**Sample Answers to Density Analysis**

**STEP 9** How are the masses and volumes of the objects related to their densities?

The volume and density of each object is related. Objects with larger masses had larger densities and objects with larger volumes had lower densities.

**STEP 10** Which of the objects that you measured was the least dense?

The wood cube was the least dense object measured.

**STEP 11** Why did the least dense object you measured have such a low density?

The wood cube had the lowest density because it had the lowest mass and the same volume as the other cube.

**STEP 12** What can you conclude about the densities of different materials- do all materials have the same density? Explain.

Based on the results of this activity, materials do not have the same densities. The masses and volumes vary, so the density does as well. Materials differ by how much matter (mass) is in a space (volume).