

National Science League – 2022

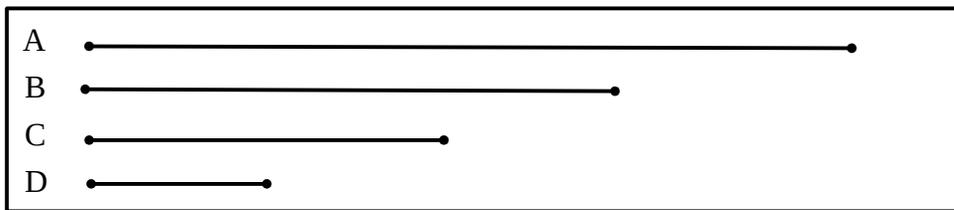
Grade 5 and 6

Directions: On the answer sheet, write the letter of the choice that best answers/completes the question.

- Which of these planets is located the greatest distance from the sun?
A. Mercury
B. Neptune
C. Saturn
D. Earth
- Adding heat energy to a liquid makes the liquid _____.
A. condense
B. melt
C. freeze
D. boil
- Which of these is part of your digestive system?
A. the heart
B. the trachea
C. the small intestine
D. the medulla
- The conversion of chemical energy to electrical energy occurs in a _____.
A. motor
B. battery
C. solar cell
D. generator
- The process that takes place in green plants and involves sunlight and chlorophyll is known as _____.
A. respiration
B. digestion
C. photosynthesis
D. transpiration
- Which of these represents the shortest distance?
A. 1 m
B. 1 dm
C. 1 cm
D. 1 mm
- Which statement about green plants and mushrooms is correct?
A. Mushrooms do not have leaves, and green plants do.
B. Mushrooms use seeds to reproduce, and green plants do not.
C. Mushrooms have roots, and green plants do not.
D. Mushrooms need light to grow, and green plants do not.
- A herbivore is an animal that eats _____.
A. only animals
B. both plants and animals
C. only plants
D. only dead organisms
- Only plant cells have _____.
A. a nucleus
B. a cell wall
C. a cell membrane
D. cytoplasm
- Your bones are held together at the joints by _____.
A. ligaments
B. tendons
C. muscles
D. cartilage

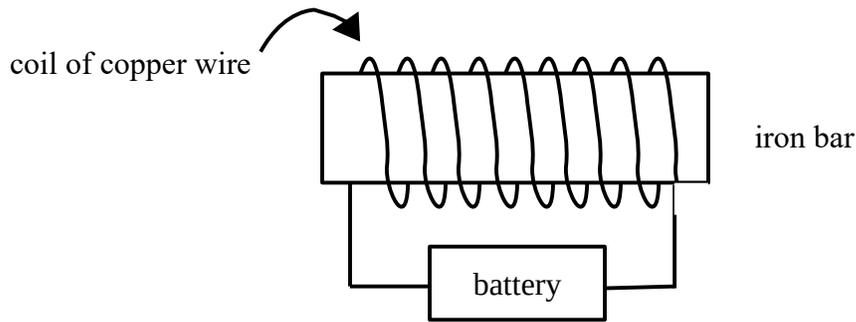
11. Clouds form by the process of _____.
- A. melting
 - B. condensation
 - C. evaporation
 - D. boiling
12. Which of these objects is visible in the night sky because it makes its own light?
- A. a comet
 - B. a planet
 - C. a moon
 - D. a star
13. Which of these living things has eggs that are laid and developed in water?
- A. a turtle
 - B. a bird
 - C. a frog
 - D. an alligator
14. Your eyes, ears and nose are all part of your _____.
- A. circulatory system
 - B. digestive system
 - C. endocrine system
 - D. nervous system
15. Which statement is correct?
- A. Sedimentary rocks are created by volcanoes.
 - B. Much of the erosion on the surface of the Earth is caused by running water.
 - C. Gold is one of the most common elements found in the crust of the Earth.
 - D. Minerals are composed of rocks.
16. A compound light microscope can be used to observe _____.
- A. small things, such as cells
 - B. animals and plants 100 meters away from you
 - C. atoms and molecules
 - D. distant stars
17. The cerebrum is part of your _____.
- A. lungs
 - B. liver
 - C. brain
 - D. heart
18. Which gas is used in party balloons that float in the air?
- A. nitrogen
 - B. carbon dioxide
 - C. oxygen
 - D. helium
19. It is warmest in the Southern Hemisphere during the month of _____.
- A. August
 - B. January
 - C. March
 - D. May
20. Which food contains the most starch?
- A. fish
 - B. bread
 - C. celery
 - D. butter
21. Which of these is a cold-blooded vertebrate?
- A. a dog
 - B. an earthworm
 - C. a snake
 - D. a snail

22. The part of the atom with no charge is the _____.
- A. nucleus
B. electron
C. proton
D. neutron
23. Day and night on Earth are caused by the _____.
- A. revolution of the Earth around the sun
B. rotation of the Earth on its axis
C. revolution of the sun around the Earth
D. rotation of the Earth around the sun
24. The musical instrument below consists of four strings of the same thickness, but different lengths. Which string will produce notes with the lowest pitch?



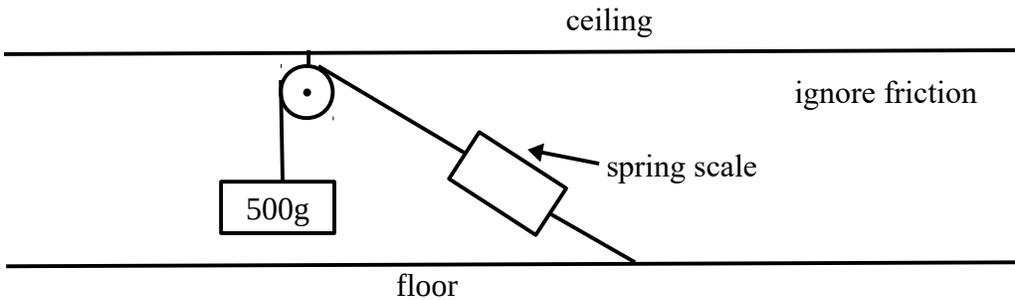
- A. string A
B. string B
C. string C
D. string D
25. The temperature of your body is regulated by the _____.
- A. liver
B. heart
C. kidneys
D. skin
26. Which living things are classified in the Monera kingdom?
- A. sponges
B. earthworms
C. bacteria
D. insects
27. Most of the water vapor passes out of a tree through the _____.
- A. stems
B. leaves
C. trunk
D. roots
28. Our sun is made mostly of _____.
- A. hydrogen and helium
B. hydrogen and carbon dioxide
C. oxygen and nitrogen
D. oxygen and helium
29. The system in your body that gets rid of waste is the _____.
- A. nervous system
B. digestive system
C. circulatory system
D. excretory system

USE THIS DIAGRAM AND YOUR KNOWLEDGE OF SCIENCE TO ANSWER QUESTION 30:



30. This diagram is _____.
- A. a generator
 - B. a motor
 - C. an electromagnet
 - D. a solar cell

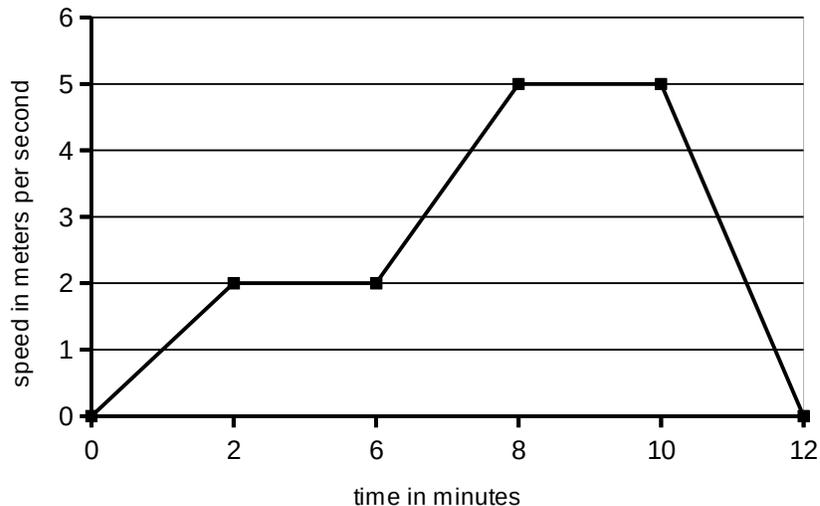
USE THIS DIAGRAM OF A SPRING SCALE AND YOUR KNOWLEDGE OF SCIENCE TO ANSWER QUESTION 31:



31. What is the reading on the spring scale in the above diagram?
- A. 500g
 - B. 1000g
 - C. 0g
 - D. 250g

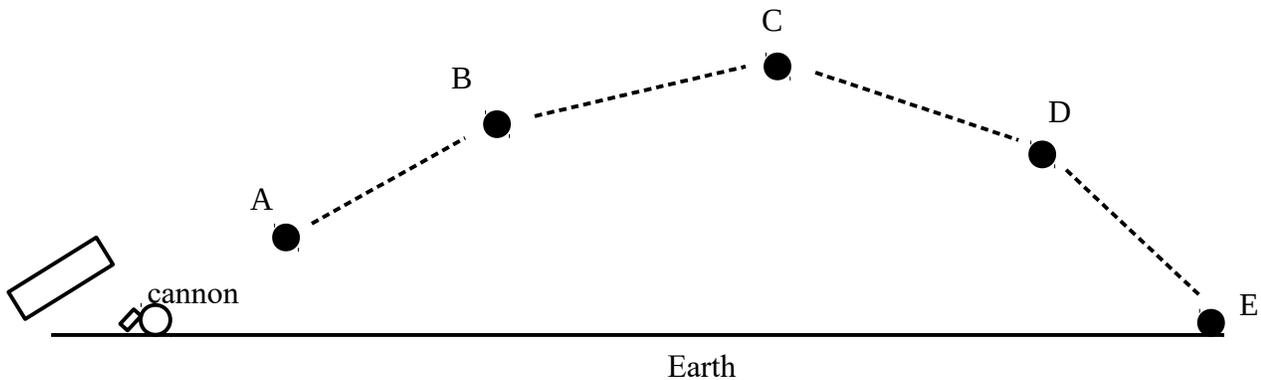
USE THE FOLLOWING INFORMATION AND YOUR KNOWLEDGE OF SCIENCE TO ANSWER QUESTIONS 32 AND 33:

The graph below shows the speed of an object for a period of 12 minutes.



32. When was the object slowing down?
- A. 0 to 2 minutes
B. 2 to 6 minutes
C. 6 to 8 minutes
D. 10 to 12 minutes
33. When did the object cover the most distance in two minutes?
- A. 0 to 2 minutes
B. 2 to 6 minutes
C. 6 to 8 minutes
D. 10 to 12 minutes
34. At what temperature does water boil in the Fahrenheit scale?
- A. 32°
B. 100°
C. 212°
D. 0°
35. 21% of the air we breathe is _____.
- A. oxygen gas
B. nitrogen gas
C. hydrogen gas
D. carbon dioxide gas
36. Which activity causes the fastest change on the surface of the Earth?
- A. an earthquake
B. waves hitting a beach
C. a glacier moving down a valley
D. erosion caused by a river
37. Jennifer measured the amount of water in her fish tank in _____.
- A. grams
B. meters
C. centimeter
D. liters

USE THE FOLLOWING INFORMATION AND YOUR KNOWLEDGE OF SCIENCE TO ANSWER QUESTIONS 38 TO 40:



The dotted line shows the path of the cannon ball. The distance from the cannon to Location E is 200 meters. Note that the cannon is tilted at a 30° angle to the ground. Five locations of the cannon ball along its path are shown by the letters A, B, C, D, and E.

38. At which location did the cannon ball have the most kinetic energy?

- A. Location A
- B. Location B
- C. Location C
- D. Location D

39. The cannon ball moves from Location C down to Location E because of _____.

- A. the motion of the Earth
- B. gravity
- C. the size of the cannon ball
- D. the shape of the cannon ball

40. If the angle between cannon ball and the Earth is decreased to 10° , the cannon ball would hit the ground _____.

- A. just under the end of the cannon
- B. at Location E
- C. to the left of Location E
- D. to the right of Location E