HOW TO DO THE POLAR BEAR WARMTH SCIENCE ACTIVITY:

The polar bear warmth science activity will help you answer an important question:
How do polar bears stay warm in the freezing cold of the Arctic? You'll use coffee to find the answer.

WHAT YOU'LL NEED:

- Coffee
- Two glass jars
- Cloth
- Plastic wrap
- Food thermometer

STEP 1: Pour one cup of strong black coffee into each of two clear glass jars. Let the jars sit until the coffee is room temperature.

STEP 2: Cover one jar with a piece of white cloth, and the other jar with a piece of clear plastic wrap.

STEP 3: Put both jars in the sun for an hour or more.

STEP 4: Use a food thermometer to check the temperature of the coffee in each jar. Which is warmer? Can you explain why?

AND NOW FOR THE POLAR BEAR'S SECRET:

Polar bears are not really white. If they were, they couldn't stay warm in their Arctic habitat.

As you just learned, white reflects sunlight and the heat that comes with it. The hairs in a polar bear's coat are clear. The hollow center of each hair soaks up light from the sun, and the light filters out the sides.

That's what makes polar bears look white. Each clear hair carries heat from the sun down to the polar bear's skin. Its skin is black, which means it soaks up heat to keep the bear warm.

A polar bear is like the plastic-covered coffee in your experiment: Clear on the outside, black on the inside -- and plenty warm