

Formative Assessment #2

Concepts Assessed

A complete circuit is necessary to light a bulb. A compass has a freely moving needle that indicates direction.

Time

45 minutes

Materials

Individual

Prompt

Advance Preparation

1. Duplicate the Formative Assessment for each student

Procedure:

1. Explain that this assessment is to help the teacher and the students tell what they know about complete circuits and compasses.
2. Explain that you will use the information from this assessment to help determine how best to help students learn more about complete circuits and compasses.

Formative Assessment #2

The Scenario (picture this):

Our class had decided to take science fieldtrip. We took a bus and a ferry to get there but for the rest of the time, we were roughing it. No T.V, no microwaves, or other modern conveniences. It was beautiful there, so after pitching our tents, we decided to go for a little hike. You were prepared, you brought your hiking shoes, you'd already sprayed on your insect repellent, and you had your backpack with a map inside

This is what happened next...

There were many students on this hike and you tried to stay close to the group but you and your buddy ended up being the last in line. While walking through the forest, you tripped on a tree root. Oops! That was a close one, you almost lost sight of the group. You knew that if you lost the group, you'd be lost too. You quickly recovered, scrambled to your feet and ran. You caught up to the group.

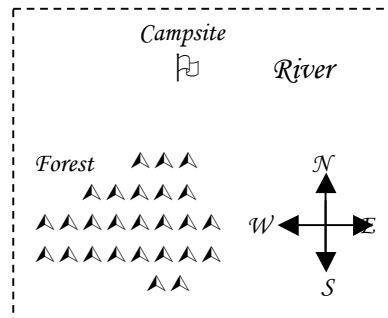
Suddenly, an island fox crossed your path. You thought, "How cute!" You looked up into the mountainside above and noticed at least 3 scrambling around. Once you looked forward again, you realized that the group had left you and your buddy behind so you ran to catch them. That's when it happened!

You tripped on yet another root. This time, you fell and hit your head. You are knocked out! Your buddy stayed behind to care for you.

When you awaken, it is nighttime and the group is gone. The island is dark under the cover of trees. You hear the river but you don't know which side of it you are on. If you could only see the North Star, you could follow it home. You don't know where you are or where the group is but you do have your backpack. Oh yes! Your trusty backpack! You packed it haphazardly. Let's see what you brought. Look in the paper bag on you desk.

What is inside the pack?

- a sewing needle
- a piece of Styrofoam or bark
- some aluminum foil
- a plastic cup
- a battery
- a bulb
- a magnet
- a bottle of water
- your science notebook



How will you find the campsite using just the materials in you backpack and information you learned in science class.
You remember.

1. Aluminum foil conducts electricity.
2. A needle can be magnetized.
3. A compass needs a freely moving, magnetized needle.

Use your materials wisely! You won't get any additional materials.

With your buddy build a flashlight

Make a compass.