

RECORD SHEET

Activity 5: Density

Name _____

Date _____

Class _____

Key Question:

We Think

1. Do you agree with Carlos, Nadia, or neither of them? Why?

Equal Volumes of Different Materials

Table 1: Mass of Cubes			
Cube Material*	Mass † (g)	Cube Material*	Mass † (g)
Aluminum	44.9 g	Milky Plastic (Nylon)	19.7 g
Brass	139.9 g	Oak Wood	12.7 g
Clear Plastic (acrylic)	16.2 g	Pine Wood	10.1 g
Copper	147.2	Poplar Wood	7.9 g
Gray Plastic (PVC)	24.2 g	Steel	127.8 g

* Cubes have approximately the same volume (15 – 16 cm³).

† Uncertainty is 0.1 g

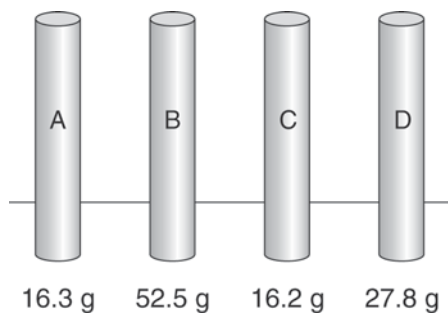
Use Table 1 to answer the following question.

2. Do equal volumes of different materials have the same mass or different masses?
Be sure to include your evidence.

Explore Your Ideas

What material is each cube made of? Use the Table of Densities in the Student Edition and record your answers on the data table below.

Table 2: Mass of Board-Game Cubes		
Cube	Mass of 1-cm ³ Cube (g)	Type of Material
# 1	8.8	
# 2	5.8	
# 3	2.8	



1. Are any cylinders made of the same materials? Explain your reasoning.

2. Which cylinders are made of different materials? Explain your reasoning.

3. Are cylinders A and E made of the same material or different materials? Explain your reasoning.

Make Sense of Your Ideas

1. Why do two properties, magnetic or nonmagnetic and electrical conductor or nonconductor, *not* help you decide if an object is made of aluminum, tin, silver, or titanium?

2. Why does the mass of a metal object *not* help you decide if it is made of aluminum, tin, silver, or titanium?

3. Describe what you would do to decide what the metal blocks were made of.

Our Consensus Ideas

The key question for this activity is:



What property can help you decide what kind of material an object is made of?

1. Answer the key question for this activity.

2. Write the class consensus ideas.
