

Alive Awake Alert: Observation

Grade Level: 5-12

Subject: Science

Prepared by: Joseph Grissom

Overview and Purpose:

A foundational skill in all science courses is a student's ability to observe the natural world. Students must be able to view the area around them in a way that addresses both qualitative characteristics as well as the quantitative nature of things. This lesson is designed to inform students of the two types of observations that they can make in the world around them on a much smaller scale.

Educational Standards - Indiana Biology Standards

- Science and Engineering Process Standards (SEPS.2) Developing and using models and tools
 - SEPS.3 - Constructing and performing investigations
-

Objectives:

Specify skills/information that will be learned

- Qualitative vs Quantitative data
 - Observational clues
 - Comparison and contrasting data
 - Reporting and sharing information
 - Scientific Method
-

Materials Needed:

- Pencil
- Timer
- 4x6 Note Card

Other Resources:

(websites, videos, books, etc.)

- None
-

Activity Outline:

1. Have students collect a card.
2. Take them outside into an open area.
3. Instruct the students to place their card on the ground in front of them. Then tell them that for 6 minutes they are to write as many things that they observe in that area under the card.
4. After the observation time, have the individuals form groups of two to compare and contrast what they observed.
5. Collect volunteer cards and have students share.
6. Discuss what the students observed about each of the samples and assess if the data

collected was quantitative in nature or qualitative in nature. Both types of data may be collected but students tend to only focus on the qualitative traits of the data.

7. I showed the students the same activity that I did with my observations of all the data that I recorded in that time period. My card was completely filled with all types of data to show them that there is much more they are not seeing.
8. Ended with talking about Thoreau quote "The question is not what you look at, but what you see." Discuss with students the difference between looking at something and actually seeing something.

Verification:

1. Check student understanding by having them share the events of the day
2. Ask students if they know the difference between quantitative vs qualitative traits of data.
3. Bellwork the next day to see if students observe these types of data. Project an image on the screen and then talk about what each of them write.