

Activity 7.6

# Changing the density of an object—Adding material

## How can you make an object float when it ordinarily sinks?



1. The can of regular soda pop sinks in water. What does this observation tell you about the density of the can of soda pop compared to the density of water?

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2. The can of diet soda pop floats in water. What does this observation tell you about the density of the can of diet soda pop compared to the density of water?

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3. Use the terms *weight*, *volume*, and *density* to explain why adding bubble wrap makes a can of regular soda pop float in water.

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4. Explain why life jackets are made of lightweight material and are large.

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Activity 7.6

**Changing the density of an object—Adding material** *(continued)*

**How can you make an object float when it ordinarily sinks?**

*Procedure*

1. Select an object like a marble, key, or plastic toy and place it a container of water to show that it sinks.
2. Add material to this object and test it in a container of water. Continue to add material and test until your object floats.

1. Draw and label your object and what you added to make it float.

2. Your object originally sunk in water. What can you say about the density of your object compared to the density of water?

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3. After adding material your object floated. What can you say about the density of the object-and-material compared to the density of water?

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4. Density is the relationship between the mass of an object and its volume.

When you add material to your sinking object, what do you change more, mass or volume?

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How does increasing the volume of an object affect its density?

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