

Activity 3

Take It in Stride

GET STEPPING AND MEASURE YOUR WAY AROUND TOWN.

The *Physical Activity Guidelines for Americans* recommends that youth (ages 6 -17) engage in at least one hour of physical activity daily. When it comes to walking, studies show that for 6- to 12-year-olds, girls need 12,000 steps/day and boys need 15,000 steps/day to stay healthy. One fun way to get kids stepping is to measure stride length. It's an important factor for speed in sports, such as soccer, and can even help kids estimate distances without a ruler!

Here's how:

To get started, watch SciGirls measure the stride length of a horse on the *SciGirls Get Healthy DVD*. (Select *Horsing Around: Experiment*).⁷



1. Discuss steps and strides. Ask girls if they know the difference between a step and a stride. (A step is the distance between the heel print of one foot to the heel print of the other foot. A stride is the distance from the heel print of one foot to the heel print of that same foot, or two steps.) How does distance traveled relate to a person's stride length?

$$\text{stride length} = \frac{\text{distance}}{\text{number of strides}}$$

2. Plan. Break into small groups¹ and give the **SciGirls Challenge:** Find a method to measure stride length.³ It sounds simple, but there are many things to consider.

You'll Need (per small group):

- ◆ tape measure
- ◆ paper and pencil
- ◆ masking or duct tape



- ★ **Number of replicates** Stride length can change while walking, so replicates are important.
- ★ **Method** Girls could mark a set distance (e.g., 20 ft.) with tape and count the number of strides it takes to walk it; or they might pick a certain number of strides (e.g., 10) to do, then measure the distance covered.⁴
- ★ **Distance** The longer the distance, the more accurate the measurement.

POINTER: Encourage girls to take a few steps to get into their "normal" stride before measuring.

3. Calculate and test. Ask each girl to calculate her average stride length and then choose a place to test it (e.g., soccer field, hallway, or playground). Have girls walk from point A to point B and count the number of strides. (Remind them that one stride equals two steps!) Then ask them to use their average stride length to calculate the distance. Compare results. How accurate were you?

4. Continue exploring. Can you figure out the distance you walk to school each day? To your friend's house? To walk the dog?² If you walked 12,000 steps each day, how many stride lengths is that? How far would you go?

Visit pbs.org/teachers/scigirls for more activities!