

- 1 A table of different properties of four samples of matter is shown.

Sample	Conducts Electricity	Conducts Heat	Soluble in Water	Physical State at Room Temperature
1	No	No	Yes	Solid
2	Yes	Yes	No	Solid
3	No	Yes	Yes	Liquid
4	Yes	Yes	No	Liquid

Which conclusion can be made about the samples based on the table?

- F Sample 1 is made of plastic.
- G Sample 2 is made of metal.
- H Sample 3 is attracted to magnets.
- J Sample 4 is less dense than water.

Read carefully which one is more like a metal?

- 2 A student is asked to design a sleeve for a cup that will insulate thermal energy and not feel hot to the touch when the cup is filled with hot liquid.

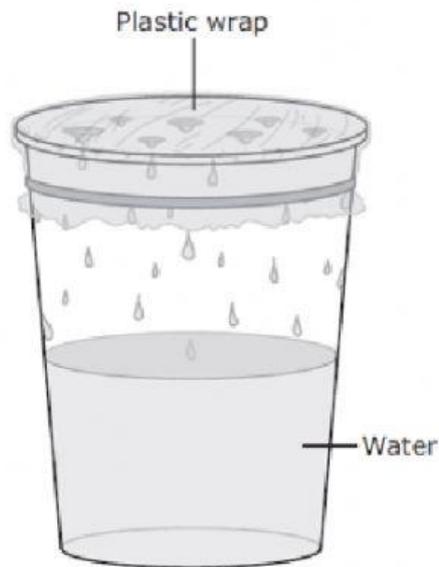


The student has four materials to choose from. Which of these materials is least useful as an insulator?

- F Cardboard
- G Aluminum
- H Rubber
- J Plastic

The question said **LEAST**
remember an insulator stops heat.

- 3 A student makes a model of the water cycle by using a cup, some water, and plastic wrap. After the student places the model near a sunny window, moisture forms on the inside of the plastic wrap.



What change is the student most likely observing in this model?

- A Freezing
- B Condensation
- C The warming of air
- D The formation of clouds

Remember when the cup is sweating what do we call that?

- 4 Two wires carrying electricity can create a spark if they come too close together. This spark can start a fire. Wires carrying electricity are usually covered with plastic to keep them from starting a fire. Why does the plastic keep the electricity from starting a fire?

- A Plastic is a good insulator.
- B Plastic can melt when heated.
- C Plastic is softer than wire.
- D Plastic conducts electricity.

What stops heat and electricity?

An _____

5 The table lists some physical properties of two objects.

Object 1	Object 2
Solid	Solid
Insulates thermal energy	Conducts thermal energy
Less dense than water	More dense than water
Poor electrical conductor	Good electrical conductor

Based on their properties, which of the objects is most likely a metal?

- A Object 1, because it is a solid that is less dense than water
- B Object 2, because all metals float in water
- C Object 2, because metals conduct thermal energy and electricity
- D Object 1, because it can be used to provide insulation for thermal energy

What can a metal do?

6 A teacher gives a student four clear sealed containers. Each container holds a different substance. The student records some observations about the substance in each container.

Student Observations

Container	Observations
1	The substance takes the shape of the container and is clear. Small particles float on top of the substance.
2	The substance is hard and cube-shaped. The surface of the substance is shiny.
3	The substance is not visible, and the container appears empty.
4	The substance is cold and made of crystals.

Based on these observations, which container most likely holds only gas?

- F Container 1
- G Container 2
- H Container 3
- J Container 4

Think of a gas for this question