

Question Sort

Materials:

Sentence Strips

Markers

Tape

What do you do with a question? Well, it depends on what type of question it is! One way to help students understand the different types of questions is a question sort. Karen Ansberry and I introduced the question sort in our book *More Picture-Perfect Science Lessons*.



Here's how it works:

1. Give students a common experience on a science topic using thought-provoking objects, readings, video clips, etc.
2. Ask students to write a question they have about the topic on a sentence strip (large sticky notes would also work).
3. Collect all the sentence strips.
4. Explain that the way a scientist goes about answering a question depends on the kind of question he or she asks, and that one way to sort questions is into two categories: research questions and testable questions.
 - Research questions** can be answered by using reliable resources or scientific information such as the Internet, books, or experts.
 - Testable questions** can be answered by observing, measuring, or doing an experiment.
5. Create a t-chart with the columns labeled "Research Questions" and "Testable Questions". Read each question aloud, and as a group, decide which category it goes in. Then, tape it up in that category.
6. Have the class select one of the testable questions and discuss ways to investigate. For example, a question like "Do larger pumpkins have more seeds than smaller pumpkins?" could be answered by cutting open several small pumpkins and several large pumpkins and comparing the number of seeds inside.
7. If you have the time and materials, you can actually do the investigation. If not, there is still value in discussing how to go about finding the answer to a testable question.

Sample Question Sort	
Research Questions	Testable Questions
Why are pumpkins orange? How big was the biggest pumpkin ever grown? Where do pumpkins grow? How do you make pumpkin pie?	Are there more lines on bigger pumpkins than on smaller ones? Do larger pumpkins have larger seeds than smaller pumpkins? Do larger pumpkins have more seeds than smaller pumpkins? How much less does a pumpkin weigh after it has been carved? What happens to a carved pumpkin after one month? after two months?

From *More Picture-Perfect Science Lessons*, Ansberry & Morgan 2007

Important Tips

In doing this question sort activity for many classes over several years, I have discovered a few tips:

- Don't underestimate the value of Step #1. Giving students an experience with the topic is essential in getting good questions. If you simply open the day with the question, "What are you wondering about magnets?" you are likely not going to get many good questions. However, if you give students some magnets and time to tinker with them, the questions will flow.
- Feel free to plant your own questions in the stack by writing them on sentence strips. I used to do this all the time. In case the question I wanted them to investigate was not brought up by them, I would include it in the sort and then say "I happen to have the materials for this one, so why don't we investigate this question today! 😊"
- If you want to be more open and you have a lot of the materials, you can have students vote on which testable or research question they want to answer, or form teams that have a common interest in one question.