

Example Planning Tool

Lead with a Question



One NGSS practice is Asking questions and Defining Problems. Designing a productive investigation question can be surprisingly challenging! Here's a tool for designing a question to frame an investigation. The same question is revisited during the investigation and often is used to kick off a discussion to make meaning.

Curriculum: Investigating Water Transformations

Lesson(s): Investigation 4

What is the learning goal for the lesson? (DCI and practice)

By the end of this lesson (or set of lessons) students will

- know that 1 cc of water weighs 1g and the number of drops in a 1cc syringe.
- understand that the weight and volume relationship let's us calculate the fractional weight of each drop.
- Gain additional evidence that very tiny things have weight.

Draft your investigation question (get out a pencil with an eraser – you'll probably make revisions!)

What does a drop of water weigh?

Review your question and revise as needed

Is the investigation question

- content focused (does student activity relate to the learning goal)?
- worded simply?
- equitable (will every student have some relevant experience to draw from)?
- one you can ask again and again throughout the lesson?

To find evidence to answer the investigation question, will students

- explore and observe?
- measure or count? (count drops, calculate fraction of gram)
- compare and contrast?
- find out what happens if?
- solve a problem? (how will we find the weight of a single drop?)
- take a position and provide evidence?
- explain and provide evidence?
- use or construct a model? (All matter, even tiny pieces, have weight)