



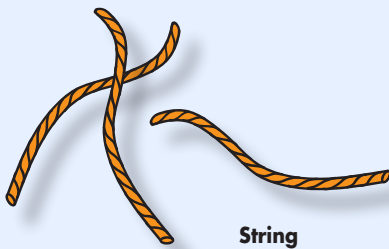
Your Body Rules!

[Check out the video for this activity on the Detective Science, Latest Updates page](#)

Find What You Need..

- String
- Scissors
- A few friends or family members

Please find
a grownup to supervise
this activity.



How could scientists use a footprint to tell how tall someone was?

People come in all shapes and sizes. But scientists know a few rules that most bodies follow. They are rules about *proportions*, or how large one body part is compared to another. For example, it turns out that most people are about seven times as tall as the length of their foot! If *forensic* (detective) scientists find a footprint in the dirt, they will have some idea how tall that person was.

That's not the only body rule. Look at the length of the inside of your forearm (from your wrist to the bend in your arm opposite your elbow) and at the length of your foot. Can you guess the rule about a size of people's feet compared to their forearms? How about your forearm compared to your face? Try this activity to find out.



Fact:

Hundreds of years ago,
artists noticed rules of body
proportions and began to use them
to make realistic portraits.

Activity Instructions

1. Find some friends or family members to work with if possible. Each of you can do the following: Place some yarn or string on the floor and step in it without your shoe on. Cut the string to be just the size of your foot. (This might be easier if someone else cuts it.)
2. Use your foot-length string to make some measurements. How many foot-lengths is your forearm? How many foot-lengths is your face, from your hairline to your chin?
3. Now, stand up and ask a friend to cut a string to be the length of your body, from the top of your head to the ground. Lay the string out straight on a table or the floor. Use the foot-length string to "measure" the longer string. How many foot-lengths is it? Does your body follow the 7-foot-lengths body rule?

Note: Bodies probably don't follow the rules *exactly*. Six-and-a-half, or seven-and-a-half, foot-lengths are still pretty close.



Conclusions

Were you surprised by any body rules? Did you and your friends get the same results? Think of how these rules could be used by forensic scientists, artists, and others. What are some problems with using these rules?

Brain Blaster:

If someone was 21 feet tall,
what would be the length
of their foot?



Kids' Science Challenge
Science Projects
are presented by
the award-winning
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