

College of Engineering
English 123
BA, LNK, SJH, CEA
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Student Name _____

Section Number _____

Unit 3

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لن تستطيع فعل أكثر مما
تعتقد عن نفسك.

Unit 3 - Reading 5

Lightning Strikes

- (1) You know that lightning is actually electricity. But how does lightning occur? The ancient Greeks noticed that when they rubbed a piece of amber* with wool or fur, the amber would attract or pick up small pieces of leaves or dust. This was called the amber effect. The English word *electricity* comes from the Greek word *electron*, which means amber. To demonstrate this concept, perform the following experiment:
1. Arrange tiny pieces of paper on a table.
 2. Rub a plastic comb with some woolen fabric.
 3. Hold the comb over the pieces of paper and observe what happens. The paper should be attracted to the comb. (Note: The comb must be rubbed again to sustain its magnetic capacity.)
- (2) In the eighteenth century, scientists discovered that there are two types of electric charge. The American Benjamin Franklin named these charges positive and negative. It was noted that like charges repel each other and unlike charges attract each other.
- (3) In the experiment above, the magnetic effect occurs because rubbing the comb causes some electrons from the cloth to run on to the comb. The cloth then has fewer electrons (which are negative) and thus becomes positively charged. The comb therefore has additional electrons, giving it a negative charge. The comb attracts the paper because opposite charges attract. Similarly, you have probably experienced an electric shock when you removed synthetic clothing from a clothes dryer, combed your hair, or touched a metal doorknob after walking across a thick rug.
- (4) A spectacular example of this phenomenon occurs during a storm. Inside a cloud, currents of air rub against the raindrops. As the electrons are rubbed off, one cloud becomes positively charged and another negatively charged. The opposite charges attract each other, and an enormous spark of electricity jumps from one cloud to another or from a cloud to the ground. Thus, lightning is produced.

* Amber is a hard, yellowish-brown substance found in certain soils.

لن يمكنك تحقيق شيء تعتقد أنك عاجز عن تحقيقه.

Unit 3 - Reading Comprehension

1. According to Paragraph 4 in the reading, lightning occurs because d .
 - a) clouds can gain or lose electrons
 - b) oppositely charged clouds attract each other
 - c) electricity can jump from a negatively or positively charged cloud
 - d) all of the above**
2. According to Paragraph 3 in the reading, an object that has lost electrons will b .
 - a) be negatively charged
 - b) be positively charged**
 - c) have no charge
 - d) none of the above
3. It can be concluded from Paragraph 2 in the reading that Benjamin Franklin c .
 - a) died when struck by lightning
 - b) discussed his ideas with the ancient Greeks
 - c) understood the underlying reasons for magnetism**
 - d) was attracted and repelled by the study of electricity
4. According to the reading, the ancient Greeks used their word for amber to refer to magnetic phenomena because d .
 - a) ancient amber was made of wool
 - b) Greek combs were made of amber
 - c) lightning is the same color as amber
 - d) they rubbed amber to produce magnets**
5. According to the reading, which of the following statement is not true?
 - a) Positive charges repel each other.
 - b) Negative charges attract each other.**
 - c) Lightning is a natural phenomenon.
 - d) Sparks of electricity can jump from one place to another.
6. Another good title for this reading would be b .
 - a) The Ancient Greeks
 - b) The Power of Electrons**
 - c) Wool and Amber Contain Electrons
 - d) Benjamin Franklin Studies Electric Charges

من أكبر متع الحياة القيام بما
يصفه الناس أنه مستحيل.

Unit 3 - Reading 6

The Magic of a Magnet

- (1) What is the magic that enables a magnet to pick up an iron nail but not a wooden pencil, a rubber eraser, or a copper penny? Magnetism, named for the ancient Greek town of Magnesia, is a force of nature that manifests itself differently in different materials. Although every substance is magnetic to some degree, magnetic effects are much more powerful with iron and steel than with materials such as wood, rubber, copper, and glass.
- (2) If you have ever played with two magnets, you know the powerful force with which certain ends are drawn toward each other and other ends push away from each other across space. The magnets' two north poles repel each other, and their two south poles also repel each other.
- (3) Physicists have always been intrigued by the fact that when a magnet is cut in half, two new magnets are formed, each with a north and south pole. If we were to cut these two magnets, we would have four magnets, each with a north and south pole. The north pole cannot be isolated from the south pole. Magnetic poles never exist alone.
- (4) The ability of magnetic iron ores, or lodestones, to attract iron and other substances was known to the ancient Greeks. Later, around the year 1100, the Chinese discovered that if a splinter of lodestone were suspended from a thread, it would pivot and point north and south, thus making a very accurate compass. This phenomenon was explained in 1600 by William Gilbert, Queen Elizabeth's doctor, who speculated that the earth itself was a gigantic magnet.
- (5) The earth's magnetism is one of the greatest mysteries of science which no one has been able to explain. Although the earth has an iron core, that core cannot be a magnet because at great heats (over 1000° C at the center of the earth) iron loses its magnetism. Another mystery is the fact that the magnetic poles are actually located over a thousand miles from the North and South Poles and they are not even at exactly opposite sides of the earth. In addition, by studying the age of rocks, scientists have discovered that from time to time in the history of the earth, the earth's magnetic field actually reverses itself as the magnetic South Pole becomes the magnetic North Pole and vice versa!
- (6) When viewed under an electron microscope, a piece of iron can be seen to be made up of many tiny magnetic areas called domains. When these domains are orderly arranged, the iron is magnetized. When these domains are randomly arranged, the iron will not act as a magnet. This explains why a magnet will pick up unmagnetized pieces of metal such as a steel paperclip. The force of the magnet causes all the tiny magnetic domains of the paperclip to align themselves. Then the north pole of the paperclip is attracted to the south pole of the magnet, and the south pole of the paperclip is attracted to the north pole of the magnet.
- (7) In 1832, the connection between magnetism and electricity was simultaneously discovered by the Englishman Michael Faraday and the American Joseph Henry. They found that when a magnet is passed through a coil of wire, it produces an electric current in the wire. This occurs because the wire contains unattached electrons. A magnetic field moving near the wire pulls these free electrons along the wire, creating an electric current.
- (8) Not only does a moving magnetic field induce electricity, but the opposite is also true. Electric currents produce magnetism. When a current of electricity is passed through a conductor, a magnetic field forms around it. Thus, a magnetic field may be induced by an electric current. Scientists believe that all magnetic fields are produced by electric currents. This is the true magic of a magnet.

Reading 6- The Magic of a Magnet

1. It can be concluded from the reading that the magnet in a compass pivots so that one end points almost north and the other end points almost south because a .
a) the earth's positive and negative poles are located near the North and South Poles
b) the positive end of a compass magnet points toward the earth's positive pole
c) the positive pole is always located near the earth's North Pole
d) all of the above
2. According to Paragraph 5 in the reading, the earth's magnetism is not completely understood as scientists do not know c .
a) why iron loses its magnetism
b) the temperature of the earth's core
c) why the magnetic poles reverse themselves
d) the locations of the magnetic north and south poles
3. It can be concluded from Paragraphs 1 and 6 in the reading that magnetic force can readily align the magnetic domains of c so that they can be picked up by a magnet.
a) wooden pencils, erasers, and copper pennies
b) wood, rubber, copper, and glass
c) paperclips
d) none of the above
4. The main idea of Paragraph 8 in the reading is that c .
a) electric currents can produce magnetism
b) magnetism can produce an electric current
c) electric currents can produce magnetism and vice versa
d) a magnetic field may be induced by an electric current
5. A better title for this reading would be d .
a) Magnets Are Not Magic
b) Electricity and Magnetism
c) Magnetism Can Be Scientifically Explained
d) all of the above

نصف من تعرفهم لا يهتمون بشكواك،
النصف الآخر يسعدهم وقوعك
بمشكلة، فما جدوى الشكوى؟

UNIT 3 VOCABULARY

C. Write your answers (a, b, c, or d) on the blanks provided.

1. The sick man was d in a special room so that other people would not catch his disease.

- a) suspended b) cancelled c) experienced **d) isolated**

2. We put lubricating oil on the hinges of the door so that it would a more easily when opening and closing.

- a) pivot** b) arrange c) sustain d) observe

3. We checked our answer again to be sure that our work was c.

- a) additional b) intriguing **c) accurate** d) unattached

4. The d reason for his failure was that he did not study.

- a) ancient b) celestial c) synthetic **d) underlying**

5. Most students are b that the final exam will be given at the end of May.

- a) massive **b) aware** c) gigantic d) magnetic

6. To c means to add liquid.

- a) moist b) moisture **c) moisturize** d) moistness

7. Underground petroleum deposits are the remains of d organisms.

- a) aligned b) orderly c) experienced **d) ancient**

8. The chemistry students b all of their experiments in the chemistry laboratory.

- a) attracted **b) performed** c) rubbing d) speculated

9. The first compasses were produced using small pieces of ore called b.

- a) fabrics **b) lodestones** c) shocks d) domains

10. To theorize means almost the same as to a.

- a) speculate** b) repel c) bind d) reverse

يحارب الجبان، لكن ذلك
حين لا يتمكن من الهرب.

UNIT 3 VOCABULARY

1) repel	resist	يتنافر
2) intriguing	interesting	مثير للاهتمام
3) isolate	separate	يعزل
4) suspended	hung	معطل، معلق، متوقف
5) pivot	rotate	يدور على محور
6) accurate	correct	دقيق
7) at random	without order	عشوائي
8) aligned	in a line	مرتب
9) simultaneously	at the same time	بنفس الوقت
10) celestial	heavenly	سماوي
11) massive	huge	ضخم
12) repulsive	dislike	تنافر
13) underlying	basic	أساسي
14) bind	tie	يربط، يقيد
15) aware	conscious	مدرك
16) cancel	neutralize	يعادل

Prefixes, Word Roots, and suffixes

1) syn-	together or with	مع، بنفس الوقت
2) -chrono-	time	متعلق بالزمن
3) -ize	(verb ending)	نهاية فعل
4) dis-	not	للنفي
5) -son-	sound	متعلق بالصوت
6) -ance	(noun ending)	نهاية فعل
7) photo-	light	متعلق بالضوء
8) -electro-	electricity	متعلق بالكهرباء
9) -ic	(adjective ending)	نهاية اسم
10) bio-		متعلق بالأحياء
11) aero-		متعلق بالهواء
12) thermo-		متعلق بالحرارة
13) hydro		متعلق بالماء

أشعر أحدا بأهميته، وستملك قلبه.

1) lightning	برق	24) spark	شرارة
2) actually	فعلياً	25) magic	سحر
3) ancient	قديم	26) enable	يُمكّن من
4) rub	يحك	27) degree	درجة
5) attract	يجذب	28) ore	ركاز
6) pick up	يلتقط	30) lodestone	حجر المغناطيس
7) effect	تأثير	31) splinter	شظية، قطعة مكسورة
8) electron	إلكترون	32) thread	خيوط
9) perform	ينجز	33) accurate	دقيق
10) experiment	تجربة	34) speculate	يخمن، يتفكر
11) arrange	يرتب	35) gigantic	ضخم
12) fabric	قماش	36) mystery	لغز
13) observe	يلاحظ	37) core	قلب
14) sustain	يتحمل	38) reverse	يعكس
15) magnetic	مغناطيسي	39) view	منظر، ينظر
16) capacity	كثافة	40) microscope	مجهر
17) electric charge	شحنة كهربية	41) domain	مجال
18) additional	إضافي	42) orderly	مرتب
19) similarly	متماثل	43) connection	ارتباط
20) experience	تجربة	44) coil	لفة سلك
21) shock	يصد، صدمة	45) unattached	غير مرتبط
22) synthetic	صناعي	46) magnetic field	وسط مغناطيس
23) spectacular	مثير، رائع، مذهل	47) induce	يحث

ينغمس أغلب الناس في التذمر حول أشياء لا يملكونها، إنهم ينسون الكثير الذي يملكونه.

Grammar-Compound, Complex, and Compound-Complex Sentences

Compound Sentences:

- consist of two independent clauses that are joined by a comma and a conjunction (and, but, or, nor, for, so, and yet)

Complex Sentences:

- consist of one independent clause and at least one dependent clause

Compound-Complex Sentences.

- consist of two independent clauses joined by a comma and a conjunction and at least one dependent clause
- the dependent clause may be with the first independent clause (before the comma / conjunction), with the second independent clause (after the comma / conjunction), or with both the first and second independent clauses (before and after the comma / conjunction) when there are two or more dependent clauses

Examples of Compound-Complex Sentences:

Most objects expand when they are heated, **but** some do not.

(dependent clause before the comma / conjunction)

Heat is energy, **and** the energy that the sun radiates heats the earth.

(dependent clause after the comma / conjunction)

Silver is a substance that readily conducts heat, so silver is not used when an insulator is needed.

(dependent clause before and after the comma / conjunction)

D. **Circle** the word that best describes each of the following sentences.

- One pole is positive, and the other is negative.
 - compound**
 - complex
 - compound-complex
- The pole that is positively charged attracts negatively charged domains.
 - compound
 - complex**
 - compound-complex
- Every magnet has two poles, and if a magnet is cut in half, each new half will have two poles.
 - compound
 - complex
 - compound-complex**
- The earth is a gigantic magnet, but its poles are not located exactly opposite each other.
 - compound**
 - complex
 - compound-complex
- The iron was viewed under an electron microscope so that areas called domains could be seen.
 - compound
 - complex**
 - compound-complex
- The earth's hot iron core cannot be a magnet because iron loses its magnetism at high temperatures.
 - compound
 - complex**
 - compound-complex
- The domains in steel readily align, so steel paperclips are objects that can easily become magnetized.
 - compound
 - complex
 - compound-complex**
- Because opposites attract, the north pole of the paperclip is attracted to the south pole of the magnet.
 - compound
 - complex**
 - compound-complex

إذا لم يكن لك حاسدٌ فلا خَيْرَ فيكَ.

Sentence Fragments, Run-On Sentences, and Comma Splices

Sentences:

- begin with a capital letter and end with a full stop and express a complete thought
- contain at least one independent clause (including at least one subject and one main/finite verb)

Sentence Fragments:

- are **incorrect** because they begin with a capital letter and end with a full stop but do **not** express a complete thought
- do **not** contain an independent clause (do **not** include one subject and one main/finite verb)
- may be missing the subject
- may be missing the main/finite verb
- may be missing both the subject and the main/finite verb
- will **not** be accepted in writing assignments

Examples:

In ancient Greece, was called the amber effect.

(missing the subject - incorrect)

The English word *electricity* from the Greek word *electron*.

(missing the main/finite verb - incorrect)

When a plastic comb is rubbed with wool.

(missing the subject and the main/finite verb - incorrect)

E. Circle the answers that best describe each of the following sentence fragments.
 [Note: Sentence fragments are **incorrect** and will **not** be accepted in writing assignments.]

1. Rub the comb causes it to gain electrons.

a) no subject

b) no main/finite verb

c) no subject and no main/finite verb

2. Lightning actually electricity.

a) no subject

b) no main/finite verb

c) no subject and no main/finite verb

3. During a storm, because clouds gain and lose electrons.

a) no subject

b) no main/finite verb

c) no subject and no main/finite verb

4. A spark of electricity from a cloud to the ground.

a) no subject

b) no main/finite verb

c) no subject and no main/finite verb

5. The combs rubbed with wool so that they become negatively charged.

a) no subject

b) no main/finite verb

c) no subject and no main/finite verb

6. The man who named them positive and negative.

a) no subject

b) no main/finite verb

c) no subject and no main/finite verb

7. Which can be aligned by the power of a magnet.

a) no subject

b) no main/finite verb

c) no subject and no main/finite verb

8. After it is rubbed, a comb as a magnet.

a) no subject

b) no main/finite verb

c) no subject and no main/finite verb

9. By passing an electric current through a wire that is coiled around a conductor.

a) no subject

b) no main/finite verb

c) no subject and no main/finite verb

إن الحياة ليست بروفة لتجربة ثوب،
إنها أصلية وواحدة فقط.

Compound Sentences:

- consist of two independent clauses that are joined by a comma and a conjunction (and, but, or, nor, for, so, and yet)

Run-On Sentences (Run-Ons):

- consist of two independent clauses joined together **without** a comma and a conjunction
- are **incorrect** and will **not** be accepted in writing assignments

Comma Splices:

- consist of two independent clauses joined together by a comma only, **without** a conjunction
- are **incorrect** and will **not** be accepted in writing assignments

Examples:

- The magnet was cut in **half, and two** new magnets were formed. (compound sentence - **correct**)
 The magnet was cut in **half two** new magnets were formed. (run-on - **incorrect**)
 The magnet was cut in **half, two** new magnets were formed. (comma splice - **incorrect**)

F. Circle the answer that best describes each of the following groups of words.
 [Note: Run-Ons and Comma Splices are **incorrect** and will **not** be accepted in writing assignments.]

- There are now two magnets, and each has a south pole and a north pole.
 a) **compound** b) run-on c) comma splice
- All substances are somewhat magnetic some materials are more magnetic than others.
 a) compound **b) run-on** c) comma splice
- Two north poles will repel each other, two south poles will repel each other.
 a) compound b) run-on **c) comma splice**
- Magnetism is a natural phenomenon it manifests itself differently in different materials.
 a) compound **b) run-on** c) comma splice
- Magnets can pick up iron nails, but they cannot pick up wooden pencils.
 a) **compound** b) run-on c) comma splice
- The magnet was passed through a coil of wire, an electric current was produced.
 a) compound b) run-on **c) comma splice**
- Faraday was an Englishman, and Henry was an American.
 a) **compound** b) run-on c) comma splice
- Wires contain free electrons, these free electrons can create an electric current.
 a) compound b) run-on **c) comma splice**
- A magnetic field can pull free electrons along a wire this produces an electric current.
 a) compound **b) run-on** c) comma splice
- Magnetic fields can induce electric currents, and electric currents can produce magnets.
 a) **compound** b) run-on c) comma splice

أجمل الأنهار لم نرها بعد، أجمل الكتب لم نقرأها بعد، أجمل أيام حياتنا لم تأت بعد.

Review of Active and Passive Finite Verbs Active Verbs

- Active verbs are finite verbs that tell **what the subject does or is**.
- **Active verbs** may be **transitive** or **intransitive**.
- **Active verbs** that are **intransitive** are not followed by direct objects and cannot be changed to passive.

Examples:

Atoms **may split**. (active intransitive verb / no direct object)
 Apples **are** nice. (active intransitive verb / no direct object)

- **Active verbs** that are **transitive** are followed by **direct objects** and can generally be changed to passive. The direct object of the active sentence becomes the subject of the passive sentence.

Examples:

Food **stores** energy. (active transitive verb / with direct object 'energy')
 changed to passive: Energy is stored in food. (passive transitive verb / with subject 'energy')

- Some **active sentences** that contain **transitive verbs** with **direct objects** cannot be changed to passive. (see chart on page 17 in Unit 1)

Examples:

Moving objects **have** kinetic energy. (active transitive verb / with direct object 'kinetic energy')
Kinetic energy is had by moving objects (no passive / **to have** is always active)

Direct Object Test

- To find out if a verb has a direct object, ask “**what?**” or “**whom?**” after the verb.
- If there is an answer, then the answer is the direct object of the verb.
- If there is no answer, then the verb does not have a direct object and is intransitive.

Examples:

Food molecules **store** energy.
 (store what? *energy* - *energy* is the direct object)
 Einstein **expressed** this concept in a formula.
 (expressed what? *this concept* - *concept* is the direct object)
It gives up neutrons when it splits.
 (gives up what? *neutrons* - *neutrons* is the direct object)
 Fusion **takes place** in the sun.
 (takes place what? There is no answer, so there is no direct object.)

The following chart lists commonly used **intransitive verbs**. Intransitive verbs must always be **active** and **cannot** be changed to **passive** because they do not take direct objects.

Intransitive Verbs		
Always Intransitive		Sometimes Intransitive
to be	to occur	to continue
to become	to remain	to leave
to consist of	to result in	to return
to flow	to rise	
to go	to sleep	
to happen	to stay	

أن نحيا ذلك شيء نادر الحدوث،
 الحقيقة أن معظم الناس
 متواجدون فقط، هذا كل شيء.

Passive Verbs

- **Passive verbs** are finite verbs that tell what is/was done to the subject. The subject of a passive sentence receives the action of the verb.
- **Passive verbs** are commonly used in scientific writing because the actor of the action is frequently not important in science.

Examples:

When a piece of wood is burned, ashes remain.
(Who burns the wood? Anyone! The actor is not important.)

- **Passive sentences** can only be changed to active sentences when the actor is understood.

Examples:

The ancient city was destroyed around the year 200 B.C.
(Who or what destroyed the city? People? Fire? An earthquake? Unknown! / cannot be changed to active)

The following chart lists verbs that are always (or generally) active and verbs that are always (or generally) passive.

Active and Passive Verbs	
Always Active or Generally Active Verbs	Always Passive or Generally Passive Verbs
<u>intransitive verbs</u> (to be, to fall, to occur, etc.) to have to get to contain (meaning to have)	verbs with actors that are <u>not understood</u> is / are composed of is / are located (meaning occur)

An Imperative Sentence:

- instructs, requests, or commands
- usually has a subject (you) that is not stated but is understood
- requires the base verb form (the infinitive without 'to')
- requires 'do not' and the base verb form for negative instructions, commands, or requests

Examples:

Close the window. (subject - you / main/finite verb - close)
Sit down and be quiet. (subject - you / main/finite verbs - sit - be)
Do not touch the chemicals on the table. (subject - you / main/finite verb - do touch)

Imperative Sentences:

- can be changed to passive sentences if they contain direct objects (The new subject will be the direct object including all of its modifying adjectives.)

Examples:

Close the window. (direct object including all modifiers – the window) **The window is closed.**

Sit down and be quiet. (no direct object - no passive) \emptyset

Do not touch the chemicals on the table. (direct object including all modifiers - the chemicals on the table)
The chemicals on the table are not touched.

Imperative Sentences with Direct Objects Repeated as Pronouns:

- can be changed to passive sentences with one subject and two main/finite verbs

Examples:

Find **the window** and open **it**. (direct objects including all modifiers - the window - it)

The window is found and opened.

Imperative Sentences with Adverbial Phrases:

- can be changed to passive complex sentences (if the adverbial phrase contains an object)

Examples:

After closing the door, open the window. (adverbial phrase - after closing the door - object / the door)

After the door is closed, the window is opened.

G. Change each of the following imperative sentences to passive (if possible).

1a. Pick up the paperclip.

The paperclip is picked up.

1b. Place the paperclip near the magnet.

The paper clip is placed near the magnet.

2a. Sit near the door.

θ (no direct object).

2b. Wait until later.

No direct object.

3a. Begin the experiment by reading the instructions.

The experiment is begun by reading the instructions.

3b. Produce ashes by burning wood.

Ashes are produced by burning wood.

4a. Rub the comb with wool so that it loses electrons to the wool.

The comb is rubbed with wool so that it loses electrons to the wool.

4b. Burn wood so that carbon dioxide forms.

Wood is burned so that carbon dioxide forms.

5a. Rub the comb with wool to transfer electrons from the wool to the comb.

The comb is rubbed with wool to transfer electrons from the wool to the comb.

5b. Burn wood to produce carbon dioxide.

Wood is burned to produce carbon dioxide.

6a. Explain the phenomenon of magnetism using an example.

The phenomenon of magnetism is explained using an example.

6b. Produce carbon dioxide using wood and fire.

Carbon dioxide is produced using wood and fire.

7a. Pick up the paperclip, and place the paperclip near the magnet.

The paperclip is picked up and (is) placed near the magnet.

7b. Read the instructions, and follow the instructions.

The instructions are read and followed.

تعد الحياة بلا أهداف جريئة أحد صور الموت لأناس على قيد الحياة.

- 8a. After coiling the wire around the conductor, turn on the electric current.
After the wire is coiled around the conductor, the electric current is turned on.
- 8b. After reading the instructions, begin the experiment.
After the instructions are read, the experiment is begun.
- 9a. Observe the papers while holding the comb nearby.
The papers are observed while the comb is held nearby.
- 9b. Take notes while performing the experiment.
Notes are taken while the experiment is performed.
- 10a. Coil the wire around the conductor before turning on the electricity.
The wire is coiled around the conductor before the electricity is turned on.
- 10b. Read the instructions before beginning the experiment.
The instructions are read before the experiment is begun.
- 11a. Before touching the objects, allow the objects to cool.
Before the objects are touched, they are allowed to cool.
- 11b. Before heating the container, open the container.
Before the container is heated, it is opened.
12. Produce tungsten carbide by combining tungsten and carbon.
Tungsten carbide is produced by combining tungsten and carbon.
13. Observe the color of the metal while heating the metal.
The color of the metal is observed while the metal is heated.
14. Be careful with the chemicals.
No direct object.
15. Combine sodium and chlorine, and produce sodium chloride.
Sodium and chlorine are combined, and sodium chloride is produced.
16. Explain the experiment after performing the experiment.
The experiment is explained after it is performed.
17. Open the container to release the pressure.
The container is opened to release the pressure.
18. Use an insulator so that heat cannot readily transfer.
An insulator is used so that heat cannot readily transfer.
19. Extract the tungsten, and use the tungsten to make filaments.
The tungsten is extracted and used to make filaments.
20. Make a magnet using a comb.
A magnet is made using a comb.

خلاصة الحكمة: عش وأنت على قيد الحياة ولا تمت قبل موتك.

