch payments.
2. Police have been fingerprinting for over 100 years and have used digital biometric databases since the 1980s.
- 3.Iris recognition has been used in a number of large airports for several years.
- 4.In prehistoric caves that were inhabited over 30,000 years ago, cave painters used handprints as signatures. It's thought that the handprint was used as a unique signifier.
- 5.The shape of your ear is just as unique as your fingerprints; no two ears, even on the same person, are alike.
- 6.Scientists are working on measuring gait - the way people walk and move.
- 7.Biometrics is gaining widespread use in the business world as means to make the workplace more secure . The technology promises almost foolproof security for facilities and computer networks.
- 8.Handwriting, voiceprints and even the geometry of your veins are other biometrics that are uniquely yours and useful for security.
- 9.689 million people across 21 countries were the victims of cybercrime last year.
- 10.In an increasingly digital word, protecting confidential information is becoming more difficult.

Singular/Plural

Write the plural of the following words.

study _____

trait _____

people _____

body _____

industry _____

study _____

scanner _____

country _____

process _____

opportunity _____

city _____

flash _____

photograph _____

glasses _____

match _____

technology _____

business_____

access_____

breach_____

address _____

Rewrite the following groups of words in possessive form.

1. the sounds of the scanner
2. the generosity of the elders
3. the hands of the thief
4. the scene of the movie
5. the peaks of the mountains
6. the fingerprints of the children
7. the history of biometrics
8. the sisters of Alex
9. the rivers of the South
10. the property of the villagers
11. the voice of the people
12. the photos of the citizens
3. the problems of society
14. the traditions of the families

Verbs

Underline the verb in each sentence.

1. Smartboards, laptops and real-time internet resources are just a part of a student's everyday experience.
2. Finger printing captures rolled images of all ten fingers.
3. Many areas in a school require identification.
4. School libraries store thousands of dollars of schools' assets such as books, periodicals, recordings and pieces of art.
5. Governments around the world turn to biometrics in an attempt to increase security at airports and border crossings.
6. The Touch ID in Apple devices uses fingerprint biometrics.
7. Yankee Stadium has announced plans to roll out new "Fast Access" entries that will, as the name suggests, get visitors into the stadium faster.

8. Airports and border authorities face an unprecedented challenge in balancing the demands for excellent security with passengers' desire to get through the airport as easily as possible.

9. You can't misplace your fingerprint, like you can misplace an access card.

10. Canada has decided to implement Biometrics as part of the screening of persons entering Canada.

Verbs- Past Tense

1. Manual fingerprints recognition studies _____ as early as the end of the 19th Century. (to begin)

2. Apple's latest smartphone has _____ biometric identification. (to introduce)

3. Apple

and [Samsung](#) _____ news _____ when they utilized fingerprint technologies on their phones. (to _____ make)

Read the sentence below, making the correct choices from the words in parentheses so that subjects and their verbs agree.

1. Jose (want, wants) to learn about biometrics.

2. You (shop, shops) for a new computer each year in May.

3. Bill (know, knows) that home security is important.

4. His grandparents (tell, tells) Joe all about different kinds of alarms they sell.

5. Biometrics is a field of study which (aim, aims)to identify or recognize people based on [traits](#) they have.

6. Jose (offer, offers) his hand in the scanner.

7. The term "biometrics" (is, are) derived from the Greek words "bio" (life) and "metrics" (to measure)..

8. Automated biometric systems (has, have) only become available over the last few decades, due to significant advances in the field of computer processing.

9. Privacy issues (is, are)very, very important.
10. Examples of biometric information (include, incldes) fingerprint scans, palm scans, retina or iris scans, facial geometry scans, and voiceprints.
11. Everyday most of us (has, have) to identify ourselves on numerous occasions.
12. We are living in a world that (is, are) going paperless.
13. Biometric technology (is, are) able to recognize a person on the basis of their unique features .
14. Voice recognition systems (work, works) by measuring the characteristics of a person's speech .
15. Mobile users (has, have) become comfortable using tools such as fingerprint identification for access.
16. Two of the biggest drawbacks of biometrics over the years—high costs and privacy concerns— (is, are) still issues.
17. Organizations today (is, are) realizing the advantages of using biometric security devices for protecting work computers
18. Businesses (has, have) been exploring the biometrics technology as a way to finally stop fraud and cybersecurity problems.
19. 52 percent of consumers (want, wants) biometrics to replace passwords, and 80 percent believe it's more secure than passwords.
20. Fingerprint readers (has, have)been fooled using Play-Doh and facial scanners using a special pair of glasses.
21. PINs and passwords (is, are) still the most common way to secure mobile devices.
22. A familiar voice, face, or manner of moving (help, helps)to identify members of our family.
23. Where (was , were) the computer show held?
24. Government(has, have) no business collecting biometric data on children.
25. Biometrics technology(is, are) also helping forensic science, data sharing over networks and reducing identification errors in hospitals.

Adjectives

Underline the adjectives.

1. In 1974, in Ethiopia, scientists discovered an unidentified skeleton. It was too small to belong to the human race. A closer examination of the bones led to the smart conclusion that this species climbed trees.
2. He has a pale narrow face, long brown hair and brown eyes.
3. Biometrics provide an extremely reliable way of identifying individuals.
4. The iris of the eye has complex patterns.
5. That card with the magnetic strip gives you access to an automated banking service.
6. With biometrics, it can be extremely difficult for someone to break into a security system.
7. Smartphones now have fingerprint sensors that replace PIN numbers.

Punctuation

Insert commas where needed.

1. Going as far back as prehistoric times man already had a feeling that certain characteristics such as the trace of his finger were sufficient to identify him and he "signed" with his finger. (3)
2. Biometrics is growing fast particularly in the field of identity documents. (1)
3. In contrast to passwords badges or documents biometric data cannot be forgotten exchanged or stolen and cannot be forged. (6)
4. Law enforcement agencies process store search and retrieve fingerprint images and subject records. (3)
5. The New Zealand Companion Animal Register a nonprofit service dedicated to reuniting lost pets with their owners has announced that it is now using biometric technology to help track lost dogs and cats. (2)

6. Thankfully biometric technology is more accessible than ever before ready to bring better security and greater convenience to whatever needs protecting from a door to your car to the PIN on your phone. (4)

7. Devices that store biometrics such as finger scanners need to be secure. (2)

8. Airports hospitals hotels grocery stores and even Disney theme parks increasingly use **biometrics**. (3)

9. Unlike keys and passwords your personal traits are extremely difficult to lose or forget. (1)

Sentences

Check if it is a complete sentence.

1. _____ Fingerprints, facial measurements, the patterns that your veins make and even the way you walk .

2. _____ Sometimes that means proving to a computer that you are you.

3. _____ Some biometric measurements are easy to see and others are not.

4. _____ TThe FBI's Photo System allows law enforcement officials to scan biometrics and have them compared to those associated with wanted criminals.

5. _____ There are a huge number of applications for biometric technology and more are being invented constantly.

6. _____ Applications in healthcare that help doctors and clinicians keep better patient health records.

7. _____ Biometrics are making our smartphones more usable.

8. _____ Airline and airport administrators are increasingly looking.

9. _____ Just a couple months after becoming the first smartphone maker to make a device with a fingerprint sensor.

10. _____ The company says that in the first seven days of its use.

11. _____ [Fingerprints](#) at a crime scene can help catch a villain!

12. ____ So if someone steals your ticket!
13. ____ So be careful who you give it to.
14. ____ Keep hair and scarves away from your face to ensure that your face can be seen clearly.
15. ____ What a wonderful discovery that was!

Capitalize words where necessary and add the ending punctuation.

1. we now have the tech to fingerprint babies - but should we
2. taking babies' fingerprints could help monitor vaccinations and identify infants swapped at birth
3. could taking infants' fingerprints could help find missing children
4. what happens to the biometric data in the long run
5. what are some physical characteristics that are unique to each individual
6. you can cancel a library card or not use a PIN but you cannot cancel your unique features
7. in what ways are biometric systems convenient
8. can any two people have same [fingerprints](#)
9. is your photograph on your health insurance card
10. dna contains your gene, that are unique to you

Read this paragraph. Add the capitals and punctuation that are missing.

biometric security is on the rise in today's highly digitized world users prefer biometric fingerprint recognition and biometric facial recognition for identification and access to their gadgets this saves them from the task of remembering passwords for almost all the accounts they have on the cloud [biometrics](#) security applications are not only limited to this

Rewrite the passage, correcting all capitalization and punctuation mistakes.

police have historically used fingerprints to identify suspects and to prosecute criminals but now using new technology and the science of biometrics scientists have developed a different and potentially more advanced way of identifying people

Put an X in front of each sentence that is a compound sentence. For those sentences, circle the word that joins the two shorter sentences.

_____1. This is the idea behind biometrics, which was once confined to the realm of spy movies and high-security facilities, but is now increasingly common in everyday security checks at borders, for secure payments and logging in to mobile devices.

_____2. While fingerprints and retina patterns are the most well-known biometric identifiers, they are not the only characteristics that can be used for biometric identification.

_____3. Biometrics is essentially ready for mass application.

_____4. The main challenge in the biometrics field is, needless to say, security.

_____5. Patient misidentification is a real problem, even in countries with advanced health systems.

_____6. The current identification systems in use in healthcare mostly rely on wristbands, which usually include the patient's name and an assigned number or code.

_____7. If you have a **temporary** injury or medical condition on your face or hands, you should wait until it has healed before you give your biometrics.

_____8. In the United States, more than 1 million students are using biometrics every day in the cafeteria, attendance and throughout their schools.

_____9. The ancient Babylonians used fingerprints on clay tablets for business transactions and the ancient Egyptians used bodily characteristics to identify workers .

_____10. With the quick swipe of a finger, students in Berkeley County are able to pay for lunch in less than a second.

Proofread each sentence. Then rewrite the sentence using the correct punctuation for dialogue.

1. My grandmother said do you remember a time when mobile devices and technology weren't a part of your daily activities.
2. The security guard Kevin asked Will you be please put your finger on the scanner
3. I'd love to have my photograph taken said Eva
4. Kevin said I'll pick you up at six o'clock
5. Take me, too yelled Sarah
6. Write about what you know said Mrs. DeMarco
7. Nothing ever happens on this street yelled Eva
8. Are you all right asked Eva
9. Why do I have to give my biometrics (fingerprints and photograph) when I apply for a visitor visa, study permit, or work permit asked the traveler
10. I asked the scientist at what age would you fingerprint children

(Science-Tech-Matter-Theme1/2)

Vocabulary

Vocabulary:

solution, solute, solvent, solubility, combustion, fuel, oxidant, chemical change, electric circuit, current source, open and closed circuit, voltages, volts, magnetite, gravity, force, equilibrium, nuclear energy, centripetal force, properties of matter, classify, absorption, mass, gravitational force, mixture, solid, liquid, gas, chemical changes, combustion, energy sources, components of a simple electric circuit, attraction, repulsion,

Which answer does not belong?

1. How can you classify objects?
color, shape, size, real, texture, smell
2. Which materials are absorbent?
paper, sand, sponge, paper towel
3. How can we describe a substance?
weight, color, texture, shape, solubility
4. Which of these substances are not soluble in water?
pepper, jello powder, hot chocolate crystals, sugar
5. What are the states of matter?
liquid, solid, gas, air
6. What can change the properties of matter?
Combustion, erosion, water, oxidation,
7. What are different forms of energy?
heat, sound, water, nuclear, chemical
8. What are the components of a simple electric circuit?
battery, wire, light bulb, switch, source
9. What involves the force of friction?
Rolling an object, sliding an object, playing with a yo-yo, pushing an object
10. What are measuring instruments?
ruler, basket, balance, thermometer, chronometer

Think-Pair-Share

1. List many physical properties of an object, a substance or a material.
2. List as many mixtures in your environment.
3. List as many substances that are soluble in water.
4. List matter that can be changed by chemical changes.
5. List different forms of energy.
6. List electrical conductors.
7. List electrical insulators.
8. List ways we can conserve energy.
9. List ways we use magnets.

10. List examples of when we use force.

(Topics Writing- electricity, magnets, energy, mixtures, fire, circuits, free falling)

Although I already knew that _____, I have learned some new facts about _____. For example, I learned that _____. I also learned that _____. Another fact I learned is _____. However, the most interesting thing I learned was _____.

Make a check if the definition is correct

1.

<u>magnetic pole</u>	either of the two points of a magnet where the lines of magnetic force meet and are strongest.
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2.

<u>combustion</u>	the act or process of combining solids with liquids
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3.

<u>saturate</u>	to use friction in pulling or pushing
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4.

<u>fuel</u>	anything such as wood or gasoline that is burned as a source of energy
-------------	--

4.

<u>circuit breaker</u>	a switch or other device that automatically breaks an electric circuit when too much electricity flows through it.
------------------------	--

6.

<u>electromagnet</u>	an iron or steel core with wire wound around it. It becomes magnetic when an electric current is passed through the wire.
----------------------	---

5.

<u>compass</u>	an instrument for showing temperature of heat
----------------	---

8.

<u>equilibrium</u>	a state of balance between two or more forces
--------------------	---

9.

<u>atmosphere</u>	the gases inside the earth
-------------------	----------------------------

10.

uranium

a heavy, silver-white radioactive metal that is used to produce nuclear energy.

What type of energy are we talking about?(light, sound, kinetic, electrical, chemical)

Let us consider the following energy transformations that we encounter on daily basis in our everyday activities.

- When we turn on our flashlight, _____ energy stored in the batteries is converted into _____ energy.
- When we turn on the television, _____ energy changes into _____ and _____. Even though undesirable, some amount of heat is also produced.
- When we move a vehicle, the engine converts the _____ energy stored in the fuel into _____, _____ and kinetic energy.
- When we talk on the telephone, the sound we produce is first transformed into _____ energy by the microphone that is transmitted along wires. In the case of cellular phones, the sound is converted into _____ waves and transmitted through the air. The speaker of the phone on the other end changes the electrical energy/ electromagnetic waves back into _____ energy.
- An electric cooker in our homes changes _____ electrical energy into heat and light. (As the hot plate gets hotter and hotter we see it glowing).
- A fireworks display is one of the most spectacular energy transformations; you can not only see it but also hear, feel and smell it. When fireworks are ignited, the energy stored in the substances inside them is quickly transformed into movement (_____ energy), _____ energy, _____ energy and thermal energy .
- Lighting a match is an example of a _____ energy.
- Your house appliances use _____ energy.
- A microwave changes electrical energy to _____ to heat food.
- A ball dropped from a height is an example of a change of energy from potential to _____ energy.

True or False

1. Dark-colored objects tend to absorb light and radiant heat. Their temperatures increase quickly when heat reaches them by radiation. _____
2. Using less energy for heating and cooling also conserves valuable resources such as coal and natural gas that are used to generate electricity. _____

3. A burning candle converts some of the chemical energy stored in wax into sound energy. _____

4. Our bodies convert chemical energy from food into mechanical and electrical energy to allow us to move. _____

5. Chemical energy stored within batteries can be converted to electrical energy. _____

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Snappy Words/ Visuwords

Synonyms:

Cross out the word that is NOT a synonym.

Dissolve (melt, liquefy, combine, break apart, scatter)

Dilute (make thinner, reduce, weaken, thicken)

Accelerate (hurry, quicken, pedal, speed, push on)

Saturate (pour, drench, fill full, soak)

Accumulate (pile up, count, collect, gather up, bring together)

Erosion (eating away, breaking down, gather, crumble)

Ignite (kindle, set fire to, set on fire, heat, inflame)

Eliminate (choose, exclude, remove, expel, reject)

Transform (change the form of, convert, change, robot)

Insulate (protect, close off, shield, to freeze, wrap)

Consume (use up, to close, drain, put away, spend)

Generate (make, create, to push, produce, form)

Resistance (fighting, opposition, refusal, to agree)

Mass (body of matter, portion, lot, tiny)

Disperse (break up, to join, separate, distribute, circulate)

Diagrams (sketch, plan, outline, design, boxes)

Quantity (load, sum, size, smallness)

Observe (look at, ignore, pay attention to, note)

Classify (organize, arrange, file, disorganize)

Methods (break, approach, form, manner)

Effective (useful, helpless, able, forceful)

Evaporation (wet, disappear, escape, fade)

Combustion (ignition, flaming, calm, on fire)

Fuel (gas, food, electricity, something removing energy)

Facilitate (block, aid, help, speed)
Insert (pop in, forget, fill in, inject)
Insulate (uncover, line, tape, wrap)
Harness (check, free, tackle, tie)
Adhere (attach, fasten, glue, loosen)
Force (relaxation, power, physical power, effort)
Equilibrium (balance, evenness, rest, excitement)

Antonyms:

Write an antonym for each word below:

Increase, _____	heavy _____
Repel _____	dull _____
Push _____	thick _____
Temporary _____	early _____
Ancient _____	full _____
Curved _____	near _____
Effect _____	always _____
Flexible _____	strong _____
Escape _____	first _____
Obstruct _____	

Write the words with ing and ed suffixes.

marry	_____	_____
study	_____	_____
carry	_____	_____
reply	_____	_____
copy	_____	_____
worry	_____	_____
cry	_____	_____
supply	_____	_____
bury	_____	_____
identify	_____	_____
multiply	_____	_____

Study each group of words. Write S for synonyms, A for antonyms and H for homophones.

Empty full _____

Odd unusual _____

Warm hot _____

Rapid quick _____

Top bottom _____

Strong powerful _____

Wring ring _____

Huge big _____

Stone rock _____

quick slow _____

throne thrown _____

difficult easy _____

cheerful gay _____

to, too, two _____

sick well _____

silent quiet _____

there their _____

herd heard _____

Homophones

Choose the correct word for the sentence.

1. How much do these pulleys (way, weigh)?
2. Do I have (to, two, too) dissolve the jello powder in the (two, too, to) cups of boiling water (to,two,too)?
3. The student (knew, new) that the sun had evaporated the water in the glass.
4. (There, their, they're) having difficulty lighting (there, their, they're) campfire.
5. If a fire starts in a deep-fryer, the (write, right) thing to do is to disconnect the appliance and put the lid on to cut the oxygen supply.
6. You should (bye, by, buy) a fire extinguisher for your kitchen.
7. A flashlight includes (won,one) battery, electrical wires, a switch and a bulb.
8. Please (clothes, close) the switch.
9. Did you (know,no) that rubber is a good electrical insulator?
10. My (stationary, stationery) bike is in the basement.
11. Do you know the (weight,wait) of the generator?
12. Is this statement (based, baste) on facts?
13. How will a change in water temperature (effect, affect) the salt?
14. These devices all consume lots of energy (accept, except) for the solar powered calculator.
15. The magnet picked up a (peace, piece) of steel.
16. We bury radioactive (waist, waste) in very deep holes in the ground in carefully chosen locations.

17. Did you (know, no) that energy can be transferred even though there are no particles to transfer the energy? This type of energy transfer is called radiation. Radiation is the transfer of energy without any movement of matter.
18. A greenhouse can extend a plant's growing season (bye, buy, by) a few weeks, or it can create a complete microclimate that's a successful substitute for the plant's native environment.

List the base word, prefix and suffix of each word.

	Root	Prefix	Suffix
Unbeatable	_____	_____	_____
Overflowing	_____	_____	_____
Inspecting	_____	_____	_____
Exportation	_____	_____	_____
Reduction	_____	_____	_____
Transportable	_____	_____	_____
Unlawful	_____	_____	_____
Induction	_____	_____	_____
Irresponsibly	_____	_____	_____
Impossible	_____	_____	_____
Malformed	_____	_____	_____

Prefixes:

Add the prefix un, im, non re pre inter or mis to the base word in parenthesis. Write the new word in the sentence. Then write the definition of the new word.

- Magnetite was the _____(cursor) of the magnets we know today.

- It is _____(safe) to leave a campfire unattended.

- It is _____(possible) for a magnet to attract a piece of paper.

- I will _____(read) the test question again because I do not understand it.

- This very simple experiment _____(produces) the functioning of a well-known instrument.

6. Air resistance is the force that can _____(vent)
you _____ from advancing quickly on your bike.

7. You must take _____(caution) when working with electrical wires.

8. The wires on this circuit board all seem to be _____(connected).

9. We will _____(new) our online membership to the Science Club.

10. Please place the new _____(used) batteries on the shelf.

Circle the prefix in the following words.

Reproduce decode disassemble ecosystem hypothesis input
Malfunction mismatched interdependence regenerate recycle
Nonliving decompose unimportant preview misplace disagree

Suffixes:

Slightest, portable, extremely, carefully, transformation, , regardless, artificially,
immediately, enjoyable, comforting,
Able,al,ful,less,ous,y,fully

Add a suffix from the list above to the base word in
parenthesis. Write the new word. Then write the definition of the new
word on the line after the sentence.

1. When a solution is saturated, _____ of how much stirring you do,
the solvent no longer dissolves in the in the solute.(regard)

2. To put out a campfire, you can eliminate the fuel by _____
removing the unburned logs, (
care) _____

3. Never put water on oil to put out flames. You should _____
use the fire extinguisher. (immediate)

4. If you see an electrical wire that is _____ cut or stripped of its protective covering, do not touch it. You could get an electric shock. (slight)

5. Windfarms are an example of an environmentally friendly way to produce electricity from the wind - a _____ resource. (renew)

Underline the suffix. Write the meaning of each word that has a suffix.

breakable bottle _____

endless pressure _____

hazardous materials _____

inflatable rocket _____

Poisonous liquid _____

dependable source _____

Careless smoker _____

enjoyable experience _____

natural resource _____

Contractions

Underline each contraction. Write the words that make up each contraction on the line.

1. There's much controversy about nuclear energy as there's been several large nuclear meltdowns in history that released radioactive waste that had lasting negative impacts on the environment and surrounding communities.

2. The more students know about which things rely on electricity, the more aware of the potential dangers they'll become, and the more likely they'll be to use it safely.

3. It 's been proven by experiments that like magnetic poles repel each other whereas unlike poles attract each other.

4. Kicking a soccer ball isn't an example of centripetal force. Playing with a yo-yo is.

5. If you keep pouring salt into water, at some point the water won't be able to dissolve the salt anymore. Saturation has occurred.

6. They'd use small sticks or crumpled paper to light a fire.

7. I've never had a kitchen fire.

8. She'll buy new batteries for the flashlight.

9. The portable radio doesn't work anymore.

10. Once you've mixed a powder with a liquid, you are preparing what is called a solution.

Compound Words:

Draw a line between the two words that make up the compound word.

Firefighters, classmates, flashlight, pathways, shortcut, hydroelectric, thumbtack, everything, campfire, safety, brainchild, radioactive, fallout, throughout, shipwrecks, landmarks, showerhead, keyboard, sunrise, overdue, payoff,

Figurative Language:

In talking about electricity we can describe electrons passing along a wire and make the comparison to water flowing through a pipe. The words 'flow' and 'current' used to describe moving water help us to describe electrons moving through a conductive metal. Thus in learning this metaphor the student has also learnt some scientific words.

Sentences

Write S in front of each group of words that IS a sentence.

1. _____ When the solute is dissolved.
2. _____ The water in rivers can cause erosion.
3. _____ From the very beginning of the science class.
4. _____ On the way to the campsite.

5. _____ In order for combustion to occur.
6. _____ Leaves turning red in the fall is an example of a chemical change.
7. _____ Sometimes the electric current in the device.
8. _____ A switch is a component that opens or closes an electric circuit.
9. _____ Set of Christmas lights connected in series.
10. _____ A short circuit in a wall outlet may cause a fire or electrocution.

Types of Sentences:

Write D before each declarative sentence, IN before each interrogative sentence,

IM before each imperative sentence, and E before each exclamatory sentence.

Put the correct punctuation at the end of each sentence.

1. _____ Solutions can be liquid, solid, or gas
2. _____ What type of mixture is a solution
3. _____ In a salt water solution, what substance is considered the solvent
4. _____ Never use electrical appliances near water
5. _____ Turn off the light
6. _____ Every time you eat, your body uses chemical reactions to break down your food into energy
7. _____ Do you think that 6 teaspoons of sugar would dissolve in a cup of tea
8. _____ A magnet creates an invisible area of magnetism all around it called a magnetic field
9. _____ when was the magnet first discovered
10. _____ Be more careful with the chemicals

Subjects/Predicates Agreement

A solution (is, are) a mixture made up of at least 2 substances: a solute and a solvent.

The solute (is, are) the substance that (dissolve, dissolves) in the mixture .

Not all substances (dissolve, dissolves) with the same ease.

The solubility of a substance (depend, depends) on the temperature of the solution.

A saturated solution (contain, contains) the maximum quantity solute that the solvent can dissolve.

Every day, the water in rivers (cause, causes) erosion and carries various substances to the ocean.

Rapid combustion (produce, produces) flames, light and heat.

Burning paper, wood and alcohol (is, are) examples of rapid combustion.

Electric current (flow, flows) through wires.

Metals such as copper and aluminum (serve, serves) as good electrical conductors.

In electricity, there (is, are) always a danger of short-circuits.

A magnet always (has, have) two poles: a north pole and a south pole.

Rewrite the sentences by combining them into one sentence.

1. I will dissolve some crystals in the glass. I will dissolve the fruit-flavored crystals in a glass of water.
2. Sugar dissolves easily. It dissolves much more easily than salt.
3. We will put out the fire. We will cover it with sand.
4. Everyone should have a carbon dioxide extinguisher. Everyone should have one in their kitchen in case of a kitchen fire.
5. A flashlight is a small device. It is a perfect example of a simple electrical circuit.
6. A switch is a component. It can open or close an electric circuit.
7. We have electrical wires in our homes. They are made of copper or aluminum wrapped in a protective covering made of rubber or plastic.
8. Thomas Edison was a great inventor. He invented the first light bulb.
9. Magnetite is a rock. Magnetite attracts objects containing iron.
10. Every year fires cause damage. Every year fires cause enormous danger to forest flora and fauna.

Run-On Sentences:

Add punctuation where needed.

Gravity or gravitational forces are forces of attraction it's like the Earth pulling on you and keeping you on the ground that pull is gravity at work.

Every object in the universe that has mass exerts a gravitational pull or force on every other mass the size of the pull depends on the masses of the objects you exert a gravitational force on the people around you but that force isn't very strong since people aren't very massive when you look at really large masses like the Earth and Moon the gravitational pull becomes very impressive the gravitational force between the Earth and the molecules of gas in the

atmosphere is strong enough to hold the atmosphere close to our surface.

Hydro energy is the energy from falling water the greater the falling height of the water, the greater the energy hydro-electric generating stations are the largest electrical generating stations in the world the largest electric generating station in the world is in China it is a massive power station, with a length of 2.3 kilometers and a height of 180 meters it is capable of generating 22,500 megawatts, which is enough electricity to supply a typical north American city with a population of 6 million people.

Hydro-electric stations consist of a dam which stretches across a flowing body of water, such as a river the purpose of the dam is to "trap" a large amount of water behind it, and then release that water gradually and in a controlled way to produce electricity the water behind the dam falls from a height equal to the height of the dam upon falling, this water travels to the bottom of the dam through a channel built into the dam at the bottom of the dam the water impinges onto the blades of special turbines this causes the turbines to turn and produce electricity.

Nouns:

Underline all the nouns.

Combustion (or burning) is a chemical process in which fuel reacts with an oxidant to produce heat. The release of heat can produce light in the form of flame.

A car engine and a rocket engine both work by combustion. Combustion in a car motor is different to combustion in a rocket engine. Car combustion is gas catching on fire and exploding in cylinders again and again to push them up and down, making the car move. Rocket combustion is made by rocket fuel exploding out of the back of the rocket moving it up. The burning of most substances is bad for the

environment and the ozone layer because it can let off greenhouse gases such as Carbon dioxide. Hydrogen burns cleanly and gives off a lot of heat, but it does not produce much power, and is hard to find. Fuel reacts with oxygen and releases energy. Complete combustion happens in a plentiful supply of air. Incomplete combustion occurs when the supply of air is limited. Complete combustion releases more energy than incomplete combustion. Incomplete combustion also creates carbon monoxide, and more soot.

The following text can be used for any grammar concept.

Michael Faraday

Michael Faraday was one of the most famous scientists in history, and is known as the 'Father of Electricity'.

He discovered many things...read on to find out more about this amazing man.

Michael Faraday was born on September 22, 1791 in London, England, UK and died on August 25 in 1867 at the age of 75.

Early Life and Education

His father was a blacksmith who wasn't healthy at all. Before they got married, his mother had been a servant. They weren't rich and lived in poverty.

Michael Faraday attended a local school until he was 13. Due to money, he received a very basic education. To earn some money for his family, he started working as a delivery boy for a bookshop. He worked super hard, and eventually he was promoted to become a trainee bookbinder.

How he Learnt about Science

- As a bookbinder, you would never think that this young man would become interested in science, especially as he was very poor and hadn't had a very good education. But he did, and it was all thanks to his work at the bookshop.
- Instead of just binding books, Michael Faraday would read them from cover to cover as he wanted to learn more about the world around him.
- He started reading more and more about science. He heard that a very famous scientist John Tatum was going to be giving some lectures and he really wanted to go. He unfortunately couldn't afford the money that was needed to get his spot. Luckily his brother was very impressed with Michael, and gave him the money to go!

More Interesting Experiments

Michael Faraday was given a great opportunity to attend lectures by the world famous Sir Humphrey Davy, which made him even more interested in science. He started creating more difficult experiments in his lab at the back of the bookshop. He built an electric battery using copper coins and zinc discs separated by moist, salty paper.

Sir Humphrey Davy

Sir Humphrey Davy was one of Michael Faraday's heroes, and he had an unfortunate accident in his lab. He asked Michael to come and work for him writing notes for a couple of days a week. This was like a dream come true for him!

- He became so interested in science that he used some of his money, which was very little, to buy some apparatus and chemicals as he wanted to check that what he was reading was true.
- The he was made chemical assistant at the Royal Institute for one of the most well-known scientists in the world. As the years went by, so he got promoted, and eventually landed up being a professor.

Interesting Facts about Michael Faraday

- He invented the toy balloon
- He got Albert Einstein his first job.
- Michael Faraday had been offered to be buried at Westminster Abbey with all the important kings and queens, but he decided against that. There is a plaque at Westminster Abbey that is dedicated to him and is placed beneath the grave of Sir Isaac Newton.

Singular/Plural:

Write the plural for each noun below:

Technology_____	battery _____
Solubility_____	energy _____
Hero_____	quantity _____
Wire _____	classify _____
Supply_____	penny _____
Key_____	discovery _____
Guess _____	valley _____
Body_____	crash _____
Loss _____	copy_____
Knife_____	half _____

Life _____	foot _____
Switch _____	compass _____
Solid _____	gas _____
Genius _____	surface _____
Radio _____	trolley _____
Hobby _____	moose _____
Turkey _____	

Possessive:

Complete each sentence with the possessive form of the word in parenthesis.

1. (machine) The washing _____ spin cycle uses centripetal force to remove water from clothing.
- 2 (showerhead) The _____ water falls because of gravitational force.
3. (class) It is this _____ turn to take the test.
4. (pigeons) It is the _____ ability to cover surprising distances with incredible precision that have made them useful to human in finding shipwrecks and boats in danger.
5. (Earth) Uranium is a metal found in the _____ crust.
6. (people) _____ ideas lead to wonderful inventions.
- 7, (students) The _____ opinions are important.
- 8.(person) That _____ science experiment was very interesting.
9. (girls) It is the _____ turn to use the ipads.
10. (object) An _____ shape and texture has an impact on how fast it falls.

Use apostrophes to show possession in the following sentences.

1. The students basic understanding of how electricity works can help them recognize the need for safe practices when around electricity.
2. The students posters and charts illustrated that they had a good understanding of electrical safety.
3. Teachers will explore students explanations for why objects may attract, while other times they repel.
4. Jenny wrote Marks initials on their poster about magnets.
5. The buzzers bell was not working.
6. Liza interview with her grandfather about life without electricity was very interesting.
7. Each persons attention was on the electrical device.
8. All the doors locks were broken.

Verb Tenses:

Underline the verb or verb phrase in each sentence. Then write present, past or future for the tense of each verb.

1. We prepared a drink with strawberry fruit-flavored crystals . _____
2. I will try to dissolve twice the amount of recommended sugar in my porridge. _____
3. Observe the following illustrations on page 4. _____
4. I compared my answers with my classmates. _____
5. Next time I will dissolve the salt in warmer water. _____
6. He drew his own conclusions from the experiment. _____
7. Many devices in our homes are powered by electricity. _____
8. In electricity, there is always a danger of short-circuits. _____
9. We read about magnets yesterday. _____
10. Next time you will use your calculators. _____

Irregular Verbs:

Fill in the chart.

<u>Present</u>	<u>Past (with/without helper)</u>	<u>Future</u>
See	_____	_____
Do	_____	_____
Come	_____	_____
Eat	_____	_____
Drink	_____	_____
Sing	_____	_____
Ring	_____	_____
Freeze	_____	_____
Choose	_____	_____
Speak	_____	_____
Break	_____	_____
Know	_____	_____
Blow	_____	_____
Grow	_____	_____
Fly	_____	_____
Take	_____	_____
Write	_____	_____
Give	_____	_____
Go	_____	_____

Fill in a verb in each sentence.

1. A solution is a specific type of mixture where one substance is _____ into another.
2. Salt water is a mixture of water and salt. You cannot _____ the salt and the salt and water will stay a solution if left _____ alone.
3. Solutions _____ be liquid, solid, or gas.
4. Solubility _____ with temperature.
6. During the experiment, remember to _____ down your observations.
7. Substances that do NOT form solutions when they are mixed with water are _____ insoluble substances.
8. You should always try to _____ out the answers to your questions.
9. Children often _____ melting and dissolving and this may be a point of discussion. Melting requires heat and dissolving requires a solvent. In making a jelly both are happening when it is added to hot water.
10. Some solids like sand do not _____ in water.

:

Adjectives:

Underline the adjective/adjectives in each sentence.

1. At the spa, we dipped into the ice-cold water and then into what felt like boiling water.
2. I prefer ketchup chips to the salt and vinegar chips.
3. We has a wonderful evening singing around the warm campfire.
4. Rotting vegetables, red leaves in the fall and brown rust on the body of a car are all examples of chemical changes.
5. Electric current flows through wires.
6. Thomas Edison was an amazing inventor who invented the first modern light bulb.
7. Many new appliances have greater energy efficiency than their predecessors.
8. There was a strong wind causing the huge waves at the beach.
9. The first electrical battery was invented by the renowned physicist Alessandro Volta.
10. Scientists must adopt effective work habits.

Write a or an in each blank.

___ air	___ animal	___ energy	___ magnet
___ liquid	___ force	___ axis	___ experiment
___ mass	___ adaptation	___ friction	___ environment
___ erosion	___ investigation	___ mixture	___ chemical
___ pulley	___ atom	___ charge	___ energy
___ variable	___ circuit	___ series	___ base

Adverbs

Write the correct degree of comparison for the adjective in comparison.

1. (effective) Which is _____ in dissolving the jello powder at the bottom of the glass with water - just stirring it or heating it?
2. (easy) Sugar dissolves _____ than salt.
3. (warm) This is the _____ water I have ever touched.
4. (salty) The water in the oceans is _____ today than it was thousands of years ago.
10. (fast) What is the _____ way to make a fire?
11. (useful) What is _____, electric lights or a cell phone?
12. (small) What is the _____ battery used for?
13. (good) This is the _____ science experiment at the show.
14. (difficult) It is _____ to cycle against the wind.

Interjections:

Rewrite the sentence, using the correct punctuation after each interjection.

1. hurry the house is on fire _____
2. o.k. i'll come right over _____
3. ouch that hurt _____
4. Oh is your brother going too _____
5. Help my foot is caught in the fence _____
6. Hey did you see johns new telescope _____

Tell whether the underlined word in each sentence is a noun, verb, pronoun, adverb, adjective, preposition, conjunction or interjection.

1. The students diluted their sugar in the bowl. _____
2. I'll be able to make my conclusions tomorrow. _____

3. The campers ran away from the fire and ran toward the tent.

4. We will see the Northern Lights out West this summer. _____
5. Whew! I am glad that science test is over. _____
6. Which is the third planet from the sun? _____
7. The firemen are spraying the burning building. _____
8. Please leave the flashlight on the kitchen counter. _____
9. I looked up and saw dark clouds. _____
10. He quickly turned off the switch. _____
11. You should try to save electrical energy in your home. _____
12. Did you try to fix the washing machine? _____
13. The electric heater is behind the door. _____
14. A wind farm was built in Cap-Chat in Gaspé because it is very windy there.

15. We'd better hurry or we will miss the presentation. _____
16. A feather falls slowly because it is greatly affected by air resistance.

17. They were pushing their stalled car down the street. _____
18. Alessandro Volta was an Italian physicist who made the first electric battery.
19. Since the accident at the Chernobyl Nuclear Plant, nuclear safety measures have improved around the world. _____
20. We are studying the unknown potential of nuclear energy.

Capitalization/Punctuation

Capitalization:

Circle each letter that should be capitalized.

1. we use the book science-tech in our grade 6 science class with mrs. graham.
2. antoine lives on main street near the edmund hospital.
3. we will be leaving for florida on thursday, april 3.
4. remember to turn off the christmas lights before you leave.
5. thomas edison lived from 1847-1931.
6. In quebec, electricity is produced mainly by dams and hydroelectric stations.
7. mr. and mrs.white will attend the science fair at mantis high school next saturday.

8. James Watt was a Scottish inventor who made improvements to the steam engine during the late 1700s.
9. Without electricity, you would never be able to watch your favorite TV show or listen to your MP3 player.
10. Electricity is measured in units of power called watts, named to honor James Watt, the inventor of the steam engine.

Punctuation:

Commas:

1. Rapid combustion produces flames, light, and heat.
2. For example, tap water contains a certain quantity of oxygen, nitrogen, and other gases.
3. When you throw a ball, the force of your throw moves it forwards. The force of gravity pulls it down, and the force of air resistance slows it down.
4. Electricity comes from power stations, the wind, the sun, water, and seriously even animal poop!
5. Thomas Edison was certainly a great inventor. He came up with more than 2,000 inventions, which includes almost everything that we need to use electricity in our homes, including switches, fuses, sockets, and meters.
6. There is zero gravity in outer space, so you would be weightless if you were floating out in space!
7. Conductors are materials, such as aluminum, that electricity flows freely through.
8. Resistors, like rubber, slow down the flow of electrons and electricity.
9. Why I never knew that!
10. Unfortunately, we lost electricity during the storm.
11. Of course, you can start the campfire.
12. Anyway, the wood is too damp to use in the firepit.
13. Dad, may I add this paper to the fire?
14. Would you try to fix the fax, Mom?
15. Thomas Edison was a scientist, mathematician, and astronomer.
16. He was born January 4, 1643, in Wools Thorpe, England.
17. He died March 31, 1727, in London, England.
18. A dim, flickering light came from the basement.
19. Centrifugal force, the force that enables an object to follow a circular motion, and to maintain it, is what causes the water from a showerhead to fall.
20. Some animals are major travelers. The pigeon, for example, can cover surprising distances.

21. Heat energy also referred to as thermal energy is really the effect of moving molecules.

22. Well I never thought I would live to see such a great meteor shower.

23. Donald and Randy by the way are science teachers.

24. To do your best you need to study daily.

25. Crying I ran to the next house but the house was dark and empty.

There was no power on in my house.

Paragraph Writing/Organizers

Topic Sentences:

There are two types of electrical circuits: parallel and series.

In Quebec, electricity is produced primarily by dams and hydroelectrical stations.

Galileo was an inventor in the 1600's.

There are four forms of energy.

(Use this text below for a grammar concept.)

Galileo Galilei was born in the year 1564 in the town of Pisa, Italy. When he was 20 years old, he was studying in Pisa. His father wanted him to be a doctor, but Galileo was bored with school except for math. Because math was the one subject where he was doing well, the court mathematician offered to tutor him privately so he could become a qualified mathematician. Galileo's father was disappointed, but he agreed.

Because he needed to earn money, Galileo began experimenting with different things, trying to come up with some sort of invention that he could sell for money. He had a little bit of success with his invention that was like a compass that could be used to measure plots of land. He had already experimented with pendulums, thermometers, and magnets.

When he heard that a Dutch inventor had invented something called a spyglass, but was keeping it a secret, Galileo decided to work on one of his own. Within 24 hours, he had invented a telescope that could magnify things to make them appear ten times larger than real life.

One night, he pointed his telescope toward the sky, and made his first of many space observations: the moon was not smooth, like everyone thought. The moon was covered in bumps and craters. As technology has improved, first Galileo, and then many others, have made improvements on the telescope, the wonderful device that allows us to see from a distance.

Biometrics

Vocabulary

Biometrics, identity, physical characteristics, gait, optical sensor, ink pad, databank, iris, automated banking machines, DNA, arthritis, rheumatism, palm, blindfold, magnetic strip, advantages, disadvantages, fingerprint,

How many syllables?

fingerprint _____ voice _____ recognition _____ gait _____
veins _____ photograph _____ matching _____ movement _____
height _____ biometrics _____ screening _____ motion _____
verification _____ criminals _____ identity _____

Biometrics involve both physiological and behavioral features of a person. Biometric identifiers are the distinctive, measurable characteristics used to label and describe individuals. Categorize these identifiers.

fingerprint, voice, odor, face recognition, iris recognition, walking gait, palm veins, typing patterns, shape of the face, retina scanning, facial features, photograph, height and hair color, DNA matching, movement of the pen when you sign your name,

Physiological

Behavioral

True or False

1. _____ Fingerprints are much harder to fake than identity cards.
2. _____ You can't guess a fingerprint pattern like you can guess a password.

3. _____ You can't misplace your fingerprint, like you can misplace an access card.

4. _____ You can't forget your fingerprints like you can forget a password.

5. _____ Biometric technology is less secure than _____ traditional passwords.

6. _____ Since biometric identifiers are unique to individuals, they are more reliable in verifying identity than token and knowledge-based methods, such as identity cards and passwords.

7. _____ Biometrics is a field of study which aims to identify or recognize people based on traits they have.

Is this an example of biometrics? Yes or No

_____ At Walt Disney World in Florida ,biometric measurements _____ are taken from the fingers of guests to ensure that a ticket s used by the same person from day to day.

_____ At the grocery store, people swipe their _____ credit cards when paying for their purchases.

_____ Using a photo ID at the library to borrow books

_____ Using a spoken pass code

_____ Opening and starting a car with fingerprints, _____ pulse or voice, making keys unnecessary.

_____ Using your license with a photo ID

_____ Using fingerprint scans to enter a building

_____ Using facial recognition instead of a passcode _____ or signature to make payments in stores.

_____ Using fingerprints scan to unlock a car

_____ Using iris identification to allow people to vote

_____ Using my photograph on a travel passport

_____ Fingerprint recognition on an Apple Touch phone
_____ You need to open the door of your house. But
you _____ do not use a key. Instead, you just place
your thumb _____ on the small machine mounted on the side
wall and click - _____ the door opens.

Check what biometrics could help prevent:

- ___ identify thieves
- ___ criminals coming into the country
- ___ identity theft
- ___ illegal immigrants coming into the country
- ___ your computer being hacked
- ___ long lineups in a library

Choose the best word to fit the sentence.

recognition, fingerprints, camera, database,
iris, convenience, identity, change, identification, photograph, security,
biometrics, traits,

1. _____ are recognized internationally as one of the most reliable identification tools and are used by immigration and law enforcement agencies around the world.
2. The Canadian Air Transport Security Authority has required fingerprints and _____ scans for staff working in secure areas at major airports since 2006.
3. The use of biometrics in Canada's immigration program will help visa officers establish the _____ of applicants with greater confidence.
4. Since 2013, certain people seeking visas to enter Canada are required to give their fingerprints and have their _____ taken as part of their application.

secure	protected, unsafe, guarded, out of harm's way
authenticate	prove, justify, certify, disprove
permanent	changing, long-lasting, fixed, for keeps
accessible	available, possible, useless, usable
convenient	available, helpful, handy, unpleasant
law enforcement	criminals, police, cops, constables
scan	look away, examine, look through, browse
privacy	secrecy, one' space, quiet, public
features	appearance, face, back, looks
analyze	ignore, inspect, figure out, investigate
eliminate	get rid of, add, wipe out, stamp out
fraud	scam, cheat, fake, truth

Antonyms

Which word is the opposite of the first word?

identical	different	exact	look alike	same
copy	model	image	original	photograph
safe	okay	protected	dangerous	out of danger
request	reply	demand	call	invitation
reliable	good	honest	undependable	positive
concern	disinterest	care	interest	worry
observe	detect	examine	neglect	look at
increase	decrease,	rise,	gain,	step-up

Homonyms

Choose the correct word.

1. Technology that identifies you (by, bye, buy) "something you are" is showing up in e-passports, laptop login screens, smart firearms and even consumer products like the iPhone.
2. Biometrics will also play an increasingly significant (roll,role) as one of the factors in multi-factor authentication.
3. 3.Like all new technologies, advances in biometrics will bring (knew,new) advantages and also (knew,new) risks.

4. I needed a password (ate, eight)characters long.
5. The global biometrics market is growing at a rapid pace (dew, due)to the need for increasing security.
6. Physiological biometric identifiers are related to a person's physicality and include: fingerprint recognition, hand geometry, odour/(sent, scent), iris scans, DNA, palm print and facial recognition.
7. You can get your fingerprints taken once you cut (heels, heals).
8. The students did not get (there, their)homework assignments because they were talking.
9. The computer remained (idol, idle) for 20 minutes.
- 10.. You are asking (too, two, to) many questions.

Find the two words in each sentence that can make a contraction and underline them. Then, write the contraction on the line.

1. If dad finds out I lost my credit card, he will be mad.

2. Our school does not use biometrics.

3. I will find out about the alarm system.

4. These fingerprints are not yours.

5. If I were you, I would get an e passport.

11.Please do not use the same password.

8. Let us check the signature on the check.

Compound Words

Draw a line between the two words that make up the compound word.

fingerprint

everything

databases

forever

photobooth

keyboard

password

handwriting

worldwide

teamwork

smartphone

withdrew

widespread

workforce

barcode

laptop

hardware

misplace

lineup

foolproof

overseas

overview

ourselves

commonplace

safeguard

foolproof

Idioms

An idiom is a word or phrase that has a different meaning than what it actually says. For example, to eat like a horse means to eat a lot.

Use the provided context clues to determine the meaning of the bolded idioms.

1. I had **a chip on my shoulder** about an old argument with my best friend.

2. Biometric technology is becoming increasingly more powerful and cost-effective. It is becoming a **piece of cake**.

3. Educational institutions are **racing against the clock** to adopt biometric identification systems.

4. The test questions looked **all Greek** to me since I did not study.

5. The security company wants **an arm and a leg** to install the new surveillance cameras.

5. I was **high as a kite** when I opened the box and saw a Touch Apple Phone.

6.
I would change passwords for finger scans at the drop of a hat.

7.
We cracked up when my grandparents tried taking a selfie with their new cell phone.

7. My dad uses iris recognition at the airport because he has zero tolerance for line ups.

.8. Once I lost my science project, I knew I would have to start from scratch.

Put an X in front of each run-on sentence. Then correct the sentence.

1. Biometrics is the measurement and analysis of people's unique physical and behavioral characteristics it is used mainly for identification .

2. Biometric verification is any means by which a person can be identified by evaluating one or more biological traits like fingerprints, hands ,earlobes, retina and iris patterns, voice waves, DNA, and signatures the oldest form f biometric verification is fingerprinting.

3. Facial-recognition technology has been used by police to pick out individuals in large crowds with considerable reliability hand geometry is being used in industry to provide physical access to buildings.

4. Though the field of biometrics is still new many people believe that biometrics will play an important role in future computers, and personal computers of the future might include a *fingerprint scanner* where you could place your index finger instead of a password to open your computer.

5. There are a huge number of ways that biometric technology can be used it is safer than using passwords at the bank or on your

phone or tablet and here are even uses for it in health care that help doctors keep better patient health records.

6. Biometrics help law enforcement agents catch criminals and are making our airports more convenient they help keep lunch lines moving quickly in schools and make sure no students get lost on field trips.

7. Biometrics technology is considered one of the best security methods of user information and data and is becoming more widely used in consumer applications and it has been used in hospitals, airports, government and law enforcement to keep people safe from a variety of situations.

8. Everyone has a unique, unchanging fingerprint and a fingerprint is made of a series of ridges and furrows on the surface of the finger and these are used to see the uniqueness of the fingerprint and once registered on the fingerprint scanner, the image of these patterns is converted into a code which becomes a digital form of you and this is stored on a database.

9. You should learn about where and how to give biometrics when applying for a visa, study or work permit and this process is fast and safe, and will help to reduce identity fraud.

10. Magnetic cards, bank cards passwords and keys can easily be stolen and biometrics technology identifies an individual on the basis of their fingerprints, face, signature, DNA, iris, typing rhythms etc and provides secure authentication.

Nouns

Underline the nouns in each sentence.

1. Schools in the UK have experimented with fingerprinting pupils then using that data for tasks including library books and lunch payments.

2. Police have been fingerprinting for over 100 years and have used digital biometric databases since the 1980s.

3. Iris recognition has been used in a number of large airports for several years.
4. In prehistoric caves that were inhabited over 30,000 years ago, cave painters used handprints as signatures. It's thought that the handprint was used as a unique signifier.
5. The shape of your ear is just as unique as your fingerprints; no two ears, even on the same person, are alike.
6. Scientists are working on measuring gait - the way people walk and move.
7. Biometrics is gaining widespread use in the business world as means to make the workplace more secure . The technology promises almost foolproof security for facilities and computer networks.
8. Handwriting, voiceprints and even the geometry of your veins are other biometrics that are uniquely yours and useful for security.
9. 689 million people across 21 countries were the victims of cybercrime last year.
10. In an increasingly digital world, protecting confidential information is becoming more difficult.

Singular/Plural

Write the plural of the following words.

- | | |
|------------------|-------------------|
| study _____ | trait _____ |
| people _____ | body _____ |
| industry _____ | study _____ |
| scanner _____ | country _____ |
| process _____ | opportunity _____ |
| city _____ | flash _____ |
| photograph _____ | glasses _____ |
| match _____ | technology _____ |
| business _____ | access _____ |
| breach _____ | address _____ |

Rewrite the following groups of words in possessive form.

1. the sounds of the scanner
2. the generosity of the elders
3. the hands of the thief
4. the scene of the movie
5. the peaks of the mountains
6. the fingerprints of the children
7. the history of biometrics
8. the sisters of Alex
9. the rivers of the South
10. the property of the villagers
11. the voice of the people
12. the photos of the citizens
3. the problems of society
14. the traditions of the families

Verbs

Underline the verb in each sentence.

1. Smartboards, laptops and real-time internet resources are just a part of a student's everyday experience.
2. Finger printing captures rolled images of all ten fingers.
3. Many areas in a school require identification.
4. School libraries store thousands of dollars of schools' assets such as books, periodicals, recordings and pieces of art.
5. Governments around the world turn to biometrics in an attempt to increase security at airports and border crossings.
6. The Touch ID in Apple devices uses fingerprint biometrics.
7. Yankee Stadium has announced plans to roll out new "Fast Access" entries that will, as the name suggests, get visitors into the stadium faster.
8. Airports and border authorities face an unprecedented challenge in balancing the demands for excellent security with passengers' desire to get through the airport as easily as possible.

9.You can't misplace your fingerprint, like you can misplace an access card.

10.Canada has decided to implement Biometrics as part of the screening of persons entering Canada.

Verbs- Past Tense

1. Manual fingerprints recognition studies _____ as early as the end of the 19th Century. (to begin)

2. Apple's latest smartphone has _____ biometric identification. (to introduce)

3. Apple

and Samsung _____ news

when

they utilized fingerprint technologies on their phones. (

to make)

Read the sentence below, making the correct choices from the words in parentheses so that subjects and their verbs agree.

1. Jose (want, wants) to learn about biometrics.

2. You (shop, shops) for a new computer each year in May.

3. Bill (know, knows) that home security is important.

4. His grandparents (tell, tells) Joe all about different kinds of alarms they sell.

5. Biometrics is a field of study which (aim, aims)to identify or recognize people based on traits they have.

6. Jose (offer, offers) his hand in the scanner.

7. The term "biometrics" (is, are) derived from the Greek words "bio" (life) and "metrics" (to measure)..

8. Automated biometric systems (has, have) only become available over the last few decades, due to significant advances in the field of computer processing.

9. Privacy issues (is, are)very, very important.

10. Examples of biometric information (include, includes) fingerprint scans, palm scans, retina or iris scans, facial geometry scans, and voiceprints.
11. Everyday most of us (has, have) to identify ourselves on numerous occasions.
12. We are living in a world that (is, are) going paperless.
13. Biometric technology (is, are) able to recognize a person on the basis of their unique features .
14. Voice recognition systems (work, works) by measuring the characteristics of a person's speech .
15. Mobile users (has, have) become comfortable using tools such as fingerprint identification for access.
16. Two of the biggest drawbacks of biometrics over the years—high costs and privacy concerns— (is, are) still issues.
17. Organizations today (is, are) realizing the advantages of using biometric security devices for protecting work computers
18. Businesses (has, have) been exploring the biometrics technology as a way to finally stop fraud and cybersecurity problems.
19. 52 percent of consumers (want, wants) biometrics to replace passwords, and 80 percent believe it's more secure than passwords.
20. Fingerprint readers (has, have)been fooled using Play-Doh and facial scanners using a special pair of glasses.
21. PINs and passwords (is, are) still the most common way to secure mobile devices.
22. A familiar voice, face, or manner of moving (help, helps)to identify members of our family.
23. Where (was , were) the computer show held?
24. Government(has, have) no business collecting biometric data on children.
25. Biometrics technology(is, are) also helping forensic science, data sharing over networks and reducing identification errors in hospitals.

Adjectives

Underline the adjectives.

1. In 1974, in Ethiopia, scientists discovered an unidentified skeleton. It was too small to belong to the human race. A closer examination of the bones led to the smart conclusion that this species climbed trees.
2. He has a pale narrow face, long brown hair and brown eyes.
3. Biometrics provide an extremely reliable way of identifying individuals.
4. The iris of the eye has complex patterns.
5. That card with the magnetic strip gives you access to an automated banking service.
6. With biometrics, it can be extremely difficult for someone to break into a security system.
7. Smartphones now have fingerprint sensors that replace PIN numbers.

Punctuation

Insert commas where needed.

1. Going as far back as prehistoric times man already had a feeling that certain characteristics such as the trace of his finger were sufficient to identify him and he "signed" with his finger. (3)
2. Biometrics is growing fast particularly in the field of identity documents. (1)
3. In contrast to passwords badges or documents biometric data cannot be forgotten exchanged or stolen and cannot be forged. (6)
4. Law enforcement agencies process store search and retrieve fingerprint images and subject records. (3)
5. The New Zealand Companion Animal Register a nonprofit service dedicated to reuniting lost pets with their owners has announced that it is now using biometric technology to help track lost dogs and cats. (2)
6. Thankfully biometric technology is more accessible than ever before ready to bring better security and greater convenience to

whatever needs protecting from a door to your car to the PIN on your phone. (4)

7.Devices that store biometrics such as finger scanners need to be secure. (2)

8.Airports hospitals hotels grocery stores and even Disney theme parks increasingly use **biometrics**. (3)

9.Unlike keys and passwords your personal traits are extremely difficult to lose or forget. (1)

Sentences

Check if it is a complete sentence.

1.____Fingerprints, facial measurements, the patterns that your veins make and even the way you walk .

2.____Sometimes that means proving to a computer that you are you.

3.____Some biometric measurements are easy to see and others are not.

4.____TThe FBI's Photo System allows law enforcement officials to scan biometrics and have them compared to those associated with wanted criminals.

5.____There are a huge number of applications for biometric technology and more are being invented constantly.

6.____Applications in healthcare that help doctors and clinicians keep better patient health records.

7.____ Biometrics are making our smartphones more usable.

8.____Airline and airport administrators are increasingly looking.

9.____ Just a couple months after becoming the first smartphone maker to make a device with a fingerprint sensor.

10.____The company says that in the first seven days of its use.

11.____Fingerprints at a crime scene can help catch a villain!

12.____So if someone steals your ticket!

13. ____So be careful who you give it to.

14. ____ Keep hair and scarves away from your face to ensure that your face can be seen clearly.
15. ____ What a wonderful discovery that was!

Capitalize words where necessary and add the ending punctuation.

1. we now have the tech to fingerprint babies - but should we
2. taking babies' fingerprints could help monitor vaccinations and identify infants swapped at birth
3. could taking infants' fingerprints could help find missing children
4. what happens to the biometric data in the long run
5. what are some physical characteristics that are unique to each individual
6. you can cancel a library card or not use a PIN but you cannot cancel your unique features
7. in what ways are biometric systems convenient
8. can any two people have same fingerprints
9. is your photograph on your health insurance card
10. dna contains your gene, that are unique to you

Read this paragraph. Add the capitals and punctuation that are missing.

biometric security is on the rise in today's highly digitized world users prefer biometric fingerprint recognition and biometric facial recognition for identification and access to their gadgets this saves them from the task of remembering passwords for almost all the accounts they have on the cloud biometrics security applications are not only limited to this

Rewrite the passage, correcting all capitalization and punctuation mistakes.

police have historically used fingerprints to identify suspects and to prosecute criminals but now using new technology and the science of

biometrics scientists have developed a different and potentially more advanced way of identifying people

Put an X in front of each sentence that is a compound sentence. For those sentences, circle the word that joins the two shorter sentences.

_____1. This is the idea behind biometrics, which was once confined to the realm of spy movies and high-security facilities, but is now increasingly common in everyday security checks at borders, for secure payments and logging in to mobile devices.

_____2. While fingerprints and retina patterns are the most well-known biometric identifiers, they are not the only characteristics that can be used for biometric identification.

_____3. Biometrics is essentially ready for mass application.

_____4. The main challenge in the biometrics field is, needless to say, security.

_____5. Patient misidentification is a real problem, even in countries with advanced health systems.

_____6. The current identification systems in use in healthcare mostly rely on wristbands, which usually include the patient's name and an assigned number or code.

_____7. If you have a **temporary** injury or medical condition on your face or hands, you should wait until it has healed before you give your biometrics.

_____8. In the United States, more than 1 million students are using biometrics every day in the cafeteria, attendance and throughout their schools.

_____9. The ancient Babylonians used fingerprints on clay tablets for business transactions and the ancient Egyptians used bodily characteristics to identify workers .

_____10. With the quick swipe of a finger, students in Berkeley County are able to pay for lunch in less than a second.

Proofread each sentence. Then rewrite the sentence using the correct punctuation for dialogue.

1. My grandmother said do you remember a time when mobile devices and technology weren't a part of your daily activities.
2. The security guard Kevin asked Will you please put your finger on the scanner
3. I'd love to have my photograph taken said Eva
4. Kevin said I'll pick you up at six o'clock
5. Take me, too yelled Sarah
6. Write about what you know said Mrs. DeMarco
7. Nothing ever happens on this street yelled Eva
8. Are you all right asked Eva
9. Why do I have to give my biometrics (fingerprints and photograph) when I apply for a visitor visa, study permit, or work permit asked the traveler
10. I asked the scientist at what age would you fingerprint children

(Science-Tech-Matter-Theme1/2)

Vocabulary

Vocabulary:

solution, solute, solvent, solubility, combustion, fuel, oxidant, chemical change, electric circuit, current source, open and closed circuit, voltages, volts, magnetite, gravity, force, equilibrium, nuclear energy, centripetal force, properties of matter, classify, absorption, mass, gravitational force, mixture, solid, liquid, gas, chemical changes, combustion, energy sources, components of a simple electric circuit, attraction, repulsion,

Which answer does not belong?

1. How can you classify objects?
color, shape, size, real, texture, smell
2. Which materials are absorbent?

paper, sand, sponge, paper towel

3. How can we describe a substance?

weight, color, texture, shape, solubility

4. Which of these substances are not soluble in water?

pepper, jello powder, hot chocolate crystals, sugar

5. What are the states of matter?

liquid, solid, gas, air

6. What can change the properties of matter?

Combustion, erosion, water, oxidation,

7. What are different forms of energy?

heat, sound, water, nuclear, chemical

8. What are the components of a simple electric circuit?

battery, wire, light bulb, switch, source

9. What involves the force of friction?

Rolling an object, sliding an object, playing with a yo-yo, pushing an object

10. What are measuring instruments?

ruler, basket, balance, thermometer, chronometer

Think-Pair-Share

1. List many physical properties of an object, a substance or a material.

2. List as many mixtures in your environment.

3. List as many substances that are soluble in water.

4. List matter that can be changed by chemical changes.

5. List different forms of energy.

6. List electrical conductors.

7. List electrical insulators.

8. List ways we can conserve energy.

9. List ways we use magnets.

10. List examples of when we use force.

(Topics Writing- electricity, magnets, energy, mixtures, fire, circuits, free falling)

Although I already knew that _____, I have learned some new facts about _____. For example, I learned that

_____. I also learned that _____. Another fact I learned is _____.

However, the most interesting thing I learned was _____.

Make a check if the definition is correct

1.

<u>magnetic pole</u>	either of the two points of a magnet where the lines of magnetic force meet and are strongest.
----------------------	--

2.

<u>combustion</u>	the act or process of combining solids with liquids
-------------------	---

3.

<u>saturate</u>	to use friction in pulling or pushing
-----------------	---------------------------------------

4.

<u>fuel</u>	anything such as wood or gasoline that is burned as a source of energy
-------------	--

4.

<u>circuit breaker</u>	a switch or other device that automatically breaks an electric circuit when too much electricity flows through it.
------------------------	--

6.

<u>electromagnet</u>	an iron or steel core with wire wound around it. It becomes magnetic when an electric current is passed through the wire.
----------------------	---

5.

<u>compass</u>	an instrument for showing temperature of heat
----------------	---

8.

<u>equilibrium</u>	a state of balance between two or more forces
--------------------	---

9.

<u>atmosphere</u>	the gases inside the earth
-------------------	----------------------------

10.

<u>uranium</u>	a heavy, silver-white radioactive metal that is used to produce nuclear energy.
----------------	---

What type of energy are we talking about?(light, sound, kinetic, electrical, chemical)

Let us consider the following energy transformations that we encounter on daily basis in our everyday activities.

- When we turn on our flashlight, _____ energy stored in the batteries is converted into _____ energy.

- When we turn on the television, _____energy changes into _____ and _____. Even though undesirable, some amount of heat is also produced.
- When we move a vehicle, the engine converts the _____ energy stored in the fuel into _____, _____ and kinetic energy.
- When we talk on the telephone, the sound we produce is first transformed into _____ energy by the microphone that is transmitted along wires. In the case of cellular phones, the sound is converted into _____ waves and transmitted through the air. The speaker of the phone on the other end changes the electrical energy/ electromagnetic waves back into _____energy.
- An electric cooker in our homes changes _____electrical energy into heat and light. (As the hot plate gets hotter and hotter we see it glowing).
- A fireworks display is one of the most spectacular energy transformations; you can not only see it but also hear, feel and smell it. When fireworks are ignited, the energy stored in the substances inside them is quickly transformed into movement (_____ energy), _____energy, _____ energy and thermal energy .
- Lighting a match is an example of a _____ energy.
- Your house appliances use _____ energy.
- A microwave changes electrical energy to _____ to heat food.
- A ball dropped from a height is an example of a change of energy from potential to _____ energy.

True or False

1. Dark-colored objects tend to absorb light and radiant heat. Their temperatures increase quickly when heat reaches them by radiation. _____
2. Using less energy for heating and cooling also conserves valuable resources such as coal and natural gas that are used to generate electricity. _____
3. A burning candle converts some of the chemical energy stored in wax into sound energy. _____
4. Our bodies convert chemical energy from food into mechanical and electrical energy to allow us to move. _____
5. Chemical energy stored within batteries can be converted to electrical energy. _____

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Snappy Words/ Visuwords

Synonyms:

Cross out the word that is NOT a synonym.

Dissolve (melt, liquefy, combine, break apart, scatter)

Dilute (make thinner, reduce, weaken, thicken)

Accelerate (hurry, quicken, pedal, speed, push on)

Saturate (pour, drench, fill full, soak)

Accumulate (pile up, count, collect, gather up, bring together)

Erosion (eating away, breaking down, gather, crumble)

Ignite (kindle, set fire to, set on fire, heat, inflame)

Eliminate (choose, exclude, remove, expel, reject)

Transform (change the form of, convert, change, robot)

Insulate (protect, close off, shield, to freeze, wrap)

Consume (use up, to close, drain, put away, spend)

Generate (make, create, to push, produce, form)

Resistance (fighting, opposition, refusal, to agree)

Mass (body of matter, portion, lot, tiny)

Disperse (break up, to join, separate, distribute, circulate)

Diagrams (sketch, plan, outline, design, boxes)

Quantity (load, sum, size, smallness)

Observe (look at, ignore, pay attention to, note)

Classify (organize, arrange, file, disorganize)

Methods (break, approach, form, manner)

Effective (useful, helpless, able, forceful)

Evaporation (wet, disappear, escape, fade)

Combustion (ignition, flaming, calm, on fire)

Fuel (gas, food, electricity, something removing energy)

Facilitate (block, aid, help, speed)

Insert (pop in, forget, fill in, inject)

Insulate (uncover, line, tape, wrap)

Harness (check, free, tackle, tie)

Adhere (attach, fasten, glue, loosen)

Force (relaxation, power, physical power, effort)

Equilibrium (balance, evenness, rest, excitement)

Antonyms:

Write an antonym for each word below:

Increase, _____	heavy _____
Repel _____	dull _____
Push _____	thick _____
Temporary _____	early _____
Ancient _____	full _____
Curved _____	near _____
Effect _____	always _____
Flexible _____	strong _____
Escape _____	first _____
Obstruct _____	

Write the words with ing and ed suffixes.

marry	_____	_____
study	_____	_____
carry	_____	_____
reply	_____	_____
copy	_____	_____
worry	_____	_____
cry	_____	_____
supply	_____	_____
bury	_____	_____
identify	_____	_____
multiply	_____	_____

Study each group of words. Write S for synonyms, A for antonyms and H for homophones.

Empty full _____	quick slow _____
Odd unusual _____	throne thrown _____
Warm hot _____	difficult easy _____
Rapid quick _____	cheerful gay _____
Top bottom _____	to, too, two _____
Strong powerful _____	sick well _____
Wring ring _____	silent quiet _____
Huge big _____	there their _____
Stone rock _____	herd heard _____

Homophones

Choose the correct word for the sentence.

1. How much do these pulleys (way, weigh)?
2. Do I have (to, two, too) dissolve the jello powder in the (two, too, to) cups of boiling water (to,two,too)?
3. The student (knew, new) that the sun had evaporated the water in the glass.
4. (There, their, they're) having difficulty lighting (there, their, they're) campfire.
5. If a fire starts in a deep-fryer, the (write, right) thing to do is to disconnect the appliance and put the lid on to cut the oxygen supply.
6. You should (bye, by, buy) a fire extinguisher for your kitchen.
7. A flashlight includes (won,one) battery, electrical wires, a switch and a bulb.
8. Please (clothes, close) the switch.
9. Did you (know,no) that rubber is a good electrical insulator?
10. My (stationary, stationery) bike is in the basement.
11. Do you know the (weight,wait) of the generator?
12. Is this statement (based, baste) on facts?
13. How will a change in water temperature (effect, affect) the salt?
14. These devices all consume lots of energy (accept, except) for the solar powered calculator.
15. The magnet picked up a (peace, piece) of steel.
16. We bury radioactive (waist, waste) in very deep holes in the ground in carefully chosen locations.
17. Did you (know, no) that energy can be transferred even though there are no particles to transfer the energy? This type of energy transfer is called radiation. Radiation is the transfer of energy without any movement of matter.
18. A greenhouse can extend a plant's growing season (bye, buy, by) a few weeks, or it can create a complete microclimate that's a successful substitute for the plant's native environment.

List the base word, prefix and suffix of each word.

	Root	Prefix	Suffix
Unbeatable	_____	_____	_____
Overflowing	_____	_____	_____

Inspecting _____
 Exportation _____
 Reduction _____
 Transportable _____
 Unlawful _____
 Induction _____
 Irresponsibly _____
 Impossible _____
 Malformed _____

Prefixes:

Add the prefix un, im, non re pre inter or mis to the base word in parenthesis. Write the new word in the sentence. Then write the definition of the new word.

1. Magnetite was the _____(cursor) of the magnets we know today.

2. It is _____(safe) to leave a campfire unattended.

3. It is _____(possible) for a magnet to attract a piece of paper.

4. I will _____(read) the test question again because I do not understand it.

5. This very simple experiment _____(produces) the functioning of a well-known instrument.

6. Air resistance is the force that can _____(vent)
 you _____ from advancing quickly on your bike.

7. You must take _____(caution) when working with electrical wires.

8. The wires on this circuit board all seem to be _____(connected).

9. We will _____(new) our online membership to the Science Club.

10. Please place the new _____(used) batteries on the shelf.

Circle the prefix in the following words.

Reproduce decode disassemble ecosystem hypothesis input
Malfunction mismatched interdependence regenerate recycle
Nonliving decompose unimportant preview misplace disagree

Suffixes:

Slightest, portable, extremely, carefully, transformation, , regardless, artificially,
immediately, enjoyable, comforting,

Able,al,ful,less,ous,y,fully

Add a suffix from the list above to the base word in
parenthesis. Write the new word. Then write the definition of the new
word on the line after the sentence.

1. When a solution is saturated, _____ of how much stirring you do,
the solvent no longer dissolves in the in the solute.(regard)

2. To put out a campfire, you can eliminate the fuel by _____
removing the unburned logs, (
care) _____

3. Never put water on oil to put out flames. You should _____
use the fire extinguisher. (immediate)

4. If you see an electrical wire that is _____cut or stripped of its
protective covering, do not touch it. You could get an electric shock. (slight)

5. Windfarms are an example of an environmentally friendly way to produce
electricity from the wind - a _____ resource. (renew)

Underline the suffix. Write the meaning of each word that has a
suffix.

breakable bottle _____

endless pressure _____

hazardous materials _____

inflatable rocket _____

Poisonous liquid _____
dependable source _____
Careless smoker _____
enjoyable experience _____
natural resource _____

Contractions

Underline each contraction. Write the words that make up each contraction on the line.

1. There's much controversy about nuclear energy as there's been several large nuclear meltdowns in history that released radioactive waste that had lasting negative impacts on the environment and surrounding communities.

2. The more students know about which things rely on electricity, the more aware of the potential dangers they'll become, and the more likely they'll be to use it safely.

3. It's been proven by experiments that like magnetic poles repel each other whereas unlike poles attract each other.

4. Kicking a soccer ball isn't an example of centripetal force. Playing with a yo-yo is.

5. If you keep pouring salt into water, at some point the water won't be able to dissolve the salt anymore. Saturation has occurred.

6. They'd use small sticks or crumpled paper to light a fire.

7. I've never had a kitchen fire.

8. She'll buy new batteries for the flashlight.

9. The portable radio doesn't work anymore.

10. Once you've mixed a powder with a liquid, you are preparing what is called a solution.

Compound Words:

Draw a line between the two words that make up the compound word.

Firefighters, classmates, flashlight, pathways, shortcut, hydroelectric, thumbtack, everything, campfire, safety, brainchild, radioactive, fallout, throughout, shipwrecks, landmarks, showerhead, keyboard, sunrise, overdue, payoff,

Figurative Language:

In talking about electricity we can describe electrons passing along a wire and make the comparison to water flowing through a pipe. The words 'flow' and 'current' used to describe moving water help us to describe electrons moving through a conductive metal. Thus in learning this metaphor the student has also learnt some scientific words.

Sentences

Write S in front of each group of words that IS a sentence.

1. _____ When the solute is dissolved.
2. _____ The water in rivers can cause erosion.
3. _____ From the very beginning of the science class.
4. _____ On the way to the campsite.
5. _____ In order for combustion to occur.
6. _____ Leaves turning red in the fall is an example of a chemical change.
7. _____ Sometimes the electric current in the device.
8. _____ A switch is a component that opens or closes an electric circuit.
9. _____ Set of Christmas lights connected in series.
10. _____ A short circuit in a wall outlet may cause a fire or electrocution.

Types of Sentences:

Write D before each declarative sentence, IN before each interrogative sentence,

IM before each imperative sentence, and E before each exclamatory sentence.

Put the correct punctuation at the end of each sentence.

1. _____ Solutions can be liquid, solid, or gas
2. _____ What type of mixture is a solution

3. _____ In a salt water solution, what substance is considered the solvent
4. _____ Never use electrical appliances near water
5. _____ Turn off the light
6. _____ Every time you eat, your body uses chemical reactions to break down your food into energy
7. _____ Do you think that 6 teaspoons of sugar would dissolve in a cup of tea
8. _____ A magnet creates an invisible area of magnetism all around it called a magnetic field
9. _____ when was the magnet first discovered
10. _____ Be more careful with the chemicals

Subjects/Predicates Agreement

A solution (is, are) a mixture made up of at least 2 substances: a solute and a solvent.

The solute (is, are) the substance that (dissolve, dissolves) in the mixture .

Not all substances (dissolve, dissolves) with the same ease.

The solubility of a substance (depend, depends) on the temperature of the solution.

A saturated solution (contain, contains) the maximum quantity solute that the solvent can dissolve.

Every day, the water in rivers (cause, causes) erosion and carries various substances to the ocean.

Rapid combustion (produce, produces) flames, light and heat.

Burning paper, wood and alcohol (is, are) examples of rapid combustion.

Electric current (flow, flows) through wires.

Metals such as copper and aluminum (serve, serves) as good electrical conductors.

In electricity, there (is, are) always a danger of short-circuits.

A magnet always (has, have) two poles: a north pole and a south pole.

Rewrite the sentences by combining them into one sentence.

1. I will dissolve some crystals in the glass. I will dissolve the fruit-flavored crystals in a glass of water.
2. Sugar dissolves easily. It dissolves much more easily than salt.
3. We will put out the fire. We will cover it with sand.
4. Everyone should have a carbon dioxide extinguisher. Everyone should have one in their kitchen in case of a kitchen fire.

5. A flashlight is a small device. It is a perfect example of a simple electrical circuit.
6. A switch is a component. It can open or close an electric circuit.
7. We have electrical wires in our homes. They are made of copper or aluminum wrapped in a protective covering made of rubber or plastic.
8. Thomas Edison was a great inventor. He invented the first light bulb.
9. Magnetite is a rock. Magnetite attracts objects containing iron.
10. Every year fires cause damage. Every year fires cause enormous danger to forest flora and fauna.

Run-On Sentences:

Add punctuation where needed.

Gravity or gravitational forces are forces of attraction it's like the Earth pulling on you and keeping you on the ground that pull is gravity at work.

Every object in the universe that has mass exerts a gravitational pull or force on every other mass the size of the pull depends on the masses of the objects you exert a gravitational force on the people around you but that force isn't very strong since people aren't very massive when you look at really large masses like the Earth and Moon the gravitational pull becomes very impressive the gravitational force between the Earth and the molecules of gas in the atmosphere is strong enough to hold the atmosphere close to our surface.

Hydro energy is the energy from falling water the greater the falling height of the water, the greater the energy hydro-electric generating stations are the largest electrical generating stations in the world the largest electric generating station in the world is in China it is a massive power station, with a length of 2.3 kilometers and a height of 180 meters it is capable of generating 22,500 megawatts, which is enough electricity to supply a typical north American city with a population of 6 million people.

Hydro-electric stations consist of a dam which stretches across a flowing body of water, such as a river the purpose of the dam is to "trap" a large amount of water behind it, and then release that water gradually and in a controlled way to produce electricity the water behind the dam falls from a height equal to the height of the dam upon falling, this water travels to the bottom of the dam through a channel built into the dam at the bottom of the dam the water impinges onto the blades of special turbines this causes the turbines to turn and produce electricity.

Nouns:

Underline all the nouns.

Combustion (or burning) is a chemical process in which fuel reacts with an oxidant to produce heat. The release of heat can produce light in the form of flame.

A car engine and a rocket engine both work by combustion. Combustion in a car motor is different to combustion in a rocket engine. Car combustion is gas catching on fire and exploding in cylinders again and again to push them up and down, making the car move. Rocket combustion is made by rocket fuel exploding out of the back of the rocket moving it up. The burning of most substances is bad for the environment and the ozone layer because it can let off greenhouse gases such as Carbon dioxide. Hydrogen burns cleanly and gives off a lot of heat, but it does not produce much power, and is hard to find.

Fuel reacts with oxygen and releases energy. Complete combustion happens in a plentiful supply of air. Incomplete combustion occurs when the supply of air is limited. Complete combustion releases more energy than incomplete combustion. Incomplete combustion also creates carbon monoxide, and more soot.

The following text can be used for any grammar concept.

Michael Faraday

Michael Faraday was one of the most famous scientists in history, and is known as the 'Father of Electricity'.

He discovered many things...read on to find out more about this amazing man.

Michael Faraday was born on September 22, 1791 in London, England, UK and died on August 25 in 1867 at the age of 75.

Early Life and Education

His father was a blacksmith who wasn't healthy at all. Before they got married, his mother had been a servant. They weren't rich and lived in poverty.

Michael Faraday attended a local school until he was 13. Due to money, he received a very basic education. To earn some money for his family, he started working as a delivery boy for a bookshop. He worked super hard, and eventually he was promoted to become a trainee bookbinder.

How he Learnt about Science

- As a bookbinder, you would never think that this young man would become interested in science, especially as he was very poor and hadn't had a very good education. But he did, and it was all thanks to his work at the bookshop.
- Instead of just binding books, Michael Faraday would read them from cover to cover as he wanted to learn more about the world around him.
- He started reading more and more about science. He heard that a very famous scientist John Tatum was going to be giving some lectures and he really wanted to go. He unfortunately couldn't afford the money that was needed to get his spot. Luckily his brother was very impressed with Michael, and gave him the money to go!

More Interesting Experiments

Michael Faraday was given a great opportunity to attend lectures by the world famous Sir Humphrey Davy, which made him even more interested in science. He started creating more difficult experiments in his lab at the back of the bookshop. He built an electric battery using copper coins and zinc discs separated by moist, salty paper.

Sir Humphrey Davy

Sir Humphrey Davy was one of Michael Faraday's heroes, and he had an unfortunate accident in his lab. He asked Michael to come and work for him writing notes for a couple of days a week. This was like a dream come true for him!

- He became so interested in science that he used some of his money, which was very little, to buy some apparatus and chemicals as he wanted to check that what he was reading was true.

- The he was made chemical assistant at the Royal Institute for one of the most well-known scientists in the world. As the years went by, so he got promoted, and eventually landed up being a professor.

Interesting Facts about Michael Faraday

- He invented the toy balloon
- He got Albert Einstein his first job.
- Michael Faraday had been offered to be buried at Westminster Abbey with all the important kings and queens, but he decided against that. There is a plaque at Westminster Abbey that is dedicated to him and is placed beneath the grave of Sir Isaac Newton.

Singular/Plural:

Write the plural for each noun below:

Technology_____	battery _____
Solubility_____	energy _____
Hero_____	quantity _____
Wire _____	classify _____
Supply_____	penny _____
Key_____	discovery _____
Guess _____	valley _____
Body_____	crash _____
Loss _____	copy_____
Knife_____	half_____
Life_____	foot _____
Switch _____	compass _____
Solid _____	gas _____
Genius _____	surface _____
Radio _____	trolley_____
Hobby _____	moose_____
Turkey_____	

Possessive:

Complete each sentence with the possessive form of the word in parenthesis.

1. (machine) The washing _____ spin cycle uses centripetal force to remove water from clothing.

2. (showerhead) The _____ water falls because of gravitational force.
3. (class) It is this _____ turn to take the test.
4. (pigeons) It is the _____ ability to cover surprising distances with incredible precision that have made them useful to human in finding shipwrecks and boats in danger.
5. (Earth) Uranium is a metal found in the _____ crust.
6. (people) _____ ideas lead to wonderful inventions.
7. (students) The _____ opinions are important.
8. (person) That _____ science experiment was very interesting.
9. (girls) It is the _____ turn to use the ipads.
10. (object) An _____ shape and texture has an impact on how fast it falls.

Use apostrophes to show possession in the following sentences.

1. The students basic understanding of how electricity works can help them recognize the need for safe practices when around electricity.
2. The students posters and charts illustrated that they had a good understanding of electrical safety.
3. Teachers will explore students explanations for why objects may attract, while other times they repel.
4. Jenny wrote Marks initials on their poster about magnets.
5. The buzzers bell was not working.
6. Liza's interview with her grandfather about life without electricity was very interesting.
7. Each persons attention was on the electrical device.
8. All the doors locks were broken.

Verb Tenses:

Underline the verb or verb phrase in each sentence. Then write present, past or future for the tense of each verb.

1. We prepared a drink with strawberry fruit-flavored crystals . _____
2. I will try to dissolve twice the amount of recommended sugar in my porridge. _____
3. Observe the following illustrations on page 4. _____
4. I compared my answers with my classmates. _____
5. Next time I will dissolve the salt in warmer water. _____
6. He drew his own conclusions from the experiment. _____
7. Many devices in our homes are powered by electricity. _____

8. In electricity, there is always a danger of short-circuits. _____
9. We read about magnets yesterday. _____
10. Next time you will use your calculators. _____

Irregular Verbs:

Fill in the chart.

<u>Present</u>	<u>Past</u> (with/without helper)	<u>Future</u>
See	_____	_____
Do	_____	_____
Come	_____	_____
Eat	_____	_____
Drink	_____	_____
Sing	_____	_____
Ring	_____	_____
Freeze	_____	_____
Choose	_____	_____
Speak	_____	_____
Break	_____	_____
Know	_____	_____
Blow	_____	_____
Grow	_____	_____
Fly	_____	_____
Take	_____	_____
Write	_____	_____
Give	_____	_____
Go	_____	_____

Fill in a verb in each sentence.

1. A solution is a specific type of mixture where one substance is _____ into another.
2. Salt water is a mixture of water and salt. You cannot _____ the salt and the salt and water will stay a solution if left _____ alone.
3. Solutions _____ be liquid, solid, or gas.
4. Solubility _____ with temperature.
6. During the experiment, remember to _____ down your observations.
7. Substances that do NOT form solutions when they are mixed with water are _____ insoluble substances.

8. You should always try to _____out the answers to your questions.
9. Children often _____melting and dissolving and this may be a point of discussion. Melting requires heat and dissolving requires a solvent. In making a jelly both are happening when it is added to hot water.
10. Some solids like sand do not _____ in water.

:

Adjectives:

Underline the adjective/adjectives in each sentence.

1. At the spa, we dipped into the ice-cold water and then into what felt like boiling water.
2. I prefer ketchup chips to the salt and vinegar chips.
3. We has a wonderful evening singing around the warm campfire.
4. Rotting vegetables, red leaves in the fall and brown rust on the body of a car are all examples of chemical changes.
5. Electric current flows through wires.
6. Thomas Edison was an amazing inventor who invented the first modern light bulb.
7. Many new appliances have greater energy efficiency than their predecessors.
8. There was a strong wind causing the huge waves at the beach.
9. The first electrical battery was invented by the renowned physicist Alessandro Volta.
10. Scientists must adopt effective work habits.

Write a or an in each blank.

_____air	_____animal	_____energy	_____magnet
____liquid	_____force	_____axis	_____experiment
____mass	_____adaptation	_____friction	_____environment
____erosion	_____investigation	_____mixture	_____chemical
____pulley	_____atom	_____charge	_____energy
____variable	_____circuit	_____series	_____base

Adverbs

Write the correct degree of comparison for the adjective in comparison.

1. (effective) Which is _____ in dissolving the jello powder at the bottom of the glass with water - just stirring it or heating

it?

2. (easy) Sugar dissolves _____ than salt.
- 3, (warm) This is the _____ water I have ever touched.
4. (salty) The water in the oceans is _____ today than it was thousands of years ago.
10. (fast) What is the _____ way to make a fire?
11. (useful) What is _____, electric lights or a cell phone?
12. (small) What is the _____ battery used for?
13. (good) This is the _____ science experiment at the show.
14. (difficult) It is _____ to cycle against the wind.

Interjections:

Rewrite the sentence, using the correct punctuation after each interjection.

1. hurry the house is on fire _____
2. o.k. i'll come right over _____
3. ouch that hurt _____
4. Oh is your brother going too _____
5. Help my foot is caught in the fence _____
6. Hey did you see johns new telescope _____

Tell whether the underlined word in each sentence is a noun, verb, pronoun, adverb, adjective, preposition, conjunction or interjection.

1. The students diluted their sugar in the bowl. _____
2. I'll be able to make my conclusions tomorrow. _____
3. The campers ran away from the fire and ran toward the tent.

4. We will see the Northern Lights out West this summer. _____
5. Whew! I am glad that science test is over. _____
6. Which is the third planet from the sun? _____
7. The firemen are spraying the burning building. _____
8. Please leave the flashlight on the kitchen counter. _____
9. I looked up and saw dark clouds. _____
10. He quickly turned off the switch. _____
11. You should try to save electrical energy in your home. _____
12. Did you try to fix the washing machine? _____
13. The electric heater is behind the door. _____

14. A wind farm was built in Cap-Chat in Gaspé because it is very windy there.

15. We'd better hurry or we will miss the presentation. _____

16. A feather falls slowly because it is greatly affected by air resistance.

17. They were pushing their stalled car down the street. _____

18. Alessandro Volta was an Italian physicist who made the first electric battery.

19. Since the accident at the Chernobyl Nuclear Plant, nuclear safety measures have improved around the world. _____

20. We are studying the unknown potential of nuclear energy.

Capitalization/Punctuation

Capitalization:

Circle each letter that should be capitalized.

1. we use the book science-tech in our grade 6 science class with mrs. graham.
2. antoine lives on main street near the edmund hospital.
3. we will be leaving for florida on thursday, april 3.
4. remember to turn off the christmas lights before you leave.
5. thomas edison lived from 1847-1931.
6. In quebec, electricity is produced mainly by dams and hydroelectric stations.
7. mr. and mrs.white will attend the science fair at mantis high school next saturday.
8. james watt was a scottish inventor who made improvements to the steam engine during the late 1700s.
9. without electricity, you would never be able to watch your favorite tv show or listen to your mp3 player.
10. electricity is measured in units of power called watts, named to honor james watt, the inventor of the steam engine.

Punctuation:

Commas:

1. Rapid combustion produces flames light and heat.
2. For example tap water contains a certain quantity of oxygen nitrogen and other gases.

Galileo was an inventor in the 1600's.
There are four forms of energy.

(Use this text below for a grammar concept.)

Galileo Galilei was born in the year 1564 in the town of Pisa, Italy. When he was 20 years old, he was studying in Pisa. His father wanted him to be a doctor, but Galileo was bored with school except for math. Because math was the one subject where he was doing well, the court mathematician offered to tutor him privately so he could become a qualified mathematician. Galileo's father was disappointed, but he agreed.

Because he needed to earn money, Galileo began experimenting with different things, trying to come up with some sort of invention that he could sell for money. He had a little bit of success with his invention that was like a compass that could be used to measure plots of land. He had already experimented with pendulums, thermometers, and magnets.

When he heard that a Dutch inventor had invented something called a spyglass, but was keeping it a secret, Galileo decided to work on one of his own. Within 24 hours, he had invented a telescope that could magnify things to make them appear ten times larger than real life.

One night, he pointed his telescope toward the sky, and made his first of many space observations: the moon was not smooth, like everyone thought. The moon was covered in bumps and craters. As technology has improved, first Galileo, and then many others, have made improvements on the telescope, the wonderful device that allows us to see from a distance.

Biometrics

Vocabulary

Biometrics, identity, physical characteristics, gait, optical sensor, ink pad, databank, iris, automated banking machines, DNA, arthritis, rheumatism, palm, blindfold, magnetic strip, advantages, disadvantages, fingerprint,

How many syllables?

fingerprint_____ voice _____ recognition_____ gait _____

veins _____ photograph _____ matching _____ movement _____
height _____ biometrics _____ screening _____ motion _____
verification _____ criminals _____ identity _____

Biometrics involve both physiological and behavioral features of a person. Biometric identifiers are the distinctive, measurable characteristics used to label and describe individuals. Categorize these identifiers.

fingerprint, voice, odor, face recognition, iris recognition, walking gait, palm veins, typing patterns, shape of the face, retina scanning, facial features, photograph, height and hair color, DNA matching, movement of the pen when you sign your name,

Physiological

Behavioral

True or False

1. _____ Fingerprints are much harder to fake than identity cards.
2. _____ You can't guess a fingerprint pattern like you can guess a password.
3. _____ You can't misplace your fingerprint, like you can misplace an access card.
4. _____ You can't forget your fingerprints like you can forget a password.
5. _____ Biometric technology is less secure than _____ traditional passwords.
6. _____ Since biometric identifiers are unique to individuals, they are more reliable in verifying identity than token and knowledge-based methods, such as identity cards and passwords.
7. _____ Biometrics is a field of study which aims to identify or recognize people based on traits they have.

Is this an example of biometrics? Yes or No

_____ At Walt Disney World in Florida ,biometric measurements are taken from the fingers of guests to ensure that a ticket s used by the same person from day to day.

_____ At the grocery store, people swipe their credit cards when paying for their purchases.

_____ Using a photo ID at the library to borrow books

_____ Using a spoken pass code

_____ Opening and starting a car with fingerprints, pulse or voice, making keys unnecessary.

_____ Using your license with a photo ID

_____ Using fingerprint scans to enter a building

_____ Using facial recognition instead of a passcode or signature to make payments in stores.

_____ Using fingerprints scan to unlock a car

_____ Using iris identification to allow people to vote

_____ Using my photograph on a travel passport

_____ Fingerprint recognition on an Apple Touch phone

_____ You need to open the door of your house. But you do not use a key. Instead, you just place your thumb on the small machine mounted on the side wall and click - the door opens.

Check what biometrics could help prevent:

___ identify thieves

___ criminals coming into the country

___ identity theft

___ illegal immigrants coming into the country

___ your computer being hacked

_____long lineups in a library

Choose the best word to fit the sentence.

recognition, fingerprints, camera, database,
iris, convenience, identity, change, identification, photograph, security,
biometrics, traits,

1. _____are recognized internationally as one of the most reliable identification tools and are used by immigration and law enforcement agencies around the world.
- 2.The Canadian Air Transport Security Authority has required fingerprints and _____ scans for staff working in secure areas at major airports since 2006.
- 3.The use of biometrics in Canada's immigration program will help visa officers establish the _____ of applicants with greater confidence.
- 4.Since 2013, certain people seeking visas to enter Canada are required to give their fingerprints and have their _____taken as part of their application.
- 5.Biometric screening will give Canada Border Services Agency officials the tools they need to verify the identity of travelers and further improve the _____of our borders.
- 6._____ is the measurement and statistical analysis of people's unique physical and behavioral characteristics.
- 7.The basic premise of biometric authentication is that every person can be accurately identified by his or her intrinsic physical or behavioral _____.
- 8.A _____ securely stores biometric data for comparison.
- 9.Fingerprint _____like on the Apple's Touch ID for the iPhone, is the first mass market application of a biometric authentication factor.

10. Fingerprints do not _____ over a lifetime, while facial appearance can change drastically with age, illness or other factors.
11. Biometrics may scan a person's fingerprint, face, retina, ear and even DNA, using a sensor or _____.
12. Smartphones, tablets and laptops are more portable than desktop PCs, making them easier to be lost or stolen, so biometric _____ can greatly improve security.
13. Biometric verification is becoming popular because of its _____.

What is the most common type of biometrics device in the enterprise?

- ___ Lie detectors that measure pulse rate
- ___ Fingerprint scanners and readers
- ___ Iris and retinal scanners
- ___ Voice and face recognition scanners

Synonyms

Which word is NOT a synonym of the first word?

unique	exclusive, one and only, lone, similar
verify	confuse, check, find out, test
data	evidence, information, date, facts
secure	protected, unsafe, guarded, out of harm's way
authenticate	prove, justify, certify, disprove
permanent	changing, long-lasting, fixed, for keeps
accessible	available, possible, useless, usable
convenient	available, helpful, handy, unpleasant
law enforcement	criminals, police, cops, constables
scan	look away, examine, look through, browse
privacy	secrecy, one's space, quiet, public
features	appearance, face, back, looks
analyze	ignore, inspect, figure out, investigate
eliminate	get rid of, add, wipe out, stamp out
fraud	scam, cheat, fake, truth

Antonyms

Which word is the opposite of the first word?

identical	different	exact	look alike	same
copy	model	image	original	photograph
safe	okay	protected	dangerous	out of danger
request	reply	demand	call	invitation
reliable	good	honest	undependable	positive
concern	disinterest	care	interest	worry
observe	detect	examine	neglect	look at
increase	decrease,	rise,	gain,	step-up

Homonyms

Choose the correct word.

1. Technology that identifies you (by, bye, buy) "something you are" is showing up in e-passports, laptop login screens, smart firearms and even consumer products like the iPhone.
2. Biometrics will also play an increasingly significant (roll,role)as one of the factors in multi-factor authentication.
3. 3.Like all new technologies, advances in biometrics will bring (knew,new) advantages and also (knew,new) risks.
4. I needed a password (ate, eight)characters long.
5. The global biometrics market is growing at a rapid pace (dew,due)to the need for increasing security.
6. Physiological biometric identifiers are related to a person's physicality and include: fingerprint recognition, hand geometry, odour/(sent, scent), iris scans, DNA, palm print and facial recognition.
7. You can get your fingerprints taken once you cut (heels, heals).
8. The students did not get (there, their)homework assignments because they were talking.
9. The computer remained (idol, idle) for 20 minutes.
- 10.. You are asking (too, two, to) many questions.

Find the two words in each sentence that can make a contraction and underline them. Then, write the contraction on the line.

1. If dad finds out I lost my credit card, he will be mad.

2. Our school does not use biometrics.

3. I will find out about the alarm system.

4. These fingerprints are not yours.

5. If I were you, I would get an e passport.

11. Please do not use the same password.

8. Let us check the signature on the check.

Compound Words

Draw a line between the two words that make up the compound word.

fingerprint

everything

databases

forever

photobooth

keyboard

password

handwriting

worldwide

teamwork

smartphone

withdrew

widespread

workforce

barcode

laptop

hardware

misplace

lineup

foolproof

overseas

overview

ourselves

commonplace

safeguard

foolproof

Idioms

An idiom is a word or phrase that has a different meaning than what it actually says. For example, to eat like a horse means to eat a lot. Use the provided context clues to determine the meaning of the bolded idioms.

1. I had a chip on my shoulder about an old argument with my best friend.

2. Biometric technology is becoming increasingly more powerful and cost-effective. It is becoming a piece of cake.

3. Educational institutions are racing against the clock to adopt biometric identification systems.

4. The test questions looked all Greek to me since I did not study.

5.

The security company wants an arm and a leg to install the new surveillance cameras.

5. I was high as a kite when I opened the box and saw a Touch Apple Phone.

6.

I would change passwords for finger scans at the drop of a hat.

7.

We cracked up when my grandparents tried taking a selfie with their new cell phone.

7. My dad uses iris recognition at the airport because he has zero tolerance for line ups.

.8. Once I lost my science project, I knew I would have to start from scratch.

Put an X in front of each run-on sentence. Then correct the sentence.

1. Biometrics is the measurement and analysis of people's unique physical and behavioral characteristics it is used mainly for identification .
2. Biometric verification is any means by which a person can be identified by evaluating one or more biological traits like fingerprints, hands ,earlobes, retina and iris patterns, voice waves, DNA, and signatures the oldest form of biometric verification is fingerprinting.
3. Facial-recognition technology has been used by police to pick out individuals in large crowds with considerable reliability hand geometry is being used in industry to provide physical access to buildings.
4. Though the field of biometrics is still new many people believe that biometrics will play an important role in future computers, and personal computers of the future might include a *fingerprint scanner* where you could place your index finger instead of a password to open your computer.
5. There are a huge number of ways that biometric technology can be used it is safer than using passwords at the bank or on your phone or tablet and here are even uses for it in health care that help doctors keep better patient health records.
6. Biometrics help law enforcement agents catch criminals and are making our airports more convenient they help keep lunch lines moving quickly in schools and make sure no students get lost on field trips.
7. Biometrics technology is considered one of the best security methods of user information and data and is becoming more widely used in consumer applications and it has been used in hospitals, airports, government and law enforcement to keep people safe from a variety of situations.
8. Everyone has a unique, unchanging fingerprint and a fingerprint is made of a series of ridges and furrows on the surface of the finger and these are used to see the uniqueness of the fingerprint and

once registered on the fingerprint scanner, the image of these patterns is converted into a code which becomes a digital form of you and this is stored on a database.

9. You should learn about where and how to give biometrics when applying for a visa, study or work permit and this process is fast and safe, and will help to reduce identity fraud.

10. Magnetic cards, bank cards passwords and keys can easily be stolen and biometrics technology identifies an individual on the basis of their fingerprints, face, signature, DNA, iris, typing rhythms etc and provides secure authentication.

Nouns

Underline the nouns in each sentence.

1. Schools in the UK have experimented with fingerprinting pupils then using that data for tasks including library books and lunch payments.

2. Police have been fingerprinting for over 100 years and have used digital biometric databases since the 1980s.

3. Iris recognition has been used in a number of large airports for several years.

4. In prehistoric caves that were inhabited over 30,000 years ago, cave painters used handprints as signatures. It's thought that the handprint was used as a unique signifier.

5. The shape of your ear is just as unique as your fingerprints; no two ears, even on the same person, are alike.

6. Scientists are working on measuring gait - the way people walk and move.

7. Biometrics is gaining widespread use in the business world as means to make the workplace more secure. The technology promises almost foolproof security for facilities and computer networks.

8. Handwriting, voiceprints and even the geometry of your veins are other biometrics that are uniquely yours and useful for security.

9.689 million people across 21 countries were the victims of cybercrime last year.

10. In an increasingly digital world, protecting confidential information is becoming more difficult.

Singular/Plural

Write the plural of the following words.

study _____

trait _____

people _____

body _____

industry _____

study _____

scanner _____

country _____

process _____

opportunity _____

city _____

flash _____

photograph _____

glasses _____

match _____

technology _____

business _____

access _____

breach _____

address _____

Rewrite the following groups of words in possessive form.

1. the sounds of the scanner
2. the generosity of the elders
3. the hands of the thief
4. the scene of the movie
5. the peaks of the mountains
6. the fingerprints of the children
7. the history of biometrics
8. the sisters of Alex
9. the rivers of the South
10. the property of the villagers
11. the voice of the people
12. the photos of the citizens
3. the problems of society
14. the traditions of the families

Verbs

Underline the verb in each sentence.

1. Smartboards, laptops and real-time internet resources are just a part of a student's everyday experience.
2. Finger printing captures rolled images of all ten fingers.
3. Many areas in a school require identification.
4. School libraries store thousands of dollars of schools' assets such as books, periodicals, recordings and pieces of art.
5. Governments around the world turn to biometrics in an attempt to increase security at airports and border crossings.
6. The Touch ID in Apple devices uses fingerprint biometrics.
7. Yankee Stadium has announced plans to roll out new "Fast Access" entries that will, as the name suggests, get visitors into the stadium faster.
8. Airports and border authorities face an unprecedented challenge in balancing the demands for excellent security with passengers' desire to get through the airport as easily as possible.
9. You can't misplace your fingerprint, like you can misplace an access card.
10. Canada has decided to implement Biometrics as part of the screening of persons entering Canada.

Verbs- Past Tense

1. Manual fingerprints recognition studies _____ as early as the end of the 19th Century. (to begin)
2. Apple's latest smartphone has _____ biometric identification. (to introduce)
3. Apple
and Samsung _____ news _____ when
they utilized fingerprint technologies on their phones. (
to _____ make)

Read the sentence below, making the correct choices from the words in parentheses so that subjects and their verbs agree.

1. Jose (want, wants) to learn about biometrics.
2. You (shop, shops) for a new computer each year in May.
3. Bill (know, knows) that home security is important.
4. His grandparents (tell, tells) Joe all about different kinds of alarms they sell.
5. Biometrics is a field of study which (aim, aims) to identify or recognize people based on traits they have.
6. Jose (offer, offers) his hand in the scanner.
7. The term "biometrics" (is, are) derived from the Greek words "bio" (life) and "metrics" (to measure)..
8. Automated biometric systems (has, have) only become available over the last few decades, due to significant advances in the field of computer processing.
9. Privacy issues (is, are)very, very important.
10. Examples of biometric information (include, includes) fingerprint scans, palm scans, retina or iris scans, facial geometry scans, and voiceprints.
11. Everyday most of us (has, have) to identify ourselves on numerous occasions.
12. We are living in a world that (is, are) going paperless.
13. Biometric technology (is, are) able to recognize a person on the basis of their unique features .
14. Voice recognition systems (work, works) by measuring the characteristics of a person's speech .
15. Mobile users (has, have) become comfortable using tools such as fingerprint identification for access.
16. Two of the biggest drawbacks of biometrics over the years—high costs and privacy concerns— (is, are) still issues.
17. Organizations today (is, are) realizing the advantages of using biometric security devices for protecting work computers

18. Businesses (has, have) been exploring the biometrics technology as a way to finally stop fraud and cybersecurity problems.

19. 52 percent of consumers (want, wants) biometrics to replace passwords, and 80 percent believe it's more secure than passwords.

20. Fingerprint readers (has, have)been fooled using Play-Doh and facial scanners using a special pair of glasses.

21. PINs and passwords (is, are) still the most common way to secure mobile devices.

22. A familiar voice, face, or manner of moving (help, helps)to identify members of our family.

23. Where (was , were) the computer show held?

24. Government(has, have) no business collecting biometric data on children.

25. Biometrics technology(is, are) also helping forensic science, data sharing over networks and reducing identification errors in hospitals.

Adjectives

Underline the adjectives.

1. In 1974, in Ethiopia, scientists discovered an unidentified skeleton. It was too small to belong to the human race. A closer examination of the bones led to the smart conclusion that this species climbed trees.
2. He has a pale narrow face, long brown hair and brown eyes.
3. Biometrics provide an extremely reliable way of identifying individuals.
4. The iris of the eye has complex patterns.
5. That card with the magnetic strip gives you access to an automated banking service.
6. With biometrics, it can be extremely difficult for someone to break into a security system.
7. Smartphones now have fingerprint sensors that replace PIN numbers.

Punctuation

Insert commas where needed.

1. Going as far back as prehistoric times man already had a feeling that certain characteristics such as the trace of his finger were sufficient to identify him and he "signed" with his finger. (3)
2. Biometrics is growing fast particularly in the field of identity documents. (1)
3. In contrast to passwords badges or documents biometric data cannot be forgotten exchanged or stolen and cannot be forged. (6)
4. Law enforcement agencies process store search and retrieve fingerprint images and subject records. (3)
5. The New Zealand Companion Animal Register a nonprofit service dedicated to reuniting lost pets with their owners has announced that it is now using biometric technology to help track lost dogs and cats. (2)
6. Thankfully biometric technology is more accessible than ever before ready to bring better security and greater convenience to whatever needs protecting from a door to your car to the PIN on your phone. (4)
7. Devices that store biometrics such as finger scanners need to be secure. (2)
8. Airports hospitals hotels grocery stores and even Disney theme parks increasingly use **biometrics**. (3)
9. Unlike keys and passwords your personal traits are extremely difficult to lose or forget. (1)

Sentences

Check if it is a complete sentence.

1. _____ Fingerprints, facial measurements, the patterns that your veins make and even the way you walk .
2. _____ Sometimes that means proving to a computer that you are you.

3. ____ Some biometric measurements are easy to see and others are not.
4. ____ TThe FBI's Photo System allows law enforcement officials to scan biometrics and have them compared to those associated with wanted criminals.
5. ____ There are a huge number of applications for biometric technology and more are being invented constantly.
6. ____ Applications in healthcare that help doctors and clinicians keep better patient health records.
7. ____ Biometrics are making our smartphones more usable.
8. ____ Airline and airport administrators are increasingly looking.
9. ____ Just a couple months after becoming the first smartphone maker to make a device with a fingerprint sensor.
10. ____ The company says that in the first seven days of its use.
11. ____ Fingerprints at a crime scene can help catch a villain!
12. ____ So if someone steals your ticket!
13. ____ So be careful who you give it to.
14. ____ Keep hair and scarves away from your face to ensure that your face can be seen clearly.
15. ____ What a wonderful discovery that was!

Capitalize words where necessary and add the ending punctuation.

1. we now have the tech to fingerprint babies - but should we
2. taking babies' fingerprints could help monitor vaccinations and identify infants swapped at birth
3. could taking infants' fingerprints could help find missing children
4. what happens to the biometric data in the long run
5. what are some physical characteristics that are unique to each individual
6. you can cancel a library card or not use a PIN but you cannot cancel your unique features
7. in what ways are biometric systems convenient

8. can any two people have same fingerprints
9. is your photograph on your health insurance card
10. dna contains your gene, that are unique to you

Read this paragraph. Add the capitals and punctuation that are missing.

biometric security is on the rise in today's highly digitized world users prefer biometric fingerprint recognition and biometric facial recognition for identification and access to their gadgets this saves them from the task of remembering passwords for almost all the accounts they have on the cloud biometrics security applications are not only limited to this

Rewrite the passage, correcting all capitalization and punctuation mistakes.

police have historically used fingerprints to identify suspects and to prosecute criminals but now using new technology and the science of biometrics scientists have developed a different and potentially more advanced way of identifying people

Put an X in front of each sentence that is a compound sentence. For those sentences, circle the word that joins the two shorter sentences.

_____1. This is the idea behind biometrics, which was once confined to the realm of spy movies and high-security facilities, but is now increasingly common in everyday security checks at borders, for secure payments and logging in to mobile devices.

_____2. While fingerprints and retina patterns are the most well-known biometric identifiers, they are not the only characteristics that can be used for biometric identification.

_____3. Biometrics is essentially ready for mass application.

_____4. The main challenge in the biometrics field is, needless to say, security.

_____5. Patient misidentification is a real problem, even in countries with advanced health systems.

_____6. The current identification systems in use in healthcare mostly rely on wristbands, which usually include the patient's name and an assigned number or code.

_____7. If you have a **temporary** injury or medical condition on your face or hands, you should wait until it has healed before you give your biometrics.

_____8. In the United States, more than 1 million students are using biometrics every day in the cafeteria, attendance and throughout their schools.

_____9. The ancient Babylonians used fingerprints on clay tablets for business transactions and the ancient Egyptians used bodily characteristics to identify workers .

_____10. With the quick swipe of a finger, students in Berkeley County are able to pay for lunch in less than a second.

Proofread each sentence. Then rewrite the sentence using the correct punctuation for dialogue.

1. My grandmother said do you remember a time when mobile devices and technology weren't a part of your daily activities.

2. The security guard Kevin asked Will you be please put your finger on the scanner

3. I'd love to have my photograph taken said Eva

4. Kevin said I'll pick you up at six o'clock

5. Take me, too yelled Sarah

6. Write about what you know said Mrs. DeMarco

7. Nothing ever happens on this street yelled Eva

8. Are you all right asked Eva

9. Why do I have to give my biometrics (fingerprints and photograph) when I apply for a visitor visa, study permit, or work permit asked the traveler

10.I asked the scientist at what age would you fingerprint children

Grammar



Earth and Space

Vocabulary

thunder, lightning flashes, lightning, infrared rays, ultraviolet rays, tides, solar system, galaxies, comets, asteroids, satellites, plains, glacier, a planet's relief, ice cap, desert, collision, continent, magma, tectonic plates, horizon, static electricity, dilates, radiation, ozone layer, crude oil, fossil fuels, astronomer, orbit, shooting star, aurora polaris, hemisphere, solar winds,

	fire	electricity	magnets	energy		
burn						
current						
magnetite						
windmill						
volts						
north pole						
Edison						
wires						
compass						
electrocution						
attraction						
fuel						
combustion						
Insulator						

wood							
ignition							
turbine							
voltage							
switch							
transform							
lightbulb							
battery							
oxidant							
biomass							
coal							
current							
Michael Faraday							
electroma gnet							
dams/wat er							
series circuit							
flame							

	Earth	sky	tides	solar system
landforms				
lithospere				
oceans				
cumulous				
friction				
relief				
satellites				

gravitational							
volcano							
hailstones							
planets							
glaciers							
Sun							
Full moon							
Tectonic plates							

atoms ,electrons ,negative ,protons, charged ,neutral ,neutrons, positive ,lose ,gain

Choose the best word from the word box to complete each sentence.

1. Matter is made up of tiny particles called

_____.

2. _____ and

_____ are found at the center, or nucleus, of an atom.

3. _____ are small particles that orbit the nucleus.

4. Electrons have a _____ charge.

5. Protons have a _____ charge.

6. Neutrons have a _____ charge.

7. When you rub two objects together, they can _____ or _____ electrons.

8. When electrons move from one object to another they become _____ with static electricity.

Tell whether each pair of objects will attract or repel each other.

9. positive - positive _____
10. positive - negative _____
11. negative-positive _____
12. negative-negative _____

Choose the best answer to fit the sentence.

The _____ is an incredible light show caused by collisions between electrically charged particles released from the sun that enter the earth's atmosphere and collide with gases such as oxygen and nitrogen. The lights are seen around the magnetic poles of the northern and southern hemispheres.

(aurora, orbits, falling stars, meteorites)

What is not part of the Earth's lithosphere?

crust, mantle, magma, core

A meteorologist would not study

- a. the changing patterns of weather
- b. global warming
- c. a satellite in orbit
- d. changes in the Earth's surface

Which is NOT true?

- a. The tectonic plates are part of the lithosphere.
- b. The tectonic plates are light and soft.
- c. The tectonic plates are heavy and move slowly.
- d. The tectonic plates can cause powerful collisions.

What can cause changes in the Earth's surface?

- a. the movement of tectonic plates
- b. gravity
- c. glaciers
- d. water and wind

e. temperature

These are types of clouds.

- a. altocumulus
- b. cumulus
- c. white and fluffy
- d. Cumulonimbus

Examples of fossil fuels (nonrenewable energy sources)

- a. sunlight
- b. coal
- c. natural gas
- d. oil

Examples of alternative energy sources

- a. wind energy
- b. solar energy
- c. tidal energy
- d. water

Examples of celestial bodies are

- a. planets
- b. comet
- c. darkness
- d. asteroids

Why satellites are used

- a. to spy on other countries
- b. to reduce gravity
- c. to search for more information about the sun, planets, etc...
- d. to study weather

What is not an effect of global warming?

- a. melting of polar ice caps
- b. longer and colder winters
- c. rising sea levels
- d. new deserts

In the case of lightning, you should stay away from

- a. golf clubs, lakes, telephone, trees

- b. your car
- c. the basement of your house
- d. the kitchen appliances

The ocean's tides are caused by

- a. Wind moving across the surface of the water
- b. Energy from the Sun's rays
- c. Gravitational pull of the Sun and Moon, and the rotation of the Earth
- d. All of the above

What is the tidal range?

- a. The time it takes for a low tide to become a high tide
- b. The time between high tides
- c. The rate at which the tide changes
- d. The speed of the tidal current
- e. The difference in sea level between the low tide and high tide

The location of volcanoes has to do with the surface of the earth. The surface, or the crust, is broken up into large pieces called _____ . These lie on top of the hot, liquid mantle.

- a. magmas
- b. tectonic plates
- c. continents
- d. Shells

The difference between lava and magma

- a. Magma is molten rock found beneath the Earth's surface. When it reaches the surface, it is called lava.
- b. Magma is hard rock below the Earth's surface. Lava is soft rock.
- c. Cone volcanoes have magma and dormant volcanoes have lava.
- e. Magma is thick. Lava is thin.

How is the Earth's mantle like a peanut butter sandwich?

- a. The mantle has three layers, like a peanut butter sandwich.
- b. The mantle is sticky, like peanut butter.
- c. The top and bottom layers of the mantle are the thickest parts.
- d. Peanut butter sandwiches feel like the hard rocks found in the mantle.

The name of our *Galaxy*

- a. International Space Station
- b. Solar system
- c. Milky Way
- d. Earth

How long does it take Earth to orbit around the sun?

- a. 365 days
- b. 30 days
- c. 100 days
- e. 24hours

Where does gravity pull people/objects?

- a. sideways
- b. upwards
- c. towards the CENTER of a planet or star.
- d. outwards

In a diagram, label the four layers of the Earth - outer core, inner core, crust and mantle.

Synonyms:

Which word is not a synonyms for the first word?

dilate: expand, swell, to blow up, enlarge

deplete: dry up, change, waste, decreased
reduce: lower, repeat, cut down, chop,
artificial: unreal, old, fake, false
ludicrous: bizarre, silly, crazy, large
Plains: mountains, fields, valleys, hills
Erosion: to make up, to grow, to destruct, to fold
Collide: crash, mend, fix, crush
Fissures: solid, closure, cracks, smoothness
Glaciers: icebergs, snow, mountain, slope
Humid: moist, dry, cold, cool
Summit: base, bottom, the top, the middle
Dilate: widen, cut, lower, reduce

Antonyms:

Circle the word that is opposite in meaning.
ascending: slowly, descending, lower, below
upward: together, downward, sideways, circular
acquire: get rid of, to help, to throw, to climb
consumer: not use, to build, to see, to eat
artificial: fake, phony, bogus, natural
Ancient: old, modern, elder, fossil
Accelerate: hurry, block, delay, slow down
diminish: lower, enlarge, close. shrink,

Homonyms:

1. The students were observing the water level indicator that they installed at the end of the (peer, pier).
2. We will wait for the ocean (tied, tide) to go out before going swimming.
3. The student got a (son, sun) burn because he forgot to apply cream.
4. We could (here, hear) the booming thunder outdoors.

5. Sarah checked the (whether, weather) before getting dressed.
6. The St. Lawrence River is (affected, effected) by the tide at the mouth of the river to Three Rivers.
7. Following oil spills in the oceans, coastal regions are covered in oil, which threaten (they're, their, there) marine and coastal wildlife.
8. I (complimented, complemented) the class on their science projects.
9. It is no longer (aloud, allowed) to throw away recyclable materials into the garbage dumps.
10. In order to reduce greenhouse gas emissions, Canada must reduce (its, it's) use of fossil fuels and replace them with clean and renewable energies.
11. The crater left a (whole, hole) that was 10 feet wide.
12. We need to (lesson, lessen) our use of electricity.
13. Many countries now have a (presence, presents) in maintaining international space stations.
14. The sun's ultraviolet (rays, raise) are responsible for sunburns.
15. Because heat rises, the magma just below the Earth's surface tries to find a (weigh, way) to rise to the earth's surface.
16. (Some, Sum) volcanoes erupt with lava and others erupt with hot ash.
17. He (new, knew) that volcanoes come in different shapes and sizes.
18. The biggest volcano on Earth is Mauna Loa, in Hawaii. It is over 13,000 feet above (sea, see) level.
19. Your science project was (dew, due) last Monday.
20. Astronauts are (sent, scent, cent) into space only after years of training.
21. He (rowed, road, rode) quickly into shore when he heard the thunder.
- 22.

Many words in science consist of three parts: a prefix, a root and a suffix. Here's an example:

GEO MORPH OLOGY

Prefix root suffix

You can figure out the meaning of the word if you know the meaning of each of the three parts.

GEO means earth MORPH means form or shape OLOGY means the study of

So the word GEOMORPHOLOGY is the "the branch of science that studies the forms and shapes of the Earth".

Prefixes:

renewable, nonrenewable, unleash, discharge, ultraviolet, unlimited, deplete, inconvenient, disappear, impossible, disintegrate, solar wind, solar cell, solar system

Suffixes: equipment, lowest, highest, astronomical, terrestrial oceanography, photography, topography, meteorologist, geologist, environmentalist, meteorologist, geologist, environmentalist

Contractions:

1. The student did not know the difference between a mountain and a volcano.
2. I am formed when magma pierces through the Earth's crust.
3. The Earth's surface is not smooth.
4. The Earth's surface did not always look as it does today.
5. You should not swim in a lake during a storm.
6. Do not play cards under the tree during the storm. Come indoors.
7. You would not want to be struck by lightning.
8. He will stop cutting the grass until after the storm passes.
9. You are going to get a sunburn if you do not sit in the shade.
10. White clothing does not absorb the sun's rays.
11. Oil, natural gas and coal are not renewable energy sources.

12. We were not able to see the Northern Lights last month.
13. They have not heard any thunder tonight.
14. Do not play with the plug.
15. Ash and cinder volcanoes have steep sides but are not very tall.
16. The biggest volcano in the solar system is not on planet Earth - it is on Mars!
17. Who is the first person that walked on the moon?
- 18.

Compound Words:

landforms, landscape, hailstones, doorknob, sunburn, sunbathe, woodstove, sunlight, carpool, firewood, seashore, sandcastle, classmate, spaceship, pathways, photosphere
greenhouse,

Figurative Language:

Scientist David Deutsch, for example, called the earth "rice pudding"—hard on the surface but pliable and liquid beneath when discussing plate tectonics. This gave a great image for a 1960s audience to latch onto to understand continental drift.

Galileo and Newton both thought of the universe as a machine composed of mechanical parts. This led to everyone thinking of everything as a machine.

The apple is like the moon.

Earth is a galactic heat engine.

The solar system is like a neighbourhood.

Hyperbole, Personification, Metaphor

1. The sky misses the sun at night.
2. I've told you a million times to clean your room!

3. Her head was spinning from all the new information about the volcano.
4. You are my sunshine.
5. The scientists are busy as bees as they study the weather satellites.
6. The sky was full of dancing stars.
7. The sun played hide and seek with the clouds.
8. My eyes widened at the sight of a million stars.
9. My dad is a volcano ready to explode.
10. The lightning was fireworks in the sky.
11. The stars are sparkling diamonds.
12. The thunder was a mighty lion.
13. His heart was as cold as ice.
14. Allie's cell phone dropped into the toilet like a falling star.
15. The clouds were like ice-cream castles in the sky.
16. This car goes faster than the speed of light.
17. There is an endless battle between thermodynamics and gravity.
18. I feel like a cloud in the air.
19. The universe is like a computer consisting of complex networks with interrelated parts.
20. The solar system is like a neighborhood.
21. He is a great scientist, but he's a bit of a dinosaur.
22. These elements react as fast as lightning.
23. This reaction is a lightning bolt.
24. The two species are as different as night and day.
25. The sun peeked happily from behind a cloud.
26. Lightning danced across the sky.
27. The science project was a bear.
28. The sun greeted me this morning.
29. The stars winked at me.
30. He is as quick as lightning.
31. The clouds were like ice-cream castles in the sky.

32. Paul carried his science project to school like he was transporting explosive glass.

33. It was as light as air.

34. You are my sunshine.

35. The clouds sailed across the sky.

36. He thinks that the world revolves around him.

Simile Examples

As big as _____

As brave as a _____

As busy as a _____

As clean as a _____

As clear as _____

As cold as _____

As cool as a _____

As cute as a _____

As dark as _____

As easy as _____

As fit as a _____

As fresh as a _____

As gentle as a _____

As hairy as an _____

As happy as a _____

As hard as a _____

As helpless as a _____

As heavy as _____

As high as a _____

As hot as _____

As hungry as _____

As light as a _____

As long as a _____

As mad as a _____

As old as the _____
As pleased as _____
As pretty as a _____
As quick as a _____
As quiet as a _____
As right as _____
As sharp as a _____

Idioms

Match the idiom with its meaning.

- | | |
|--|----------------------|
| 1. go to bed with the sun | a. very seldom, rare |
| 2. once in a blue moon | b. go to bed early |
| 3. follow you to the ends of the earth | c. extremely happy |
| 4. over the moon
someone you love | d. Committing to |

Would you rather follow your best friend or your neighbor to the end of the earth?

Would you rather go to bed with the sun or wake up with the sun?

Would you rather eat ice cream or broccoli once in a blue moon?

Would you rather be over the moon about giving gifts to people or over the moon receiving gifts from people? Why?

Describe three benefits of going to bed with the sun.

_____ Describe two things you do once in a blue moon.

_____ Describe something you would win and you would be over the moon about winning.

Sentences

Incomplete:

1. The Milky Way at night only
2. Galaxies are groups of stars that form a system
3. Hundreds of millions of stars in the sky
4. Meteorites are blocks of rock of different sizes that roam space.
5. Magma is the hot liquid rock under the surface of the Earth. It is known as lava after it comes out of a [volcano](#)
6. The world's largest desert
7. Scientists have dated the Earth as being between 4 and 5 billion years old
8. Is a large group of tiny water droplets that we can see in the air
9. Cumulus clouds are puffy, like cotton floating in the sky
10. _____ Around one quarter of lightning
11. Is the sun.
12. _____ Solar winds.

Subjects/Predicates:

Underline the verb in each sentence.

1. We saw the Northern Lights in British Columbia.
2. Auroral displays appear in many colours although pale green and pink are the most common.
3. Winter in the north is generally a good season to view lights.

4. Skywatcher Shawn White takes many photos of the Northern Lights.
5. The northern lights, or aurora borealis, offer an entrancing, dramatic, magical display .
6. At the center of our solar system lies the sun, the yellow star that sustains life on our planet.
7. At the center of the sun, the temperature is 15 million degrees Celsius.
8. Earth is constantly bombarded with debris, radiation and other magnetic waves from space that could threaten the future of life as we know it.
9. The lights of the Aurora generally extend from 80 kilometres to as high as 640 kilometres above the earth's surface.
10. People still travel thousands of miles to see the brilliant natural light shows in Earth's atmosphere.

Compound:

Combine the following sentences.

1. A third of the world's population does not have access to electricity. A third of the world's population must find other means to satisfy their energy needs.
2. Oil tanker spills affect the environment. Oil tanker spills have a direct impact on the environment.
3. In North America we consume energy. 90% of the energy consumed is derived from oil, natural gas and coal.
4. Fossil fuels produces gases. These gases pollute the air.
5. We need to reduce the use of fossil fuels. We need to find alternative energy sources.
6. In some places wind energy can be developed. In some places solar energy and tidal energy can be developed.
7. Carpooling is good. Carpooling is a way to help reduce our consumption of oil.

Complete each sentence with **and**, **for**, **or**, or **but** after the comma to make a compound sentence. Remember that the second part must have a subject and a verb.

1. The sky is blue,

_____.

2. We went swimming,

_____.

3. I do not feel very hot,

_____.

4. We built a

sandcastle, _____

5. It is a full moon tonight,

6. He watched the video about the moon,

8. I bought an electric car

9. Mr. Elsy is a scientist

10. The surface of the Earth looks flat

Run-On:

Punctuate these paragraphs.

Tides are the rise and fall of the levels of the ocean they are caused by the gravitational pull of the sun and moon as well as the rotation of the Earth **Tides** cycle as the Moon rotates around the Earth and as the position of the Sun changes throughout the day the sea level is constantly rising or falling

The highest tides called spring tides are formed when the earth sun and moon are lined up in a row this happens every two weeks during a new moon or full moon smaller tides called neap tides are formed when

the earth sun and moon form a right angle this causes the sun and moon to pull the water in two different directions neap tides happen during a quarter or three-quarter moon.

The difference between high tide and low tide is called the tidal range the biggest tidal range is found in the Bay of Fundy Canada where sea level rises and falls as much as 16 m in just over 6 hours the smallest tidal ranges are less than 1 m

In most places, there are two tides a day they each have a high point (the **high tide**) and a low point (the **ebb tide**) we speak of the tide coming in towards the high tide and ebbing (or going out) towards the ebb tide.

Volcanoes can be very dangerous and can do a lot of damage volcanic eruptions have caused mudslides avalanches and floods they can also trigger other things like tsunamis earthquakes and rockfalls in the United States the most active volcanoes are in Alaska Washington Oregon California and Hawaii in fact the Hawaiian islands were actually created by volcanoes under the ocean

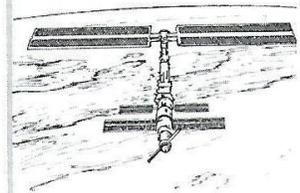
Name _____

The International Space Station

side by side, sixteen countries have been working on the International Space Station (ISS). The biggest scientific project in the history of the world, the ISS will be four times as large as the Russian Mir space station. The ISS will be 109 meters (356 ft) across and it'll be 88 meters (290 ft) long. Solar panels covering almost an acre will provide power for lab tests. The ISS will weigh over 450,000 kilograms (one million lbs)!



- names of nationalities
- abbreviations
- acronyms



MONDAY

WEEK 27

The United States is leading the program, but the ISS is truly an international project. Every country is making a part of the final ISS. Canada, for example, is building a Robotic Arm. The arm will be 17 meters (55 ft) long and it'll be used to build other parts of the ISS. The European Space Agency, for its part, is building a lab and transport vehicles. Russia, moreover, is building two research modules. One of the Russian modules will transport and transfer crews.



- names of nations
- names of nationalities
- abbreviations
- acronyms

TUESDAY

WEEK 27

Name _____

ISSs orbit will provide scientists with a big view of Earth. They'll be able to see 85% of the globe's surface and he'll be able to see 95% of the world's population. This big view to be sure will allow scientists to study Earth's weather. The ISS is a unique science lab that will allow scientists to study do experiments and grow things. Without Earth's gravity the results may differ from experiments done on Earth. By comparing results scientists may make new discoveries about how things work.



- names of places
- acronyms
- commas

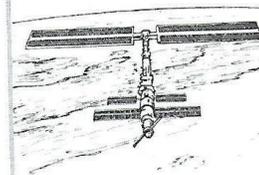
WEDNESDAY

WEEK 27

the ISS, a science space station makes some people want a space hotel. A room would be very expensive but there are millionaires, rock stars, and others who would pay for it. There are a few space tourists in fact who have already flown into space. They pass medical tests and they paid a lot of money. Worried that tourists will take away from science, some people are not happy about space tourists. Despite their objections, space vacations may not be that far off.



- acronyms
- commas



THURSDAY

WEEK 27

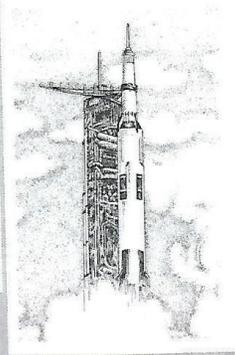
Name _____

Apollo 13

On April 13, 1970, astronaut James Lovell and his crew were on their way to the moon. Fifty-six hours into the mission, the No. 2 oxygen tank exploded, causing great damage to the Odyssey their spaceship. "Houston, we've had a problem," Lovell told Mission Control. Lovell and his men were 200,000 miles from Earth, floating through space without any assurance that he would ever return.



- hyphens
- names of spacecraft
- quotes



MONDAY

WEEK 33

Immediately after the explosion, Lovell reported seeing some type of gas leaking from the ship. It was oxygen! The astronauts had to abandon ship and seek refuge in the Aquarius, the lunar module. The Aquarius is not made to support three men; it had been designed to land on the moon. As the astronauts did their best to conserve power, heat, and water, Mission Control had to come up with an immediate plan to keep the men from dying of dangerous carbon dioxide poisoning?



- names of spacecraft
- semicolons

TUESDAY

WEEK 33

Grammar

Nouns:

Underline the nouns in each sentence.

1. The solar system is primarily composed of the sun, which is a star, and eight planets , including the Earth.
2. Not all planets are the same size and not all the same distance from the sun.
3. The sun belongs to a galaxy called the Milky Way.
4. Comets are masses of very hard ice and stones that travel in space around the sun.
5. Today, several countries, including Canada, the United States, France, Japan and Russia, are working together to build an international space station.
6. Satellites transmit a variety of information as they orbit Earth.
7. Shooting stars are just tiny bits of dust entering the Earth's atmosphere from space.
8. About 30% of the Earth's surface is covered with land, while about 70% is covered by oceans.
9. The Earth's temperature, weather, atmosphere and many other factors are just right to keep us alive.
10. The Sun is so large that the Earth could easily fit inside the Sun a million times.

Write a or an in each blank.

1. _____asteroid
2. _____area
3. _____planet
4. _____earthquake
5. _____volcano
6. _____scientist
7. _____comet
8. _____orbit
9. _____energy
10. _____satellite

Singular/Plural:

Write the plural form of these words.

galaxy, flash, ray, energy, volcano, beach, glacier, unleash, sky, wind, success, man, antenna, country, video, species, buzz, glass, foot, half, fly, stone, thermometer, flashlight, journey, enemy, dock, volcano, zero, solo, knife, army, copy, shelf, duty, life, shelf, butterfly

Possessive:

Underline the correct possessive of each underlined noun.

The tides of the St.Lawrence River

The St.Lawrence River's tides

The St.Lawrence Rivers' tides

The tides of the oceans

The ocean's tides

The oceans' tides

The satellites of the planets

The planet's satellites

The planets' satellites

The gravitational pull of the Earth

The Earth's gravitational pull

The Earths' gravitational pull

The devices on satellites

The satellite's devices

The satellites' devices

Apostrophes:

Put apostrophes in the right places.

1. Albert Einstein was more than just a scientist. He was a genius who changed our lives. He made some of sciences biggest discoveries.
2. Einsteins discoveries made things like television, DVD players, and garage door openers possible.
3. The students experiments are on display in the gym.
4. The Earths outer surface is called the crust.
5. Earth is moving around the Sun because of the Suns huge gravitational pull.
6. Scientists research has identified 15 large tectonic plates within Earth's crust.
7. Tectonic plates movements are horizontal and very slow over Earths surface.
8. Earthquakes vibrations in the ground result from movement along breaks in Earth's lithosphere.
9. Seismologists evaluate earthquake risk in several ways because earthquakes threaten peoples lives and property.
10. Pangaea is the name of the single landmass that broke apart 200 million years ago and gave rise to todays continents.

Verb Tenses:

Irregular Verbs:

Pronouns:

Rewrite these sentences, using the correct pronouns in place of the underlined words.

1. The Sputnik 1 and the Alouette 1 were both satellites that had successful missions in space.

-
2. Galileo Galilei was one of the pioneers of astronomy.

3. The tides in the Bay of Fundy in New Brunswick are so high because of the Bay's long funnel shape.

4. Weather satellites help scientists to monitor the weather and climate of the Earth.

Adjectives:

Underline the adjectives in each paragraph.

The secrets buried inside our amazing planet are revealed by recording and studying things called **seismic waves**. Caused by things like scary earthquakes, loud explosions and the regular movement of our oceans, there are two types of seismic wave - a **shear wave**, which won't travel through liquid; and a **pressure wave**, which moves through both liquid and solids. These waves show that the Earth is made from five layers: the inner and outer core, the lower and upper mantle, and the crust.

Lightning is an electric current. Within a thunder cloud way up in the sky, many small frozen raindrops bump into each other as they move around in the air. All of those collisions create an electric charge. After a while, the whole cloud fills up with electrical charges. The positive charges or protons form at the top of the cloud and the negative charges or electrons form at the bottom of the cloud. Since opposites attract, that causes a positive charge to build up on the ground beneath the cloud. The ground's electrical charge concentrates around anything that sticks up, such as high mountains, people, or single trees. The charge coming up from these points eventually connects

with a charge reaching down from the clouds and - zap - bright lightning strikes!

Solar is the Latin word for "sun" - and it's a powerful source of energy. In fact, the hot sunlight that shines on the Earth in just one hour could meet world energy demand for an entire year!



We can use solar power in two different ways: as a heat source, and as an energy source. People have used the sun as a heat source for thousands of years. Families in ancient Greece built their simple warm homes to get the most sunlight during the cold winter months.

Write an adjective for each noun.

1. _____ machine
2. _____ planet
3. _____ energy
4. _____ sunburn
5. _____ sky
6. _____ fire

7. _____ clouds
8. _____ storm
9. _____ lightning

Is the word in dark print an adjective or an adverb?

1. **Blue** sky _____
2. Sped **quickly** _____
3. **Often** hear _____
4. **Black** clouds _____
5. Flew **high** _____
6. Ended **suddenly** _____
7. **Bright** sun _____
8. Flashed **brightly** _____
9. **Hot** water _____
10. _____

Conjunctions:

Circle the conjunction in each sentence.

1. Kaboom! Watching and listening to a thunderstorm can be exciting, but you wouldn't want to be out in it.
2. All thunderstorms make lightning and lightning is dangerous.
3. Lightning is most likely to hit tall objects, including trees or mountains or people - anything that stands up from the ground.
4. Thunderstorms can happen at any time of the year, but they happen most often during the spring, summer and fall.
5. Lightning seems to be clear or a white-yellow color, but it really depends on the background.
6. How hot is a lightning bolt? Very hot for it is about 54,000 degrees Fahrenheit — roughly five times hotter than the surface of the sun!
7. An average lightning bolt can release enough energy to operate a 100-watt light bulb for more than three months straight

8. Lightning kills about 2,000 people a year, so stay inside during lightning storms.

9. It is easy to calculate how far away the lightning is by counting the seconds between the flash of lightning and the clap of thunder.

Calculate this at the rate of one mile for every 5 seconds.

10. Do not play golf during a thunderstorm, for many golfers have been hit by lightning because of their metal clubs.

Interjections:

Circle each interjection. Put an exclamation point after each interjection.

1. Look out There's lightning.
2. Alas
3. I have completed the project at last.
4. Slow down We don't want to miss the Northern Lights.
5. For goodness sake
6. Hurrah Our recycling project won first prize in the competition.
7. Aha Now I understand the dangers of lightning.
8. Look There is a shooting star.
9. Please Look at the full moon.
10. Bah I've seen the moon through the telescope so many times.
11. Cheers We finally completed our model of the solar system.
12. All right We can go swimming as the tide has gone out.
13. Watch out You can still get a sunburn on a cloudy day.
14. Oh my gosh
15. Stop it You are just wasting electricity.

Capitalization/Punctuation

Capitalization:

Circle the letters that should be capitalized.

1. the [eruption of vesuvius](#) destroyed pompeii and herculaneum that were two resort towns in italy for wealthy roman families. the eruption is the first known accurate account of the eruption of an explosive volcano.
2. captain pierre simon laplace was the first person to accurately explain tides.
3. i said to mom, " maxime's family is going to the science center on sunday. May i go with them?"
4. supervolcano eruptions occur only about once every 100,000 years. lake toba in indonesia, lake taupo , new zealand, and yellowstone national park in the usa are all super volcanoes.
5. there are usually about 50 to 60 volcanoes that are erupting on our planet at the present time. most of them are located on the pacific ring of fire.
6. the himalayas mountains were formed when the indian plate collided with the asian plate over 60 million years ago.
7. the earth is the third planet from the sun and comes between the planet venus and the planet mars.
8. the earth is not an exact sphere; the diameter going round the north and south poles is slightly less than the diameter round the equator.
9. the earth has seven large land masses called continents. The continents include africa, asia, north america, south america, europe, oceania, and antarctica. it also has 5 major bodies of water called oceans including the atlantic, pacific, indian, southern, and arctic oceans. The highest point above sea level on earth is mount everest and the lowest point is the mariana trench
- 10 before december, 1968, people really had no idea what the earth looked like from space. The apollo 8 crew snapped photos of the earth from the [moon's orbit](#).
11. this week in class we read the book our solar system.

Punctuation

End of Sentence Punctuation

1. The warmest planet is Venus
2. How many planets are in our solar system
3. Our team won
4. What fun
5. Do you remember when Neil Armstrong walked on the moon
6. How exciting
7. Jupiter is the large planet known for its Red Spot
8. Where is the telescope
9. What is the planet with the brightest rings

Commas

1. Solar energy is used for heating water for domestic use space heating of buildings drying agricultural products and generating electrical energy.
2. Recyclable materials include many kinds of glass paper metal plastic textiles and electronics.
3. On average 16% of the money you spend on a product pays for the packaging which ultimately ends up as rubbish.
4. Hydropower is a clean renewable and reliable energy source which converts kinetic energy from falling water into electricity without consuming more water than is produced by nature.
5. Mechanical energy is derived by directing harnessing or channeling moving water. The amount of available energy in moving water is determined by its flow or fall.
6. Because many types of plants and animals have specific habitat requirements climate change could cause disastrous losses of wildlife species .

7. Arctic ice is rapidly disappearing and the region may have its first completely ice-free summer by 2040 or earlier. Polar bears and indigenous cultures are already suffering from the sea-ice loss.

8. An upsurge in the amount of extreme weather events such as wildfires heat waves and strong tropical storms is also attributed in part to climate change by some experts.

9. For the 2 billion people without access to electricity it would be cheaper to install solar panels than to extend the electrical grid.

10. Solar water heaters do not pollute. By investing in one you will be avoiding carbon dioxide nitrogen oxides sulfur dioxide and the other air pollution and wastes created when your utility generates power or you burn fuel to heat your household water.

13. We will visit the Science Museum at 1000 Sherbrooke Street Montreal Quebec.

14. What happened at the space station on December 6 1999?

15. Yes we can recycle those bottles.

Quotation Marks:

1. Charles Kuralt said It takes an earthquake to remind us that we walk on the crust of an unfinished earth.

2. We cannot delude ourselves - we must understand our resources problems, and we must face up to them now said the environmentalist to the reporter.

3. Lightning frightens me exclaimed the little boy.

4. Ginette asked what is the biggest plant?

5. Jupiter is by far the biggest planet replied her brother.

6. I just saw a video about Jupiter said Cindy.

Paragraph Writing/Organizers

Topic Sentences:

How do mountains form on the Earth's surface?

How do volcanoes form?

You should not swim in a lake during a storm.

There are many ways that you can stay safe when there is lightning.

Nicholaus Copernicus is the founder of modern astronomy.

There are many ways to conserve energy at home.

The important thing about _____ is....

