

Discovering Snow: Part A

1. Find a site that has not been trampled by footsteps, dig a square pit down to the ground *keeping one side of the pit free of footsteps!*
2. Sketch the wall of your pit that is on the non-trampled side (all persons in the group should be on one side of the pit facing the “clean” wall. What colors do you see? What textures? What does the snow feel like to touch? Are there patterns, such as layers? What does the top surface look like? What does the snow look like where it touches the ground? What does the ground underneath look like? Label your sketch with your own labels and arrows for reference (“layer 1” , “hard spot here”, don’t worry about using any technical wording). Just draw and label what you see, feel, smell, taste, etc.

3. Among your group, make a list of what each of you know about snow from previous classes or from experience. Don't judge any of this knowledge as right or wrong yet, this is to help your group and your instructor get an idea of where each of you is coming from.

4. Now you need to make some measurements. Based on your sketch, what do you think are the most important measurements to add a quantitative component to your sketch. The first couple are easy, I've provided a few as suggestions, then you decide. Consider all the labels and observations you put on your sketch - how would you quantify them? What tools would you need to quantify these concepts?

(a) What is the temperature outside today?

(b) Is the sun shining or is it cloudy? How would you quantify this?

(c) How tall and wide is your snow wall (ground = 0m)?

(d) How big are the snow crystals? Are they the same size everywhere?

(e) ?

(f) ?

Discovering Snow: Part B

Make the measurements you identified in Part A after discussing the list with your instructor. You might need or want to redraw your sketch to be able to relate the quantities measured to your pit wall.

For each type of measurement you make, please describe briefly your technique and what you think the major source of errors are.

Discovering Snow: Part D

Guidelines for Oral Synthesis

You have been given an overarching question. Consider the observations and ideas you have made during the activity and synthesize them into ONLY 1-3 sentence answers to these questions.

This is the only part of this activity which you will hand in. Your grade will be based on this one page synthesis. Therefore, use specific wording in your short answers in order to pack in as much information into the fewest words!

Bad: "The snow has lots of colors."

Good: "The snow is darker brown in the top layer, greenish in the middle layer and white in the bottom layer."

1. What observations did you make that relate to this overarching question?
2. What other background knowledge (from coursework, personal experience) does your group have that you feel might contribute to answering the question?
3. What are several ideas (2-4) that might be answers to your overarching question?
4. What would you want to measure or observe next to work towards a better understanding?
5. What additional background information would be useful to look up in order to help understand how your observations relate to the overarching question?

You will rotate through the members of your group to present the answers to these questions in 1-2 sentences (60 seconds each - no longer).