

# Genes

Running Time: 26 Minutes

## Nifty questions in this episode:

- What are the bundles of chemicals in our body called?
- What are the four main chemicals that make up DNA?
- What makes up your body and brain with a set of instructions that determines who you are?
- Where do our genes come from and what determines hair, eye, and skin color?

## Awesome answers:

- Deoxyribonucleic Acid.
- Adenine, Thymine, Cytosine, Guanine.
- Genes.
- Parents' DNA molecules; DNA (parents' genes).

## Experiments shown on the video:

### SAME BUT DIFFERENT

**Objective: To determine if your physical characteristics are similar to those of your parents.**

- Work with a partner to help you record and determine the following:
  - Is your ear lobe closed (attached to your head) or is it open (hanging from your ear)?
  - Does your hairline form a point or "peak" at your forehead?
- Also check and record the following: hair between the first and second knuckle on your little finger; if second toe is longer than your first, "big" toe; the color of your eyes; if you can roll your tongue lengthwise.
- Compare your characteristics to those of your parents.

## More interesting stuff to do:

### TOO LIGHT OR NOT TOO LIGHT


**Objective: To determine if light has any effect on skin color.**

- Wrap a bandage around the first joint of any finger and nail.
- Wrap another bandage around the second joint of another finger.
- Repeat this procedure on the other hand and keep the bandages on for two days.
- Remove bandages and compare skin color of the area under the bandage to that of the rest of your hands. A substance called melanin causes skin to become lighter in color with the absence of light and darker with more light.

### TASTE...IT'S IN THE GENES

**Objective: To determine what similarities occur between you and your parents.**

- Make a list of food and drink that you enjoy that have various tastes and flavors (sweet, sour, bitter, hot, etc.).
- Have your parents compile their own lists and compare with yours.
- Make additional lists that incorporate other interests, for example: textures, colors, clothes, design and style, etc. Which of these interests are learned and which are inherited? Think of some other lists that you can compile to test your gene-alogy.

 closed-captioned



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