

Name \_\_\_\_\_

Date \_\_\_\_\_



## *What's the Matter with My Snow?* Proficiency Assessment



**Directions:** Multiple choice and extended multiple choice.

- 1) Which of the following objects probably has the greatest density?
- a) a ping pong ball
  - b) a rubber ball
  - c) a golf ball
  - d) a Styrofoam ball

2-3) A *variable* is something that can vary or change during an experiment. Some variables need to be controlled (kept the same) in order to get accurate results. Which statement below describes a variable that could cause inaccurate results during the *What's the Matter with My Snow* investigation?

- a) Everyone uses the same equipment to measure their snow samples.
- b) Some students collect snow that has been stepped on by other students.
- c) Some students pack snow into their containers and some do not.
- d) both b and c

Explain \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Directions:** Short answer.

4-6) Donald's team has just finished collecting the information needed for their snow density experiment. Their snow and container weigh 95 grams. Their empty container weighs 24 grams. The volume of their container is 355 milliliters. Complete their work in the space provided below using words and numbers. Circle the correct choice on the scale below. Ask your teacher about using a calculator.

$$\text{density} = \frac{\text{mass (g)}}{\text{volume (ml)}}$$

**Scale**  
**0.1 to 0.3 = dry snow**  
**0.4 to 0.6 = good packing snow**  
**0.7 to 0.9 = slushy snow**  
**1.0 = water**



*What's the Matter with My Snow?*  
**Proficiency Assessment**  
(continued)



**Directions:** Extended Response.

7-10) Write a letter to your parents on a separate sheet of paper that explains the two most important things you learned from the *What's the Matter with My Snow?* investigation. Use three or more of the choices from the Word Bank in your response.

**Word Bank**

density      phase change      matter      water cycle  
mass      volume      measurement

**Checklist**

*I will earn my best score if:*

- My letter tells two important things I learned.
- My letter gives details about each important thing.
- I use three or more words from the Word Bank.
- I use the form for a letter with a greeting, a body, and a closing.
- I use words that make my meaning clear. I do not use the same words over and over.
- I try to spell the words correctly.
- My sentences and proper names begin with a capital letter.
- My sentences end with a period, an exclamation mark, or a question mark.

**Space for Prewriting / Brainstorming**