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Science Methods
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Science Trail: What's the matter?

Grade: 3rd

Season: Winter

Materials: Thermometers for each group, 2-3 mirrors placed in the Garver bathroom by the showers, a plastic cup for each group, packets for each student, clipboards or something for the kids to write on, pencils.

Introduction: Walk in dressed in a full snow outfit. Tell the kids: "Good Morning Class GUESS WHAT! I came across a really cool thing this morning and I thought I would bring it in to share with you. Oh where did I put it. (Start searching through your pockets, looking down your snow suit, in your shoes, etc). Oh man I thought it was here somewhere. (Look around and find a cup) OH HERE IT IS...wait...this is where I put the surprise I thought. It was really neat. It was a giant snowball, but now all that is left is just a little bit of water. I knew that I wasn't going to be able to keep it all the way since I brought it in yesterday after school, but I wonder where it went. Has anyone seen my snowball? Does anyone know what could of happened to my surprise? (Wait till someone says it melted). Well that could be it. This morning I thought we would go be scientific observers and check out some different places on a trail to find out what happens to water when it is snow or when it turns into steam. In groups we are going to go on a detective trail to see if we can figure out why sometimes water is in the form that we drink, sometimes it is in a solid form like snowballs and ice cubes, and other times we can not even see it.

Stop 1:

Location: Down by the Eel River

Objective: When looking at a river, the student will be able to explain that even though the air temperature is cold, because the water is constantly moving it doesn't freeze 100% of the time.

- Task:
1. Collect water and take the temperature.
 2. Watch the river for 30 seconds. Describe what you see. Does the water stay still or does it move? How fast? What direction? Do you see any living things in the river? Why isn't the water ice?
 3. Take the air temperature.

Assessment: Turn in the worksheet packet with description.

Stop 2:

Location: Garver Showers

Objective: When shown steam, students will understand it is water in the gas form 100% of the time.

- Task:
1. Draw a picture of yourself by looking in the mirror.
 2. Turn on the shower as hot as it will go (DO NOT TOUCH THE WATER).
 3. Wait for 5 minutes.

4. Take air temperature.
5. Now look in the mirror again. Redraw yourself.
6. Answer the following questions:
 - a. What is different about the drawing?
 - b. Why did the mirror fog up?
 - c. Touch the mirror, what is now on your hands?

Assessment: Turn in worksheet packet with pictures and questions answered.

Stop 3:

Location: The Mall

Objective: When looking at snow or ice, the students will understand that it is water in its solid form with 100% accuracy.

- Task:
1. Take the air temperature.
 2. Take the snow temperature.
 3. Put some snow in your mouth.
 4. Answer the following questions:
 - a. What happened?
 - b. When snow isn't cold what happens?

Assessment: Turn in worksheet packet with answers to questions.