

A Typical P.S. Science lesson:

Engage:

In the ongoing process of mentoring the classroom teacher in hands-on science instruction, the typical P.S. Science lesson starts with the classroom teacher introducing the lesson sometime prior to the arrival of the P.S. Science Instructor. This phase of the lesson is titled the “Engage” phase and often involves a book or demonstration designed to elicit curiosity or interest from the students. Each participating classroom has a collection of P.S. Science themed books linked to the specific lessons. As an example, in a 3rd grade lesson on evolution and camouflage, the teacher reads a book called “Clara Caterpillar” in which a drab colored butterfly is best able to hide and scare away a predatory bird. When the P.S. Science Instructor arrives for the weekly lesson he or she typically discusses with the classroom teacher how to share the duties for the delivery of the lesson that day. Teachers are encouraged to take on a larger and larger role as they become more comfortable with the content.

Explore:

Lessons continue in the next three phases, the first of which is “Explore”: during the Explore phase students use an open-ended investigation to begin to formulate ideas about the phenomena they are experiencing. In the camouflage lesson, students find a detailed area of their classroom and design and decorate a paper moth to camouflage in that location.

Explain:

The next phase is titled “Explain”. The explain stage is when the bulk of the traditional “teaching” is done. It might include a non-fiction book, video or other imagery to support the factual content being delivered. In the Explain stage of the camouflage lesson, the P.S. Science Instructor uses a felt story board to explain the popular story of the peppered-moth which demonstrates how human impact on the environment led to the evolutionary change in the color of the peppered moth during the Industrial Revolution in the forests around London, England.

Expand:

Next comes the “Expand” phase of the lesson- designed to allow students to build connections and deeper understanding of the content. In the camouflage lesson, students are challenged to act as predatory birds and try and locate as many of their classmates moths that are hidden around the room. The “survivor” moths lead to a discussion about the varying traits that resulted in the moth’s survival.

Evaluate:

In the final “Evaluate” phase of the P.S. Science lesson, the classroom teacher leads a discussion, writing assignment, or completion of a provided datasheet to allow the students to share and synthesize their understanding of the lesson topic.