

Spying, also called **espionage**, means observing closely and secretly. The main job of a spy is to collect secret information. If a spy is paid by her country's spy organization, called an **intelligence agency**, then the spy is a government employee called an **agent**. An agent, also called a secret agent, may be a spy catcher who tries to catch enemy spies. Or an agent may be sent on a spy mission to gather information.

When an intelligence agency sends an agent on a secret mission, the agent will often take on a **cover**, a disguise to protect her identity and motives. A spy using a cover is said to be **under cover**. An undercover spy can be a **mole**, a person who works in an enemy organization for a long time before beginning to collect secret information. A spy can also be a **double agent**, a person who spies for both sides.

Whatever a spy's mission is, science plays a big role in getting the job done. Try the following activities to learn more about spy science and how it's involved in becoming a secret agent.



Project

1

Covers

A spy under cover will often wear a disguise. Try the following activity to make your own disguise.

M A T E R I A L S

full-length mirror

wig

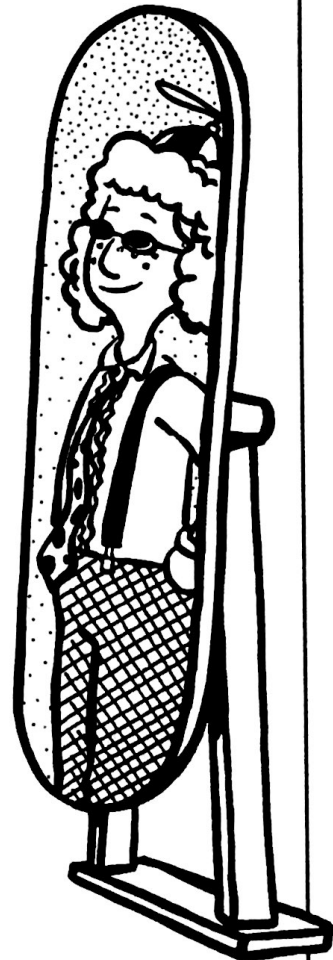
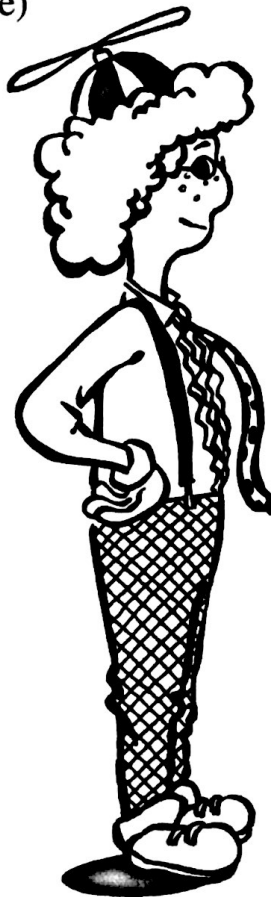
sunglasses

comb or hairbrush

various old clothes (shirt, pants, hat, etc.)

PROCEDURE

- 1 Look at yourself in the mirror. How does your appearance make you special? What can you do to change your appearance, using the materials you have?
- 2 Put on the wig. How does changing your hair color or style affect your appearance?
- 3 Put on the sunglasses. What effect do they have on your appearance?
- 4 Take off the wig, then use the comb or hairbrush to change your hairstyle. If you normally wear your hair forward, comb or brush it back. Part your hair differently. How do these changes affect how you look?
- 5 Stand up as straight and tall as you can. Then, slump your shoulders forward, making yourself appear smaller.
- 6 Put on loose clothes, then tight clothes. How do they change your appearance?
- 7 Put on clothes with vertical (up-and-down) stripes, then clothes with horizontal (side-to-side) stripes. What effect do the stripes have?
- 8 Wear two layers of clothes. How does that affect your appearance?





MORE FUN STUFF TO DO

With an adult's permission, invite your friends to a disguise party. Ask each person to come to the party disguised as someone else. Not only must your guests dress their parts, they have to act them as well. They should research their characters' backgrounds. For example, if a friend comes disguised as a science teacher, he should know what a science teacher does and what a science teacher would talk about.

E X P L A N A T I O N

There are many ways to change your appearance. In this activity you explored different ways to disguise your age, height, weight, and other characteristics. Layered and loose-fitting clothes make you look heavier. Vertical stripes make you look taller, while horizontal stripes make you look wider. A wig changes your hair color and style, and large, dark sunglasses hide parts of your face.

When you slump your shoulders forward, you seem shorter. When asked later, the observer might say that you are several inches (centimeters) shorter than you really are. This is because when we first look at someone else, we retain a first impression of that person. That impression is compared to our memories and knowledge. For example, if you see a man walking hunched over, you might think he is old because you have seen other old people walk hunched over. Your memories and thoughts about how old people walk give you a bias. A **bias** is an opinion or judgment that may or may not match the facts. A bias may make it difficult to change a first impression.

Like spies, scientists know how important it is to avoid biases. If scientists allow their own opinions and ideas to affect how they view the results of an experiment, those biases may cause them to draw a false conclusion. Scientists, like spies, must always keep an open mind and be ready for unexpected information.

Lia de Beaumont may have had one of the most successful disguises in the history of spying. When presented at the eighteenth-century Russian court, Empress Elizabeth was so taken with the shy, sweet Lia that she made her a maid of honor. The empress never suspected that beneath the flowing gown, the makeup, and the wig was Charles-Geneviève-Louis-Auguste-André-Timothée d'Éon de Beaumont, a male French spy.

Spies have used many different disguises and covers to protect their identity. Perhaps the most innocent cover was adopted by Robert Baden-Powell, an Englishman. Before World War I, he traveled throughout the Austro-Hungarian Empire, posing as a **lepidopterist**, a scientist who studies butterflies. He spent his time not only chasing butterflies, but also scouting and sketching military installations. Baden-Powell is remembered for more than his work as a spy. He founded the Boy Scouts.



Legends



To take on a cover, spies have to do more than change their looks. They have to actually act out the part. This becomes part of a spy's **legend**, the story that supports the cover she has chosen. Try the following activity to learn techniques for pretending to be someone else.

M A T E R I A L S

scissors
several sheets of paper
pencil
several helpers