

SECTION 3-3 REVIEW AND REINFORCE

Floating and Sinking

◆ Understanding Main Ideas

Answer the following questions in the spaces provided. Use the back of this sheet or a separate sheet of paper if you need more room.

1. Explain why an object underwater feels lighter than when it is in air.

The buoyant force pushes up against gravity and makes the object feel lighter

2. If an object that floats on the surface displaces 10 cm³ of water, how much does that object weigh? Explain how you know.

Because H₂O weighs 1 g/cm³, the object must weigh 10 grams.

Fill in the table below.

Observation of object in fluid	Density of object compared to the density of the fluid
Object sinks.	3. Greater
Object floats on surface.	4. LESS
Object floats at constant level.	5. Equal to

◆ Building Vocabulary

Define each of the following in the spaces provided.

6. Archimedes' principle

The buoyant force on an object is equal to the weight of the fluid displaced by the object

7. density

The mass of an object per unit volume

8. buoyant force

A force acting on an object in a fluid in the direction opposite to gravity.