

Forming Questions in Science

Goal • Identifying science questions to investigate.

Think About It

Scientists ask many questions as they try to find out more about our world. For example, a question might be, “What happened to that puddle that was here a while ago?” How could you design an investigation to answer that question? It would be very difficult. When you make some observations, you are able to word the question in such a way that you can do an experiment that may help you find the answer. In this example, the question could become, “Does water always evaporate more quickly in the Sun than in the shade?”

What to Do

Read the following pairs of questions. Tell which of the two you would choose to try to answer. Make some brief notes about how you might do it.

1. How does a snail find its food?
2. Does a snail need light to find a piece of lettuce?

Notes: _____

1. How do heat and moisture affect seed germination?
2. What makes seeds germinate?

Notes: _____

1. Why does hot chocolate get cold if you leave it out before drinking it?
2. What effect does insulating a cup of hot chocolate have on its decrease in temperature over time?

Notes: _____

Exploring Cause and Effect

Goal • Practise forming questions that explore cause and effect.

Think About It

Asking and exploring good questions is one of the bases of science inquiry. Many new inventions and uses of technology were produced by scientists who conducted an inquiry into what caused something to happen, or what effect resulted from a particular activity. For example, scientists interested in finding ways to reduce tooth decay developed technology such as toothbrushes and toothpastes.

What to Do

Use the following outline to help you develop questions for an inquiry into possible causes and effects of tooth decay.

Questions

1. **Question:** What causes teeth to decay? List some possible causes for tooth decay:

#1 _____ #2 _____
 #3 _____ #4 _____

2. **Question:** What are possible effects of increasing each of the causes you have listed?

Cause	Possible Effects
#1 _____	_____
#2 _____	_____
#3 _____	_____
#4 _____	_____

3. The causes and effects you have listed have a direct relationship. Explain the relationship between the causes and effects you have listed for tooth decay.

#1 _____
 #2 _____
 #3 _____
 #4 _____

