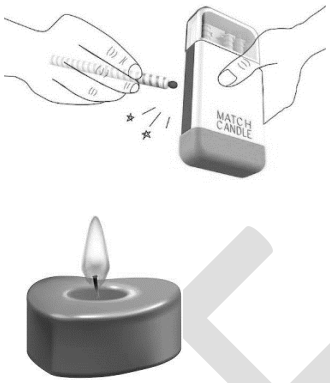
FIT Science

5th Grade Science

STAAR Test Item Questions

Category 2

1. A class is learning about states of matter. The teacher shows the students how to set up the following investigation shown below.



What kinds of energy are needed in this investigation to change the state of matter of the chocolate scented candle?

A. Light, mechanical, and friction

B. Sound, mechanical, and light

C. Thermal, light, and sound

D. Mechanical, light, and thermal

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2. Which of the following example is associated with Mechanical Energy?

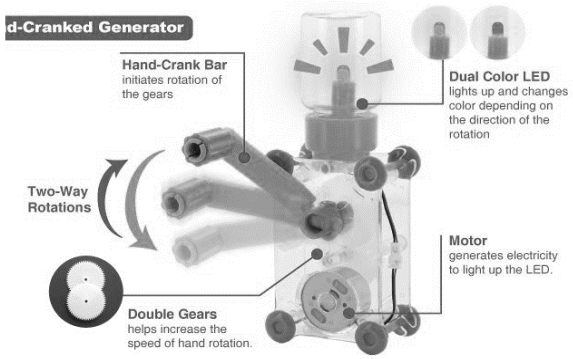
F. Vibrations

G. Motion or Movement

H. Lightbulb

J. Fire

3. A student observes the following investigation shown below.



Based on the information in the illustration, which forms of energy are used to turn on the light?

A. Sound and mechanical energy

B. Light and thermal energy

C. Mechanical and electrical energy

D. Mechanical and sound energy

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4. Which of the following example is associated with the use of Thermal Energy?

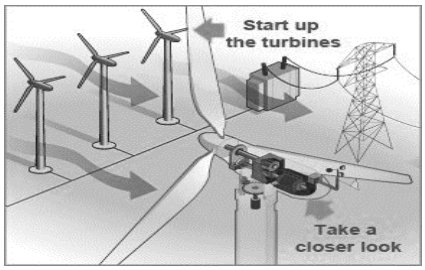
F. Fireworks

G. Convection currents in air

H. Density

J. Mass

5. Which of these is NOT an example of the wind turbine using mechanical energy?



A. The propellers of the wind turbine moving in a clockwise direction.

B. The wind moving through the wind turbine pushing the blades

C. The turbine turning the generator as the propellers move.

D. The electricity flows to houses from the wind turbine

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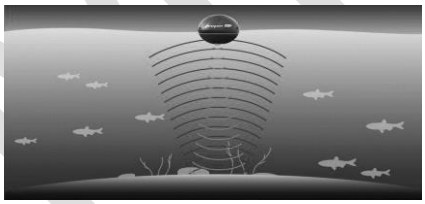
6. When fishermen search for fish in the ocean, they use a sonar system. This sonar system uses the sound waves to find the fish.



When the boat moves in the ocean, the fishermen listen to the soundwaves and sees the images in the sonar system to locate schools of fish. They do this by using –

F. Thermal Energy and Light Energy

G. Sound Energy and Thermal Energy

H. Sound Energy and Light Energy

J. Mechanical Energy and Sound Energy

7. The lamp shown uses a special lightbulb for a farmer to use with his chicks as soon as they hatch.

What types of energy does the lamp need to use in order for it to be good use for the farmer and the chicks?

A. Electrical Energy and Light Energy

B. Light Energy and Sound Energy

C. Electrical Energy and Thermal Energy

D. Light Energy only

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8. Which of the following examples is the only one that is a source of both mechanical and sound energy?

F. An alarm clock

G. A radio

H. A drum set

J. A fire alarm

9. Which of the following example is associated with the use of Light Energy?

A. Motion or Movement

B. Sound in the dark

C. Electricity

D. Visibility

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10. Which of the following example is associated with the use of Sound Energy?

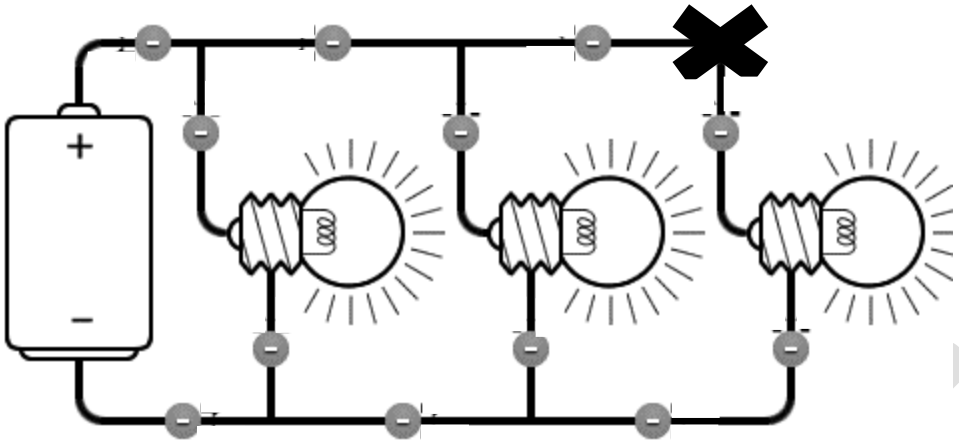
F. Heat

G. Electricity

H. Visibility

J Communication

11. The diagram below shows a parallel circuit with lit bulbs.



How many bulbs will remain lit if the wire is cut at the point shown by the X?

A. 0

B. 1

C. 2

D. 3

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12. A complete circuit example is best described as a circuit that has –

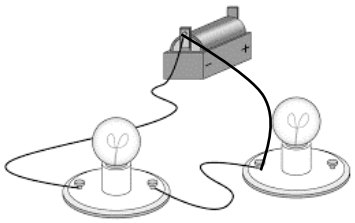
F. A battery connected to broken lightbulbs

G. A battery connected to wires and wires not connected to unlit lightbulbs

H. A battery not connected to wires

J. A battery connected to wires and wires connected to lit lightbulbs

13. A student creates a circuit shown in the diagram below.



Which of these changes to the electric circuit shown above will cause the lightbulb to light up?

A. Switch out the lightbulbs for new ones.

B. Detach the first wire to the positive terminal of the battery and replace the battery.

C. Switch out the battery for a new one.

D. Place the first wire on the other side of the lightbulb and then attach it to the positive terminal of the battery.

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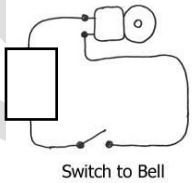
14. A student illustrates the circuit shown below.

Figure #3.



The bell does not vibrate. Which statement best explain the student's observation?

F. The battery is not attached and does not make a complete circuit.

G. The bell is not attached to make a complete circuit.

H. The wires are old and do not conduct electricity.

J. The switch remains open and does not allow electricity to flow.