

Outdoor Classroom

•Does conducting science lessons in the outdoor classroom improve elementary students' inquiry skills?



Introduction:

I have been working with a class of 26 fourth grade students in Wasilla, Alaska. There are an equal number of boys and girls. 23% have identified learning disabilities, while 31% are above grade level in reading.

I recognized that I wasn't taking students outdoors often enough to take full of advantage of our local environment. I wanted to find out if taking students outdoors for science activities would encourage students to make more detailed observations, form more investigable questions, and design investigations.

What does the Literature say?

"The possibilities for using a nature area as an outdoor classroom are limitless. Population studies, observations of migration, life cycles, mapping, soil studies, and environmental issues are just a few of the tasks that students can undertake. Teachers can make interdisciplinary connections, like having students keep nature journals, and sketch plants and animals" (NSTA, 2007).

National Science Teachers Association
www.nsta.org

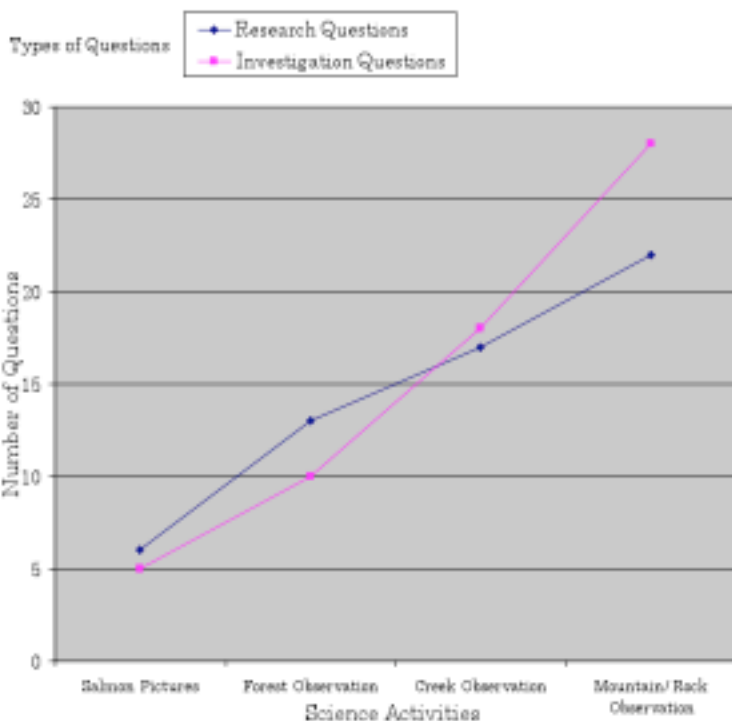
"Why are the salmon turning red?"
"How long do dragonflies live?"
"What do salmon like to eat?"
"What is that big cloud of insects?"
"How many eggs do salmon lay?"

Methodology:

For the treatment, I took students outdoors on several occasions. I modeled how to form investigable questions. I also modeled how to make observations and complete investigations. On subsequent trips outdoors, students formed questions based on their observations and conducted investigations. To complete investigations, we walked to a creek to conduct a macro invertebrate study and plant count. Students investigated rocks and erosion at a moraine. Students also designed their own investigations to answer questions about snow and ice.



•"I'm doing real experiments. I'm finding out what works and what doesn't work. I'm making observations, I'm measuring, I-I-I'm even classifying! Fourth grade is the best year of my life!"



What have I learned? The more often students went outside for activities, the more aware and curious they became about natural phenomena. The data indicated:

- When students had more opportunities to go outside and make observations, they generated more investigable questions..
- Students improved in making detailed observations.
- At the end of the treatment, 85% of the class could complete a multistep investigation and report their conclusions.
- For the purpose of developing inquiry skills in elementary school children, outdoor activities are beneficial.

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