

Science

Grade 4

Second Term 2025

February Revision

Mr. Ahmed Elbasha

Unit Three (Concept 1)

+

Unit Three (Concept 2 till Lesson 3)

* طبقاً لأخر تعديل في المادة للعام الدراسي 2024-2025



February Revision

Mr. Ahmed Elbasha

✱ (1) Write the scientific term:

- 1) The source of energy in some toys that stores chemical energy. (.....)

- 2) The energy produced from batteries. (.....)

- 3) A robotic vehicle designed to explore the surface of Mars. (.....)

- 4) The energy produced from a battery. (.....)

- 5) The energy used to operate a television. (.....)

- 6) The main source of energy for most forms of energies on Earth. (.....)

- 7) The energy produced when the wood of trees is burned. (.....)

- 8) The substance that is produced from the remains of dead trees that buried deep in the Earth over millions of years. (.....)

- 9) The energy stored in coal. (.....)

- 10) A form of energy produced from the electric lamp and affects our eyes. (.....)

- 11) Energy can neither be created nor destroyed, but only converted from one form into another. (.....)

- 12) The energy that is used to operate an electric heater. (.....)

- 13) The energy that is stored in both batteries and food. (.....)

- 14) The energy that is produced from the electric power stations and flows through wires. (.....)

- 15) A form of energy that is produced from the electric heater and burning coal. (.....)

- 16) The wasted energy when using a mobile phone for a long time. (.....)

- 17) The energy produced when the wood of trees is burned. (.....)
-
- 18) It is any substance which produces thermal energy on burning. (.....)
-
- 19) Natural resources of energy, that take a short period of time to be renewed. (.....)
-
- 20) Natural resources of energy that take a very long period of time to be formed. (.....)
-
- 21) It is a form of biofuel that can be made from some types of plants such as grass and wood chips. (.....)
-
- 22) They are fuels that were formed from remains of dead animals and plants under the Earth's surface. (.....)
-
- 23) It is a form of fossil fuel that was formed from remains of dead plants under the effect of extreme heat and pressure. (.....)
-
- 24) It is a form of fossil fuel that was formed from dead marine animals (.....)

***(2) Complete the following sentences by using these words:**

1. (kinetic - chemical – electrical - thermal)

- The energy stored in batteries is energy.
- Fuel is used as a source of energy.
- batteries of a remote-controlled toy, chemical energy is converted into energy, which is converted into energy or sound energy.

2. (heat - chemical - coal - kinetic - Sun - thermal)

- Most of the energy we use is produced inside the
- When you eat, your body turns the energy found in the food into energy that helps your body move.
- In electric power stations is burned to generate thermal energy.
- In an electric iron, electrical energy is converted into energy.
- In several electrical devices, most of the waste energy leaks out in the form of

✱(3) Choose the right answer:

1. The on the rover Curiosity convert solar energy into energy which is used to charge its batteries. *

- a. solar panels - electrical b. batteries - electrical
c. solar panels - sound d. batteries - sound

2. In the battery of a toy car energy is converted into electrical energy.

- a. chemical b. sound c. light d. thermal

3. Electrical energy produced from a toy car battery can be converted into and energies.

- a. kinetic - sound - solar b. kinetic - thermal - solar
c. kinetic - sound – thermal d. sound - thermal - solar

4. The energy source in a toy car is the

- a. engine. b. tires. c. battery. d. fuel.

5. It takes several for a spacecraft to travel from Earth to Mars.

- a. seconds b. minutes c. days d. months

6. Curiosity rover is designed to explore

- a. Earth. b. Mars. c. the Sun. d. the moon.

7. In the washing machine, the energy is converted into kinetic and sound energies.

- a. light b. electrical c. thermal d. potential

8. You feel warm when you rub your hands together, because energy is converted into thermal energy.

- a. kinetic b. light c. electrical d. sound

9. Inside a light bulb, electrical energy is converted into and energies.

- a. sound - light b. sound - thermal
c. kinetic - light d. light - thermal

10. When you turn on a light bulb, the electrical energy travels through until reaching the bulb.

- a. wires b. glass c. wood d. plastic

11. Remains of living organisms that were buried under the Earth's surface are affected by to form fossil fuels.

- a. low pressure and high temperature b. high pressure and low temperature
c. low pressure and low temperature d. high pressure and high temperature

12. All the following factors play an important role in the formation of fossil fuels, except

.....

- a. extreme pressure.
- b. extreme heat.
- c. strong wind.
- d. rocks and sediment.

13. All forms of fossil fuel are formed

- a. above the Earth's surface.
- b. under the Earth's surface.
- c. above the water surface.
- d. in the air around us.

14. All the following are forms of fossil fuels, except

- a. water.
- b. coal.
- c. natural gas.
- d. oil.

15. The steps of forming fossil fuel don't include of the remains of living organisms.

- a. decaying
- b. cooling
- c. burying
- d. heating

16. All the following actions don't conserve electrical energy, except

- a. unplugging unused electrical appliances.
- b. plugging many unused electrical appliances.
- c. turning on all the house lights all the day long.
- d. leaving the television turned on all the day long.

17. All the following can be used to generate electrical energy, except

- a. oil.
- b. natural gas.
- c. water.
- d. glass.

18. In the hair dryer, the electrical energy is converted into, and energies.

- a. sound - thermal - kinetic
- b. kinetic - light - chemical
- c. thermal - light - chemical
- d. light - sound - chemical

19. Plants can convert the light energy from the Sun into energy which is stored in the plant in the form of sugar.

- a. sound
- b. electrical
- c. chemical
- d. kinetic

20. When you eat an apple, your body converts the energy stored in the apple into energy when you move.

- a. chemical - electrical
- b. kinetic - chemical
- c. electrical - chemical
- d. chemical - kinetic

21. Electric wires are made of

- a. copper.
- b. paper.
- c. wood.
- d. glass.

22. In the electric water kettle, electrical energy is converted into energy that can heat the cold water inside it.

- a. potential b. thermal c. electrical d. chemical

23. While playing a guitar..... energy is converted into sound energy.

- a. kinetic b. light c. chemical d. potential

24. Both the hair dryer and the electric water kettle produce energy.

- a. chemical b. thermal c. electrical d. potential

25. Some kinetic energy is converted into energy due to friction of bike's tire with the road.

- a. light b. electrical c. potential d. thermal

26. Which form of energy is not used or produced when you turn on an electric bulb?

- a. Electrical. b. Light. c. Thermal. d. Sound.

27. When you use the hand bell, the energy is converted into sound energy.

- a. light b. thermal c. kinetic d. electric

28. The input energy when using the hair dryer is the energy.

- a. electrical b. potential c. kinetic d. thermal

29. Which form of energy is not an output energy when a hair dryer is used ?

- a. Kinetic energy. b. Electrical energy.
c. Thermal energy. d. Sound energy.

30. During charging a mobile phone, the energy is converted into energy that is stored in the phone battery.

- a. electrical - chemical b. chemical - thermal
c. electrical – thermal d. thermal - chemical

31. Sound and energies are output energies when operating the mobile phone.

- a. electrical b. potential c. chemical d. light

32. The output energy when playing drums is the energy.

- a. chemical b. light c. sound d. potential

33. The produced energy does not help the blender do its job.

- a. chemical b. sound c. light d. potential

34. When a piece of coal is burned energy is produced.

- a. thermal b. solar c. sound d. potential

35. When a football player runs, the chemical energy inside his body is converted into and energies.

- a. potential - light
b. kinetic - light
c. thermal - kinetic
d. thermal – light

36. Among the forms of fuel that are present in car fuel stations are

- a. gasoline and wood.
b. natural gas and coal.
c. wood and coal.
d. gasoline and natural gas.

37. We can use the energy obtained from burning of wood directly for all of the following purposes, except

- a. warming houses.
b. operating television.
c. cooking food.
d. boiling water.

38. is considered as the main resource of energy on the Earth's surface.

- a. Gasoline
b. The Sun
c. Natural gas
d. The moon

39. All the following are renewable resources of energy, except.....

- a. natural gas.
b. water.
c. the Sun.
d. wind.

40. Nonrenewable resources of energy take to be formed.

- a. a short period of time
b. a very long period of time
c. few minutes
d. few hours

41. Ancient people used as a fuel before discovering gasoline.

- a. electricity
b. water
c. wind
d. wood

42. Wood is considered as

- a. biofuel.
b. fossil fuel.
c. liquid fuel.
d. gaseous fuel.

43. Coal was formed under the Earth's surface from the remains of

- a. dead animals.
b. dead plants.
c. dead humans.
d. dead insects.

44. Extreme heat and pressure under the Earth's surface has an important role in forming

- a. wood.
b. wind.
c. fossil fuel.
d. biofuel

***(4) Complete the following:**

1. Remote controlled toy car converts energy stored in its batteries into energy that is converted into energy which is used to move the car.
2. To operate an electric mixer we use energy.
3. When your cell phone is out of charge, you must recharge its to operate it again.
4. Some calculators can change solar energy into energy by using the sunlight.
5. On planet Mars, Curiosity robot is operated by using energy from sunlight that is converted into energy used to recharge its batteries.
6. The energy produced from the battery and used to operate a toy car is energy.
7. The energies that are produced from the washing machine are energy and energy.
8. When you rub your hands together, the energy is converted into energy.
9. When you ride a bicycle energy stored in your food is converted into energy which causes the bicycle to move.
10. Some kinetic energy of the bicycle is converted into energy due to the friction of its tires with the road.
11. The electric lamp converts energy into light energy and energy.
12. Energy can neither be nor but only from one form to another.
13. The electric lamp converts electrical energy into energy and energy.
14. By using the mobile phone for a long time, some energy is lost in the form of energy.
15. The main function of a blender is done by the help of the produced energy.
16. The input energy in an electric bulb is energy, while its output energies are energy and also energy which doesn't help in its main function
17. In the electric heater energy is considered as an input energy, while thermal energy is considered as energy.

18. The kinetic energy in a hand bell is considered as energy, while in an electric fan is considered as energy.
19. The natural resources that can be replaced shortly after being used are called resources of energy.
20. The natural resources that are consumed at a rate faster than they can be renewed are called resources of energy.
21. Different forms of fuel can be classified into two main types which are and
22. The type of fuel that is produced from living organisms that can be planted is called such as wood and
23. Wood and are examples of biofuel, while and are examples of fossil fuel.
24. In electric power station, we use fossil fuels such as oil and natural gas which are considered as resources of energy.
25. Water is considered as resource of energy, and we can use it to generate
26. When fuel is burned in an electric power station, it produces energy to heat water.

✳(5) Put (√) or (X) :

1. We can convert the solar energy into different forms of energy. ()
2. The input energy in the hair dryer is chemical energy. ()
3. Mobile phone stores electrical energy in its battery in the form of chemical energy. ()
4. A toy car can continue moving even after its battery runs out. ()
5. As the speed of a car increases, the amount of used fuel decreases. ()
6. Biofuel is one of nonrenewable resources of energy. ()
7. Extreme cooling under the Earth's surface helps in the formation of oil. ()
8. Both coal and wood produce energy when they are burned. ()
9. Any form of fossil fuels must be formed under the Earth's surface. ()
10. Oil, natural gas and coal can be used to produce electrical energy. ()
11. Turning off lights that we do not need is a way to conserve electricity. ()
12. Movement of a generator in an electric power station produces potential energy. ()
13. We have to conserve all forms of fuel. ()
14. The consumed energy in the blender is sound energy. ()
15. The produced energy in remote-controlled toy car is chemical energy. ()
16. In the electric blender, sound energy is converted into electrical energy ()
17. Most of energy chains starts with the energy of the moon. ()
18. Energy can be destroyed inside some devices . ()
19. When you ride a bike, some of the kinetic energy is converted into thermal energy due to the friction between tires and the road. ()
20. There is a stored chemical energy inside the food we eat. ()
21. Energy can't be changed from one form to another. ()
22. The electric bulb depends on chemical energy to operate. ()
23. Both the electric bulb and the electric heater produce thermal energy ()
24. Water and gasoline are two renewable resources of energy. ()
25. We have to reduce the usage of the Sun as a source of energy. ()
26. Rate of usage of oil is slower than its rate of formation under the Earth's surface. ()
27. The Sun is the main source of forming both biofuel and fossil fuel. ()
28. The input energy in a hair dryer is the chemical energy . ()
29. In waterfalls, the water that falls down has kinetic energy. ()
30. Curiosity is a vehicle that travels across the surface of the planet Mars. ()
31. In the soap dispenser, potential energy is converted into kinetic energy. ()

✱(6) Correct the underline

1	The solar energy produced from the <u>moon</u> can be converted into different forms of energy.	(.....)
2	Toy cars depend on <u>fuel</u> as a source of electrical energy.	(.....)
3	Curiosity is a robotic vehicle that is designed to explore the surface of <u>moon</u> .	(.....)
4	Most of energy chains start with the <u>moon</u>	(.....)
5	There is a stored <u>thermal</u> energy inside the food we eat.	(.....)
6	The input energy in a hair dryer is the <u>chemical</u> energy	(.....)
7	We need <u>sound</u> energy, for cooking food and warming houses.	(.....)
8	<u>Coal</u> is the main source of most energies on the Earth's surface.	(.....)
9	Fuel is the substance that produces <u>electrical energy</u> on burning.	(.....)
10	We have to increase planting vegetables and fruits that need a <u>large</u> amount of water.	(.....)
11	The nonrenewable resources of energy take a <u>short</u> period of time to be formed under the Earth's surface.	(.....)
12	The rate of usage of fossil fuels must be <u>increased</u> .	(.....)
13	Wood is a form of <u>fossil fuels</u> that can be used in houses.	(.....)
14	Fossil fuels include oil, coal and <u>wood</u> .	(.....)
15	After death of living organisms, their remains are buried under the Earth's surface and exposed to extreme pressure and <u>cool</u> .	(.....)
16	Water is a <u>nonrenewable</u> energy resource.	(.....)
17	The movement of generator in the electric power station changes kinetic energy into <u>potential</u> energy.	(.....)

***(7) Give reason for:**

1. A remote-controlled toy car needs a battery to move from one place to another.
.....
2. Some calculators use sunlight to operate.
.....
3. Mars rover Curiosity operates for a long period of time on Mars without any need to be recharged.
.....
4. Water and wind are considered as renewable resources of energy.
.....
5. Coal and gasoline are considered as nonrenewable resources of energy.
.....
6. Using wood of trees as a fuel has negative effects on the environment.
.....
7. When you rub your hands together, you feel warm.
.....
8. You feel heat, when you put your hands near a lighted electric lamp.
.....
9. Thermal energy in a mobile phone is considered as a wasted energy.
.....
10. We must turn off lights that we do not need.
.....

***(8) What happen if:**

1. Batteries of remote-controlled toy car run out.
.....
2. Solar calculators were exposed to the sunlight.
.....
3. Mars rover Curiosity didn't get any sunlight on Mars surface.
.....
4. You put your hands near the lighted lamp.
.....
5. You use a mobile phone for a long time. (according to the wasted energy).
.....
6. You turn on an electric fan. (according to the change of energy).
.....
7. Decomposition of remains of sea animals under the Earth's surface
.....



*(9) TRY TO ANSWER:

1. Look at the following figures, then complete the following sentences :

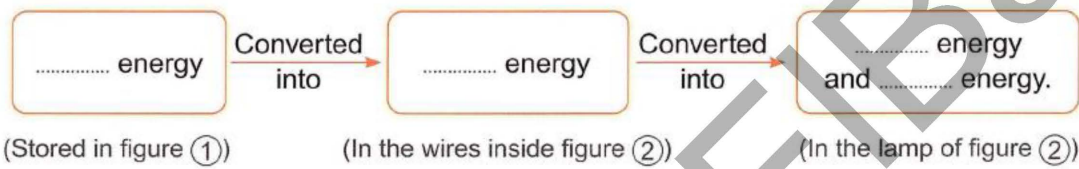


Figure (1)






Figure (2)

- Figure (1) stores energy.
- Figure (2) needs a source that produces energy to be operated.
- The energy chain that is produced due to inserting figure (1) inside figure (2) and turning it on is :



2. Choose from column (A) what suits it in both columns (B) and (C) :

(A) Energy used	(B) The item	(C) Energy produced
1. Kinetic energy	a. 	A. Thermal energy.
2. Electrical energy	b. 	B. Chemical energy.
3. Solar energy	c. 	C. Sound energy.

1. →

2. →

3. →

Model Answer

* (1) Write the scientific term:

1. Battery	5. Electrical energy	10. Light energy	13. chemical energy	17. thermal energy	21. liquid fuel
2. Electric energy	6. Sun	11. Law of conservation of energy	14. electrical energy	18. fuel	22. fossil fuel
3. Mars rover curiosity	7. Thermal energy	12. electric energy	15. thermal energy	19. renewable energy	23. coal
4. Electrical energy	8. Coal		16. thermal energy	20. non-renewable energy	24. oil
	9. Chemical energy				

* (2) Complete the following sentences by using these words:

1	2
1. chemical	1. Sun
2. thermal	2. Chemical – kinetic
3. electrical – kinetic	3. Coal
	4. Thermal
	5. heat

* (3) Choose the right answer:

1. A	7. B	13. B	19. C	25. D	31. D	37. B	43. B
2. A	8. A	14. A	20. D	26. D	32. C	38. B	44. C
3. C	9. D	15. B	21. A	27. C	33. B	39. A	
4. C	10. A	16. A	22. B	28. A	34. A	40. B	
5. D	11. D	17. D	23. A	29. B	35. C	41. D	
6. B	12. C	18. A	24. B	30. A	36. D	42. A	

* (4) Complete the following:

1. Chemical – electrical – kinetic	8. Kinetic – thermal	15. Kinetic	22. Biofuel – charcoal
2. Electrical	9. Chemical – kinetic	16. Electrical – light – thermal	23. Charcoal – oil – coal
3. Battery	10. Thermal	17. Electrical – output	24. Nonrenewable
4. Electrical	11. Electrical – thermal	18. Input – output	25. Renewable – electricity
5. Solar – electrical	12. Created – destroyed – converted	19. Renewable	26. Thermal
6. Electrical	13. Light – thermal	20. Non-renewable	
7. Kinetic – sound	14. Thermal	21. Biofuel – fossil fuel	

* (5) Put (√) or (X)

1. (√)	5. (X)	9. (√)	13. (√)	17. (X)	21. (X)	25. (X)	29. (√)
2. (X)	6. (X)	10. (√)	14. (X)	18. (X)	22. (X)	26. (√)	30. (√)
3. (√)	7. (X)	11. (√)	15. (X)	19. (√)	23. (√)	27. (√)	31. (√)
4. (X)	8. (√)	12. (X)	16. (X)	20. (√)	24. (X)	28. (X)	

* (6) Correct the underline

1. Sun	4. Sun	7. Thermal	10. Small	13. Biofuel	16. renewable
2. Battery	5. Chemical	8. Sun	11. Long	14. Natural gas	17. electrical
3. Sun	6. Electrical	9. Thermal	12. Decrease	15. Heat	

* (7) Give reason for:

- Because the chemical energy stored in battery is converted into electrical energy that changes into kinetic energy that makes the car moves.
- Because the energy of sunlight (solar energy) is converted into electrical energy which calculators use it to be operated.
- Due to the presence of solar panels that use sunlight to recharge its batteries.
- Because they can be replaced shortly after being used.
- Because they are used at a rate faster than they can be renewed.
- Because when wood is burned, it release gases that cause air pollution.
- Because the kinetic energy is converted into thermal energy.
- Because some of the electrical energy is converted into thermal energy.
- Because it doesn't help the mobile phone to do its main function.
- To conserve the electricity.

*** (8) What happen if:**

1. The car will not move.
2. Solar energy is converted into electrical energy that operate them.
3. It cannot be operated
4. You feel warm.
5. Some energy is wasted as thermal energy.
6. The electrical energy is converted into kinetic energy.
7. They will form oil and natural gas.

*** (9) TRY TO ANSWER:**

1. 1. Chemical 2. Electrical 3. Chemical – electrical – light and thermal	2. 1. B – c 2. C – a 3. A - b
3. 1. A 2. D	4. 1. C 2. A 3. B