

Unit 2 Grammar

Adjectives (One-Word Adjectives, Adjective Phrases, and Adjective Clauses)

- Adjectives are words that **modify** nouns. Adjectives answer the question “**which noun(s)?**”.

Example:

Hot wires can damage computers. (*Which* wires can damage computers? *Hot* wires.)

- An **adjective** may be one word, a phrase, or a clause.

Examples:

Hot wires can damage machines. (one-word adjective)

Computers in the lab were damaged by heat. (adjective phrase - prepositional)

Wires carrying electrical currents can become hot. (adjective phrase - present participle)

The machine damaged by heat was replaced. (adjective phrase - past participle)

Machines have the ability to do work. (adjective phrase - infinitive)

Wires that become overheated can damage computers. (adjective [relative] clause)

- One-word adjectives** may occur together with other one-word adjectives.

Examples:

A large, dense nucleus is called a macronucleus.

Overheated electrical wires are dangerous.

- Articles** are one-word adjectives that can only be placed before the nouns they modify. If there are any other one-word adjectives before the noun, the article is placed before them.

Example:

The computer was damaged by an overheated wire.

- Other **one-word adjectives** may be placed before the nouns that they modify or after linking verbs.

Examples:

Hot wires can damage computers. (before the noun *wires*)

Wires may become hot. (after the linking verb *may become*)

- Adjective phrases** are *generally* placed after the nouns that they modify. When adjective phrases are placed before the nouns that they modify, an introductory comma may be required between the adjective phrase and the modified noun.*

Examples:

The computer damaged by heat did not work correctly. (after the noun *computer*)

Damaged by heat, the computer did not work correctly. (before the noun *computer* with a comma*)

- Adjective clauses** are always placed after the nouns that they modify.

Example:

The computer that was damaged by heat did not work correctly. (after the noun *computer*)

إذا لم تعلم أين تذهب، فأى طريق يفي بالغرض.

D. Underline the adjectives, and then circle the nouns that they modify.

1. Chemical energy is stored in gasoline, food, and oil.
a) one-word adjective(s) b) adjective phrase c) adjective clause
2. It is stored energy.
a) one-word adjective(s) b) adjective phrase c) adjective clause
3. Einstein and Lavoisier are famous.
a) one-word adjective(s) b) adjective phrase c) adjective clause
4. They are large, expensive machines.
a) one-word adjective(s) b) adjective phrase c) adjective clause
5. Pieces of wood were burned and weighed.
a) one-word adjective(s) **b) adjective phrase** c) adjective clause
6. Energy stored in food molecules can be released by enzymes.
a) one-word adjective(s) **b) adjective phrase** c) adjective clause
7. Plans to replace them were cancelled.
a) one-word adjective(s) **b) adjective phrase** c) adjective clause
8. Substances containing carbon and hydrogen are called hydrocarbons.
a) one-word adjective(s) **b) adjective phrase** c) adjective clause
9. Hydrocarbons are substances that are composed of carbon and hydrogen.
a) one-word adjective(s) b) adjective phrase **c) adjective clause**
10. Insulated electrical wires are used in homes.
a) one-word adjective(s) b) adjective phrase c) adjective clause
11. They are scientists who studied matter and energy.
a) one-word adjective(s) b) adjective phrase **c) adjective clause**

ركز على أهدافك، كثير من الناس
حاربوا وماتوا لغير قضية.

Using Present Participles and Past Participles as Adjectives

Using the present participle (verb + ing) as an adjective:

Adjectives that are formed with **-ing** frequently indicate a certain action that is performed by the noun or occurs to the noun:

- grinding machine:** machine that crushes substances into small bits
- recording mechanism:** device that records sound
- refining process:** process that purifies metals
- revolving platform:** a stand or surface that turns

Using the past participle (verb + ed) as an adjective:

Adjectives that are formed with **-ed** frequently indicate a completed action:

- dehydrated plant:** plant that has dried up
- magnetized rock:** rock that has been made into a magnet
- diffused light:** light that is spread out

Many verbs can form either **-ing** or **-ed** adjectives. Look at this example of the adjectives **diluting** and **diluted**, which are formed from the verb **to dilute**:

- to dilute:** to weaken or thin with water or another liquid
- diluting agent:** agent or substance that dilutes or thins a liquid
- diluted solution:** solution or liquid that has been diluted or weakened

E. Circle the letter of the answer that best completes each of these sentences.

1. A substance that combines metals with oxygen is an a.
a. oxidizing agent b. oxidized agent
2. Water that has been purified is b.
a. distilling water b. distilled water
3. A nucleus that is in the process of breaking apart is a.
a. disintegrating nucleus b. disintegrated nucleus
4. A device that has been adjusted for errors is a b.
a. calibrating instrument b. calibrated instrument
5. A device that adjusts other instruments is a a.
a. calibrating instrument b. calibrated instrument
6. A gas that has been reduced in volume by pressure is a b.
a. compressing gas b. compressed gas
7. A bar that attaches one moving part of a machine to another is a a.
a. connecting rod b. connected rod
8. A base that makes an acid neutral is a a.
a. neutralizing agent b. neutralized agent
9. A wire that is covered with a nonconductor is an b.
a. insulating agent b. insulated wire
10. Calcium that has been converted into ions is b.
a. ionizing calcium b. ionized calcium

في حال عدم وجود أهداف يكون لدينا ولاء غريب لأموار تافهة لكن بشكل منظم.

Using Present Participles and Past Participles as Adjectives

1. Wool is a material that insulates, so it is called an a material.
a) **insulating** b) insulated
2. Electrical wires are wires that are insulated, so they are called b wires.
a) insulating **b) insulated**
3. Fuels that heat homes and buildings are called a fuels.
a) **heating** b) heated
4. A device that cools the air in a building is called an a device.
a) **air-conditioning** b) air-conditioned
5. The composition of a compound is fixed. Thus, compounds have b compositions.
a) fixing **b) fixed**
6. The composition of a compound does not vary. Thus, compounds have a compositions.
a) **unvarying** b) unvaried
7. Ashes are substances that remain after burning. Thus, they are a substances.
a) **remaining** b) remained
8. Heat may be conducted between objects. This type of heat is called b heat.
a) conducting **b) conducted**
9. After a surface is polished, it is called a b surface.
a) polishing **b) polished**
10. Bacteria are things that live. Thus, they are a things.
a) **living** b) lived
11. Sugar is a compound that is found in candy. Sugar is a compound b in candy.
a) finding **b) found**
12. Hydrocarbons are substances that contain only carbon and hydrogen. Hydrocarbons are substances a only carbon and hydrogen.
a) **containing** b) contained
13. Substances that are composed of just one type of atom are called elements. Substances b of just one type of atom are called elements.
a) composing **b) composed**
14. Substances that have unvarying compositions are known as chemical substances. Substances a unvarying compositions are known as chemical substances.
a) **having** b) had

قد يكون مهما أين أنت الآن،
لكن الأهم إلى أين تتجه.

Adverbs (One-Word Adverbs, Adverb Phrases, Adverbial Phrases, and Adverb Clauses)

- **Adverbs** are words that modify verbs, adjectives, and other adverbs. They answer the questions “**how?**” “**when?**”, “**why?**”, “**where?**”, “**under what circumstances?**”, “**how often?**”, “**how much?**”, and “**to what extent?**”.

Examples:

His homework was quickly completed.	(how? quickly)
His homework was completed yesterday .	(when? yesterday)
He studied to prepare for the quiz .	(why? to prepare for the quiz)
His homework was completed in class .	(where? in class)
He did not bring a pencil although it was required .	(under what circumstances? although it was required)
His homework was usually completed.	(how often? usually)
His homework was partially completed.	(how much or to what extent? partially)

- An **adverb** may be **one word**, a **phrase**, or a **clause**.

Examples:

The experiment was often performed.	(one-word adverbs)
The experiment was performed in a laboratory .	(adverb phrase – prepositional)
It was performed to prove his theory .	(adverb phrase – infinitive)
Most substances expand when heated .	(adverb phrase – adverbial)
Most substances expand when they are heated .	(adverb clause)

- **One-word adverbs** frequently, but not always, end in “**ly**”.

Commonly Used Adverbs with ly endings:

similarly, increasingly, rapidly, comparatively, immediately, readily, usually, highly, only, completely, easily, quickly, frequently, exactly, extremely

Commonly Used Adverbs with other endings:

almost, always, here, later, never, not, now, often, seldom, sometimes, soon, still, then, too, very, well, what, when, where, why

- **Adverbial phrases** begin with **adverbs** [if, after, before, when, while, although, etc.] and are followed by **verbals** (**present participles** or **past participles**). They are **not adverb clauses** because they do not contain **subjects** and **finite verbs**.

Examples:

Most substances expand **when heated**.
They contract **after cooling**.
If heated to 100° C, water will boil.

ما يمكن تخيله يمكن تحقيقه، وما يمكن تحقيقه لن نعدم طريقاً للوصول إليه.

1. Lavoisier **carefully** measured the remaining energy.
a) how b) why, when, where, or under what circumstances c) how often, how much, or to what extent
2. It expanded **because it was heated**.
a) how b) **why, when, where, or under what circumstances** c) how often, how much, or to what extent
3. Most substances will contract **when cooled**.
a) how b) **why, when, where, or under what circumstances** c) how often, how much, or to what extent
4. It was heated **on the outside**.
a) how b) **why, when, where, or under what circumstances** c) how often, how much, or to what extent
5. Water will boil **if it is heated to 110° C**.
a) how b) **why, when, where, or under what circumstances** c) how often, how much, or to what extent
6. The water was heated **repeatedly**.
a) how b) why, when, where, or under what circumstances c) **how often, how much, or to what extent**
7. The apple fell **two meters** and hit the ground.
a) how b) why, when, where, or under what circumstances c) **how often, how much, or to what extent**
8. The water was **very** hot.
a) how b) why, when, where, or under what circumstances c) **how often, how much, or to what extent**
9. Water is dangerous **while boiling**.
a) how b) **why, when, where, or under what circumstances** c) how often, how much, or to what extent
10. Matter is affected **by temperature**.
a) **how** b) why, when, where, or under what circumstances c) how often, how much, or to what extent
11. Energy **frequently** changes form.
a) how b) why, when, where, or under what circumstances c) **how often, how much, or to what extent**
12. It gains kinetic energy **because its velocity increases**.
a) how b) **why, when, where, or under what circumstances** c) how often, how much, or to what extent
13. **Although they were not hot**, the wires were dangerous.
a) how b) **why, when, where, or under what circumstances** c) how often, how much, or to what extent
14. **As it is heated**, it expands.
a) how b) **why, when, where, or under what circumstances** c) how often, how much, or to what extent

اذهب لحلمك الآن، فالمستقبل غير مضمون لأحد.

H. Underline the adverbs in the following sentences and then indicate if they are one-word adverbs, adverb phrases, or adverb clauses.

1. Einstein is very famous.

- a) **one-word adverb** b) adverb phrase (prepositional, infinitive, or adverbial) c) adverb clause

2. Lavoisier lived in France.

- a) one-word adverb **b) adverb phrase (prepositional, infinitive, or adverbial)** c) adverb clause

3. Meat is cooked to kill bacteria.

- a) one-word adverb **b) adverb phrase (prepositional, infinitive, or adverbial)** c) adverb clause

4. It was dangerous because of its high temperature.

- a) one-word adverb **b) adverb phrase (prepositional, infinitive, or adverbial)** c) adverb clause

5. It was dangerous because it was overheated.

- a) one-word adverb b) adverb phrase (prepositional, infinitive, or adverbial) **c) adverb clause**

6. They cannot function without air-conditioning.

- a) one-word adverb **b) adverb phrase (prepositional, infinitive, or adverbial)** c) adverb clause

7. If overheated, wires become dangerous.

- a) one-word adverb **b) adverb phrase (prepositional, infinitive, or adverbial)** c) adverb clause

8. If wires are overheated, they become dangerous.

- a) one-word adverb b) adverb phrase (prepositional, infinitive, or adverbial) **c) adverb clause**

9. Energy is thus transferred or conducted.

- a) one-word adverb** b) adverb phrase (prepositional, infinitive, or adverbial) c) adverb clause

10. As the hot air rises, it heats the room.

- a) one-word adverb b) adverb phrase (prepositional, infinitive, or adverbial) **c) adverb clause**

11. The hot object was placed near the cold object.

- a) one-word adverb **b) adverb phrase (prepositional, infinitive, or adverbial)** c) adverb clause

12. Comparatively small temperature changes can affect living things.

- a) one-word adverb** b) adverb phrase (prepositional, infinitive, or adverbial) c) adverb clause

13. Insulated electrical wires are used in buildings.

- a) one-word adverb **b) adverb phrase (prepositional, infinitive, or adverbial)** c) adverb clause

14. Energy stored in food can be released by enzymes.

- a) one-word adverb **b) adverb phrase (prepositional, infinitive, or adverbial)** c) adverb clause

Verbal Nouns and Verbal Noun Phrases (Gerunds, Gerund Phrases, Infinitives, and Infinitive Phrases)

- **Gerunds** (*verbing*) and **infinitives** (*to verb*) may be used as **nouns** and may be called **verbal nouns**.

Examples:

Burning may produce ashes. (gerund)

To transform means to change. (infinitive)

- **Gerund phrases** and **infinitive phrases** may also be used as **nouns**.

Examples:

Splitting hydrogen atoms is dangerous. (gerund phrase)

To do work means to use energy. (infinitive phrase)

- **Gerunds and gerund phrases** and **infinitives and infinitive phrases** may be used as **subjects** and as **direct objects**. **Gerunds and gerund phrases** (but **not** infinitives / infinitive phrases) may also be used as the **objects of prepositions**.

Examples:

Burning may produce ashes. (gerund used as a subject)

Splitting hydrogen atoms is dangerous. (gerund phrase used as a subject)

The production of ashes requires **burning**. (gerund used as a direct object)

Fission involves **splitting hydrogen atoms**. (gerund phrase used as a direct object)

Ashes can be produced by **burning**. (gerund used as the object of a preposition)

Ashes can be produced by **burning wood**. (gerund phrase used as the object of a preposition)

To transform means to change. (infinitive used as a subject)

To do work means to use energy. (infinitive phrase used as a subject)

They wanted **to understand**. (infinitive used as a direct object)

They wanted **to understand it**. (infinitive phrase used as a direct object)

I. Underline the verbal nouns and verbal noun phrases in the following sentences, and then indicate if they are gerunds, gerund phrases, infinitives, and infinitive phrases.

1. The computer is overheated and needs to rest.
a) gerund b) gerund phrase c) **infinitive** d) infinitive phrase
2. He can cool them by turning off the computer.
a) gerund b) **gerund phrase** c) infinitive d) infinitive phrase
3. The engineer wanted to cool the computer wires.
a) gerund b) gerund phrase c) infinitive d) **infinitive phrase**
4. As the temperature increased, the bacteria began to die.
a) gerund b) gerund phrase c) **infinitive** d) infinitive phrase
5. Killing bacteria prevents illness.
a) gerund b) **gerund phrase** c) infinitive d) infinitive phrase
6. High temperatures are used for killing bacteria.
a) gerund b) **gerund phrase** c) infinitive d) infinitive phrase
7. Pasteurizing kills the bacteria that are found in milk.
a) **gerund** b) gerund phrase c) infinitive d) infinitive phrase

المنافسة الواقعية تكون بين ما تقوم بعمله وما أنت قادر على عمله، قارن نفسك مع نفسك وليس مع أي شخص آخر.



Unit 2 Grammar Review

J. Circle the answers that best describe the required articles. The symbol \emptyset indicates that no article is necessary. When the specific article [the] is required, indicate why it is required [the^{#1} modifies nouns that are the only ones, the^{#2} modifies nouns that are 2nd mention, and the^{#3} modifies nouns that are explained].

1. Heat radiates from d sun.

- a) a b) an c) \emptyset **d) the^{#1}** e) the^{#2} f) the^{#3}

2. When c gas molecules are heated, they begin to expand and rise.

- a) a b) an **c) \emptyset** d) the^{#1} e) the^{#2} f) the^{#3}

3. If a metal spoon is placed in boiling water, f handle will immediately become very hot.

- a) a b) an c) \emptyset d) the^{#1} e) the^{#2} **f) the^{#3}**

4. Conducted and convected heat cannot pass through a vacuum.

- a) a** b) an c) \emptyset d) the^{#1} e) the^{#2} f) the^{#3}

5. Heat flows from a warmer object to a cooler object and causes e cooler one to become warmer.

- a) a b) an c) \emptyset d) the^{#1} **e) the^{#2}** f) the^{#3}

6. Wool is b excellent insulator.

- a) a **b) an** c) \emptyset d) the^{#1} e) the^{#2} f) the^{#3}

7. Radiated heat from the sun is d most important source of heat for the earth.

- a) a b) an c) \emptyset **d) the^{#1}** e) the^{#2} f) the^{#3}

K. For each of the following sentences, circle the answer that best describes the type of sentence provided.

1. The conduction of heat causes warmer objects to become cooler and cooler objects to become warmer.

- a) simple** b) compound c) complex with a relative [adjective] clause d) complex with an adverb clause

2. Heat is conducted between objects only when their temperatures are not equal.

- a) simple b) compound c) complex with a relative [adjective] clause **d) complex with an adverb clause**

3. Glass is a good conductor of heat, and wool is a good insulator.

- a) simple **b) compound** c) complex with a relative [adjective] clause d) complex with an adverb clause

4. The electromagnetic waves that carry heat and light to the earth are invisible and without heat.

- a) simple b) compound **c) complex with a relative [adjective] clause** d) complex with an adverb clause

5. Usually, objects placed in sunlight do not absorb all the radiated energy but reflect some of it.

- a) simple** b) compound c) complex with a relative [adjective] clause d) complex with an adverb clause

6. Fluids do not conduct heat very well, but they do transfer heat by convection.

- a) simple **b) compound** c) complex with a relative [adjective] clause d) complex with an adverb clause

كون البعض ناجحون يثبت أن الآخرين
يمكنهم أن يكونوا ناجحين أيضاً.

L. Circle the letters that correspond to the correctly punctuated sentences.

1. Which of the following sentences is punctuated correctly?

- a) **A vacuum is an ideal insulator because it has no molecules to transfer heat.**
- b) A vacuum is an ideal insulator, because it has no molecules to transfer heat.
- c) A vacuum is an ideal insulator because, it has no molecules to transfer heat.
- d) none of the above

2. Which of the following sentences is punctuated correctly?

- a) In contrast to conducted and conveccted heat radiated heat can pass through a vacuum.
- b) In contrast to conducted, and conveccted heat radiated heat can pass through a vacuum.
- c) **In contrast to conducted and conveccted heat, radiated heat can pass through a vacuum.**
- d) none of the above

3. Which of the following sentences is punctuated correctly?

- a) The three methods of heat transfer are conduction convection and radiation.
- b) The three methods of heat transfer, are conduction convection and radiation.
- c) The three methods of heat transfer are conduction, convection and radiation.
- d) **The three methods of heat transfer are conduction, convection, and radiation.**

4. Which of the following sentences is punctuated correctly?

- a) Objects may reflect the sun's energy or they may absorb it and become warmer.
- b) **Objects may reflect the sun's energy, or they may absorb it and become warmer.**
- c) Objects may reflect the sun's energy or they may absorb it, and become warmer.
- d) Objects may reflect the sun's energy, or they may absorb it, and become warmer.

5. Which of the following sentences is punctuated correctly?

- a) For example computers are sensitive machines that are easily damaged by heat.
- b) **For example, computers are sensitive machines that are easily damaged by heat.**
- c) For example, computers are sensitive machines, that are easily damaged by heat.
- d) none of the above

M. For each of the following sentences, circle the letter that best describes the type of comma(s) used.

1. Temperature affects the size, color, pressure, and electrical conductivity of matter.

- a) introductory b) compound sentence c) **series** d) reversible adjective

2. The expensive, new, powerful, heat sensitive computer was damaged by overheated wires.

- a) introductory b) compound sentence c) series d) **reversible adjective**

3. Heated gas molecules move faster and expand, so they become less dense and rise.

- a) introductory b) **compound sentence** c) series d) reversible adjective

4. When heated, gas molecules begin to expand and rise.

- a) **introductory** b) compound sentence c) series d) reversible adjective

5. Heated gas molecules move faster, collide more, become less dense, and thus rise.

- a) introductory b) compound sentence c) **series** d) reversible adjective

6. The sun is extremely important, for the earth could not survive without it.

- a) introductory b) **compound sentence** c) series d) reversible adjective

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عنده ما يكفي من الوقت لذلك.

N. Underline the dependent clauses in the following sentences. For each clause, circle the clause word, and then indicate whether the clause is a relative [adjective] clause or an adverb clause.

1. When gas molecules are heated, they begin to move faster and collide more.
a) relative [adjective] clause b) **adverb clause**
2. An organism whose temperature becomes excessively high will die.
a) **relative [adjective] clause** b) adverb clause
3. The vacuum through which the sun's invisible rays pass is cold and dark.
a) **relative [adjective] clause** b) adverb clause
4. A vacuum is an ideal insulator because it has no molecules to conduct heat.
a) relative [adjective] clause b) **adverb clause**
5. In contrast to shiny, light-colored objects, objects that are dark and dull easily absorb radiant energy.
a) **relative [adjective] clause** b) adverb clause
6. A hot air furnace is a furnace in which hot air is heated.
a) **relative [adjective] clause** b) adverb clause
7. Heat flows from one object to another until their temperatures are equal.
a) relative [adjective] clause b) **adverb clause**

O. Underline the verbals in the following sentences, and then circle the answers that best describe them. **Infinitives** are used as nouns, adjectives, and adverbs; **gerunds** are used as nouns; and **participles** are used as adjectives.

infinitives	gerunds	present participles	past participles
-- nouns -- adjectives -- adverbs	-- nouns	-- adjectives	-- adjectives

1. In the afternoon, the heat began to intensify.
a) **infinitive** b) gerund c) present participle d) past participle
2. Proceeding was impossible because of the heat.
a) infinitive b) **gerund** c) present participle d) past participle
3. Moving objects have kinetic energy.
a) infinitive b) gerund c) **present participle** d) past participle
4. Heat has the power to kill.
a) **infinitive** b) gerund c) present participle d) past participle
5. Conducted heat cannot pass through a vacuum.
a) infinitive b) gerund c) present participle d) **past participle**
6. Evaporation is one way of vaporizing.
a) infinitive b) **gerund** c) present participle d) past participle
7. In equations, constants are unchanging variables.
a) infinitive b) gerund c) **present participle** d) past participle
8. Pain is a feeling that serves to protect.
a) **infinitive** b) gerund c) present participle d) past participle

وسيلة النقل والخرائط غير هامة إذا لم تكن تعرف وجهتك.

P. Underline the verbal phrases in the following sentences, and then circle the answers that best describe them. Infinitive phrases are used as nouns, adjectives, and adverbs; gerund phrases are used as nouns; and participial phrases are used as adjectives.

1. Energy is the ability to do work.
a) **infinitive phrase** b) gerund phrase c) present participial phrase d) past participial phrase
2. Splitting an atom will cause a chain reaction.
a) infinitive phrase b) **gerund phrase** c) present participial phrase d) past participial phrase
3. As a gas is heated, its molecules begin to move rapidly.
a) **infinitive phrase** b) gerund phrase c) present participial phrase d) past participial phrase
4. Nuclear energy is the energy stored in certain types of atoms.
a) infinitive phrase b) gerund phrase c) present participial phrase d) **past participial phrase**
5. An apple hanging on a tree has potential energy because of its position.
a) infinitive phrase b) gerund phrase c) **present participial phrase** d) past participial phrase
6. The scientist wanted to prove his theory.
a) **infinitive phrase** b) gerund phrase c) present participial phrase d) past participial phrase
7. Fuels found in underground deposits are known as natural fuels.
a) infinitive phrase b) gerund phrase c) present participial phrase d) **past participial phrase**
8. The energy in gasoline is released to propel cars forward.
a) **infinitive phrase** b) gerund phrase c) present participial phrase d) past participial phrase
9. Fission causes atomic explosions by releasing enormous amounts of energy.
a) infinitive phrase b) **gerund phrase** c) present participial phrase d) past participial phrase

Q. Underline the prepositional phrases and adverbial phrases in the following begin sentences, and then circle the answers that best describe them. Prepositional phrases with prepositions and are used as adjectives and adverbs. Adverbial phrases begin with adverbs (if, when, after, before, although, while, etc.) and are followed by participles. Adverbials phrases are used as adverbs.

1. Although heated excessively, the container did not break.
a) prepositional phrase(s) b) **adverbial phrase**
2. All life on earth is dependent on the radiation of the sun's heat and light energy.
a) **prepositional phrase(s)** b) adverbial phrase
3. Wood produces ashes when burned.
a) prepositional phrase(s) b) **adverbial phrase**
4. Heat is the transfer of energy from a warmer body to a cooler one.
a) **prepositional phrase(s)** b) adverbial phrase
5. While falling, an apple loses potential energy.
a) prepositional phrase(s) b) **adverbial phrase**
6. Convection is the upward flow of masses of liquid or gas molecules as they are heated from below.
a) **prepositional phrase(s)** b) adverbial phrase

البحيرات سهلة الوصول إليها ينتهي الصيد فيها سريعاً، على عكس تلك صعبة الوصول.

R. Circle the finite verbs [active or passive / singular or plural] that correctly complete the following sentences.

1. This law c the law of the conservation of matter and energy.

- a) calls
- b) call
- c) is called**
- d) are called

2. Our bodies b enzymes to release food energy.

- a) needs
- b) need**
- c) is needed
- d) are needed

3. In 1945, people a that Einstein's theory was correct.

- a) discovered**
- b) was discovered
- c) were discovered
- d) none of the above

4. The properties of matter d by temperature.

- a) affects
- b) affect
- c) is affected
- d) are affected**

5. Hammers a nails.

- a) moves
- b) move**
- c) is moved
- d) are moved

6. The sun a electromagnetic rays that provide heat and light.

- a) emits**
- b) emit
- c) is emitted
- d) are emitted

7. The weight of the remaining substances b by Lavoisier.

- a) measured
- b) was measured**
- c) were measured
- d) none of the above

8. Water and air readily b heat by convection.

- a) transfers
- b) transfer**
- c) is transferred
- d) are transferred

9. Evaporation a liquids to change into gases.

- a) causes**
- b) cause
- c) is caused
- d) are caused

البعض ينجح لذكاته، والبعض الآخر ينجح لغباء الآخرين.

S. Circle the **finite verbs** or **verbals** that correctly complete the following sentences.

1. The gas molecules expanded because they d.

- a) is heated
- b) are heated
- c) was heated
- d) were heated**

2. When a by temperature, an object may change color.

- a) affected**
- b) affecting
- c) is affected
- d) are affected

3. The energy of nuclear fuels c through the fission or fusion of atoms.

- a) released
- b) releasing
- c) is released**
- d) are released

4. Fuels a from biomass are called synthetic fuels.

- a) produced**
- b) producing
- c) is produced
- d) are produced

5. After c, gas molecules are less dense and will thus flow upward.

- a) expands
- b) expand
- c) expanding**
- d) expanded

6. Most fuels release energy by d with oxygen in the air.

- a) burn
- b) to burn
- c) burned
- d) burning**

7. Heat may be used b bacteria.

- a) kill
- b) to kill**
- c) killed
- d) killing

8. Substances d only hydrogen and carbon atoms are known as hydrocarbons.

- a) contain
- b) contains
- c) to contain
- d) containing**

9. Atoms of carbon and hydrogen a to form methane, propane, and other hydrocarbons.

- a) combine**
- b) combines
- c) combining
- d) to combine

الخوف من الفشل أهم سبب لإحجام
الكثير عن تحقيق النجاح.

T. For each of the following sentences, circle the subject (s) [not including any modifiers] and underline the main verb (s). Remember that the subjects and main verbs of sentences are found only in independent clauses.

1. All substances conduct some heat, but glass, plastic, and wool act as insulators because their molecules make very little contact.
2. An incandescent light bulb provides another example of a color change, for its tungsten wire gives off white light when it is hot.
3. For example, if a silver spoon is inserted into a pot of tea, the handle of the spoon will immediately become hot.
4. Usually, objects do not absorb all of the sun's energy but reflect some of it.
5. We know this because the space between the earth and the sun is dark and cold, but when the rays reach the earth, they light the atmosphere and warm our world.
6. A glass may break when boiling water is poured into it because part of the glass heats up and expands more rapidly than the rest.
7. Using the same principle, we pasteurize milk and cook meat to kill harmful bacteria and other organisms that cannot tolerate the heat.
8. On the other hand, the composition of a mixture is not fixed and varies from sample to sample.
9. These and thousands of other compounds that contain only carbon and hydrogen are known as hydrocarbons.
10. The composition of chocolate chip ice cream varies, and some samples contain more chocolate chip pieces than others.
11. Just as the watch spring needs to be released to do the work of moving the hands, the energy stored in food molecules needs to be released by enzymes or substances in the body, and the energy stored in gasoline must be released by the spark plug to do its work of propelling the car forward.
12. If the carbon dioxide, water vapor, and ashes are added together, the total weight will equal the original weight of the wood plus the oxygen in the air.

العالم بأسره يتنحى جانباً ليفسح الطريق للإنسان الذي يعرف تماماً إلى أين يتوجه.

U. Complete the following sentences by circling the correct **verb** or **verbal**.

1. Atomic energy is the energy that b in atoms.
a) storing **b) is stored** c) are stored d) stores
2. The ability c electricity varies with temperature.
a) resist b) resists **c) to resist** d) resisting
3. All substances a some heat.
a) conduct b) conducts c) conducting d) to conduct
4. A hammer is a tool that is used c nails.
a) strike b) strikes **c) to strike** d) striking
5. Ashes are substances that a after wood is burned.
a) remain b) remaining c) remained d) remains
6. The ability of a metal to resist electricity b with its temperature.
a) to vary **b) varies** c) varying d) varied
7. Heat is the energy that warms our houses and c our food.
a) to cook b) cooking **c) cooks** d) cooked
8. We pasteurize milk and cook meat c harmful bacteria.
a) kill b) killing **c) to kill** d) killed
9. Boiling water b to break a glass.
a) may use **b) may be used** c) uses d) using
10. Pain is a feeling that b to protect us.
a) serving **b) serves** c) to serve d) none of the above
11. The physical state of a substance d by its temperature.
a) affects b) affecting c) effected **d) is affected**
12. Pasteurizing milk b harmful bacteria.
a) to kill **b) kills** c) is killed d) killing

إذا رأيت كل الناس يسلكون نفس الطريق،
عندها فكر قليلا فقد يكون الطريق الخطأ.