Bill Nye the Science Guy:

Mammals

Running Time: 26 Minutes

Nifty questions in this episode:

- What are some characteristics of mammals?
- Does a mammal's temperature change with the outside?
- Where do mammals get their body heat?

Awesome answers:

- Hair/fur, warm blood, nursing of young, and breathing oxygen.
- No! A mammal is warmblooded, so its body maintains its temperature.
- From the energy in the food they eat.

Experiments shown on the video:

SNIFF IT!

Objective: To demonstrate the sense of smell.

- Soak cotton balls with vanilla, lemon juice, peppermint.
- Gather materials such as chocolate chips, orange rinds, etc.
- Blindfold a partner and let him sniff the cotton balls and other foods.
- Can your partner identify what the various substances are, using the sense of smell?

More interesting stuff to do:

I'M ALL EARS

Objective: To determine if a mammal's ears would aid in cooling the skin.

- Stretch two wire clothes hangers and form a basic square shape.
- Almost fill four long skinny balloons with warm tap water, allowing enough of the balloon to extend at each end to tie to the hanger. Tie the ends of two balloons to one hanger, stretching the balloons across the middle of the hanger; keep balloons a couple of inches apart.
- Repeat this procedure with the other hanger.
- Fan the hangers (to simulate ear movement) back and forth while spraying balloons with a cold water spray bottle. After one minute, touch the balloons to determine if balloons have cooled.

BE COOL...WAY COOL

Objective: To demonstrate how evaporation is cooling.

Note: In the following experiment, all coverings are to be placed at the same time; record temperature before beginning procedure.

- Place five thermometers on a table in a warm area. Place a hot (tap water), wet paper towel on one thermometer, a cold (refrigerator water), wet paper towel on another thermometer.
- Repeat procedure above, but use cloth this time.
- Leave one thermometer uncovered.
- Use an electric fan and direct over thermometers. Record temperatures after 20seconds.
- Continue to record temperatures to determine which thermometer(s) cool the fastest or at the same time.
- How do humans use evaporation to cool off?

Way Cool Scientist: Laura Wilson, Naturalist

closed-captioned

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