

Name _____ Date _____



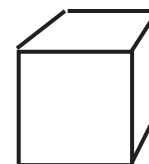
What's the Matter with My Snow? Thinksheet



Begin with a Question: *How dense is the snow today?*

Think It Through:

- 1) Density is _____
- 2) Two objects that are similar in size but have different densities are
a(n) _____ and a(n) _____
- 3) Here's what I learned about the centimeter cube:



- 4) If you want to use numbers to figure out density, use this formula:

The density of an object = the mass (g) of the object divided by its volume (ml).

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

- 5) The density of water for the centimeter cube would be
_____ gram (g) divided by _____ milliliter (ml), or _____ g/ml.
- 6) The density of snow will always be somewhere between 0.1 g/ml and 0.9 g/ml.
Good packing snow is usually between 0.4 g/ml and 0.6 g/ml.

Hypothesis: The density of the snow today will be _____ to _____ (range of 0.2 g/ml)
because _____

Reminder: Don't forget to use the correct units (g/ml) in your hypothesis.

Name _____

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What's the Matter with My Snow?
Thinksheet
(continued)



Design a Test That's Fair: Consider the following variables in this controlled experiment.

Control Variables

- The snow will be collected in the same type of container by all teams.
- The snow will not be packed into the container.
- Snow above the rim of the container will be leveled off.
- The snow will be measured in grams.
- Team results will be averaged to get the best overall result.

Do an Activity (Procedure):

- #1 Measure the mass of the empty juice container. The mass is _____ grams (g).
 - #2 Fill your container by taking a horizontal sample of undisturbed snow. Be sure to level off the top.
 - #3 Measure the mass of the snow-filled juice container. The mass is _____ g.
 - #4 **The snow in the container is _____ g.** (Use the data above and subtract.)
-
- #1 Read the volume of the juice container. **The volume is _____ milliliters (ml).**
 - #2 Use the formula for density on the first page of the Thinksheet and a calculator to find the density of your snow. Round your answer to the nearest tenth.

The density of the snow is _____ grams per milliliter.

- #3 Dump the snow outside.
- #4 Add your density result to the Class Data Sheet.

Make Some Sense of It:

- 1) Review your Thinksheet and Data Sheet(s).
- 2) Complete this sentence: I accept/reject (circle one) my original

hypothesis because _____

(Use the Data Sheet for support.)

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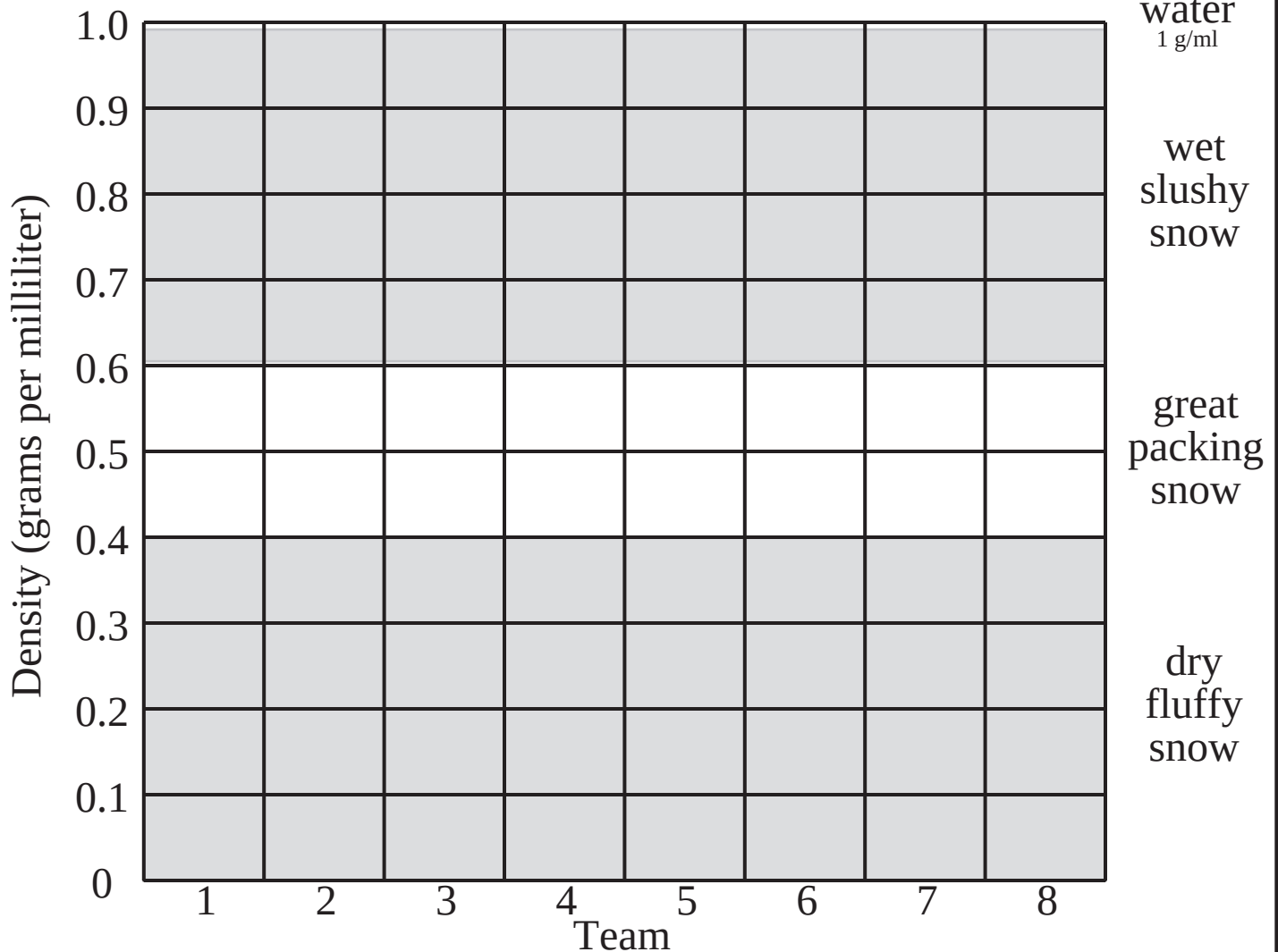


What's the Matter with My Snow? Data Sheet



Directions: Chart the density results for each team on the bar graph below. Complete statistics information according to your teacher's directions.

Question: *How dense is the snow today?*



Terms

mean--the average
median--the middle value
mode--the value that occurs most often
maximum--the highest value
minimum--the lowest value

Density Statistics