

Name: _____

Date: _____

FOURTH GRADE-SCIENCE (SCIENCE4_5)

1. Sound can travel fastest through
 - A. air.
 - B. metal.
 - C. water.
 - D. outer space.
2. An electromagnet has just enough strength to pick up five paper clips. Which would most likely happen if ten more loops of wire were wrapped around the nail?
 - A. Exactly two clips would fall off the nail.
 - B. All of the clips would fall off the nail.
 - C. The electromagnet would be able to pick up more clips.
 - D. The strength of the electromagnet would stay the same.
3. Which is an example of current electricity?
 - A. a balloon sticking to a wall
 - B. a lamp lighting a room
 - C. hair standing up as a comb passes over it
 - D. clothes sticking together after they come out of the dryer
4. Keenan brought his electricity project to school. He forgot to bring a sample conductor and a sample insulator. Which materials in his classroom could he substitute for the conductor and insulator?
 - A. a safety pin and a chalkboard eraser
 - B. scissors and a key
 - C. a pretzel and a color pencil
 - D. a plastic spoon and an index card
5. Which would save the MOST electricity?
 - A. shutting off lights when leaving a room
 - B. keeping the volume low on a television
 - C. using a hand-operated can opener
 - D. making one piece of toast at a time
6. To help students understand the importance of electricity in their lives, a teacher assigns homework requiring them NOT to use anything electric. Which item could a student continue to use?

- A. calculator
 - B. refrigerator
 - C. computer
 - D. bicycle
-
7. Which sound would probably have the highest pitch?
- A. a balloon popping
 - B. a hammer hitting wood
 - C. an eraser hitting a chalkboard
 - D. a metal rod hitting a musical triangle
-
8. Which sound has a pitch that is MOST DIFFERENT from the other three sounds?
- A. fire alarm
 - B. train whistle
 - C. bouncing ball
 - D. smoke detector
-
9. Which item would conduct electricity?
- A. a glass cup
 - B. a chicken feather
 - C. a plastic straw
 - D. a metal fork
-
10. The sound that a person hears from a drum is produced by
- A. echoes.
 - B. reflections.
 - C. pulses.
 - D. vibrations.
-
11. Lightning is a form of
- A. air current.
 - B. magnetism.
 - C. cloud cover.
 - D. static electricity.
-
12. Which term refers to the flow of electrical charges?
- A. conductance
 - B. resistance
 - C. current
 - D. energy
-
13. Which is an insulator?
- A. copper coin

- B. aluminum ladder
- C. glass
- D. water

14. Which material conducts electricity?

- A. piece of glass
- B. cotton T-shirt
- C. rubber ball
- D. copper coin

15. At which time of day would a person's shadow cast by the Sun be the shortest?

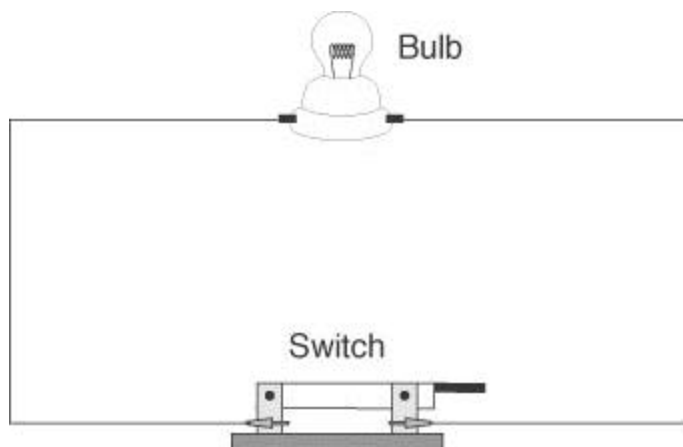
- A. early morning
- B. noon
- C. mid-afternoon
- D. night

16. Which would be MOST dangerous for a student to do?

- A. leave a television on for more than six hours.
- B. turn on a radio while taking a bath.
- C. pull out the plug before shutting off a lamp.
- D. store flashlight batteries in a basement.

17.

Use the picture below to answer this question.



The bulb in the electric circuit will NOT light because

- A. the switch is too far away from the bulb.
- B. the bulb has to be larger.
- C. the wires are not long enough.
- D. there is no energy source.

18. A guitar string makes a higher-pitched sound when you tighten the string. Which of the following explains why tightening the string causes this change?

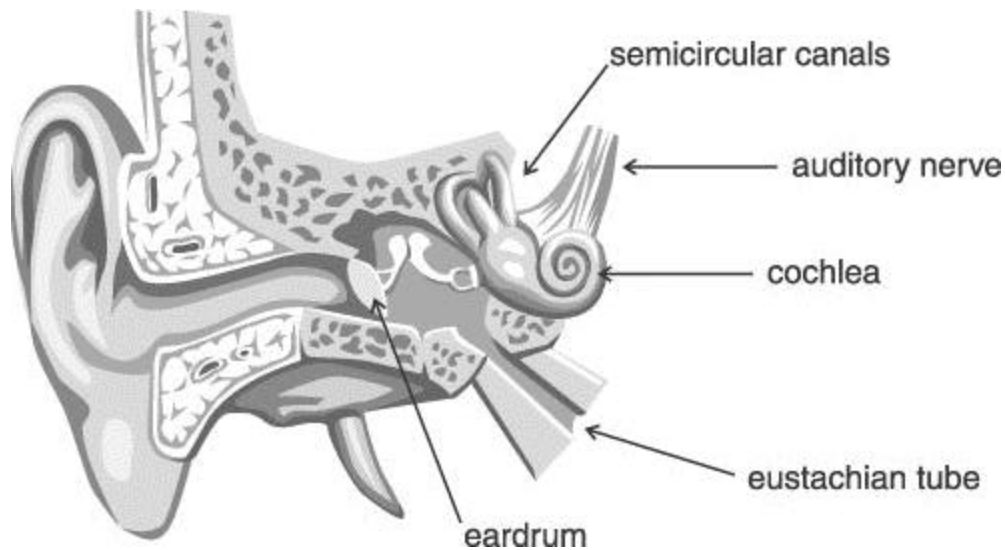
- A. It changes the shape of the guitar.
- B. It causes the string to get thinner.
- C. Tightening the string makes it vibrate faster.
- D. Tightening the string makes it longer.

19. Which is an example of an opaque material?

- A. clear glass
- B. brick wall
- C. waxed paper
- D. colored water

20.

Use the diagram below to answer this question.



Which part of the ear vibrates first when sound waves hit it so that the sound can be heard?

- A. cochlea
- B. eardrum
- C. eustachian tube
- D. auditory nerve

21. When several lightbulbs are connected in a series circuit, what will happen if one bulb burns out?

- A. All of the lightbulbs will go out.
- B. The other bulbs will continue to burn.

- C. The other bulbs will burn brighter.
 - D. There will be a short circuit.
-

22. Kim is outdoors when an electrical storm begins. Where should Kim go to be safe during the storm?

- A. into a lake
 - B. into the house
 - C. under a tree
 - D. on a lawn
-

23. The Sun, a lightbulb, and a candle all give off light. How does the light from these things feel?

- A. dry
 - B. wet
 - C. cool
 - D. warm
-

24. The plastic coating around an electric cord is used to

- A. help the electricity move through the wires.
 - B. stop the electricity from shocking you.
 - C. cover the wires so the cord looks pretty.
 - D. use less wire so the cord costs less.
-

25. A scientist wanted to conduct an experiment with special equipment that is very sensitive to sound. A place where the equipment would NOT be affected by sound waves is

- A. deep under water.
- B. high in the air.
- C. in a solid piece of granite.
- D. in outer space.

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(Answer Key)

1. metal.
2. The electromagnet would be able to pick up more clips.
3. a lamp lighting a room
4. a safety pin and a chalkboard eraser
5. shutting off lights when leaving a room

6. bicycle
7. a metal rod hitting a musical triangle
8. bouncing ball
9. a metal fork
10. vibrations.
11. static electricity.
12. current
13. glass
14. copper coin
15. noon
16. turn on a radio while taking a bath.
17. there is no energy source.
18. Tightening the string makes it vibrate faster.
19. brick wall
20. eardrum
21. All of the lightbulbs will go out.
22. into the house
23. warm
24. stop the electricity from shocking you.
25. in outer space.