

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Class: \_\_\_\_\_

## Measuring Variation in Human Hands

### Learner Objectives:

- Observe variation in living things, and describe examples of variation among species and within species

**Background Information:** Variation within a species may not be something that is immediately noticeable, however even minor variability can improve how well adapted an organism is to its environment.



**Research Question:** What kinds of variations exist in the human hand?

### Materials:

Ruler

### Procedure:

1. Spread your left hand on a flat surface so that the tip of your thumb is as far as possible from the tip of your little finger.
2. Ask a partner to measure and record your hand, from the tip of your thumb to the tip of your pinky finger, in centimeters.
3. Switch roles and measure your partner's hand span.
4. Compile your data with that of the rest of your class.

### Observations:

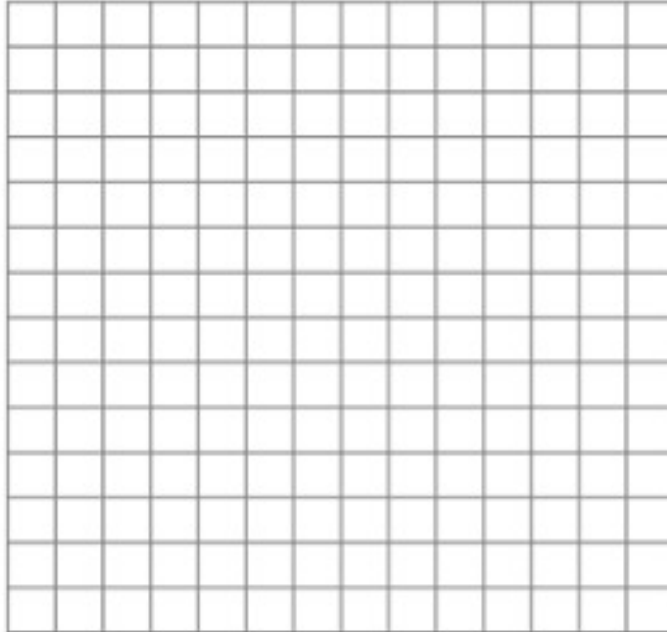
Hand span in cm	12 cm or less	13 to 16 cm	17 to 20 cm	21 to 24 cm	25 to 28 cm	29 or more cm
Number of Students						

This investigation / activity has been adapted from:

Mah K, Martha J, McClelland L, et al. *Science in Action 9*. Toronto, ON: Addison Wesley.

**Analysis:**

1. Graph your data using an appropriate method.



2. What shape does the graph have? What does it show about variation in hand span among your classmates?
3. Predict whether the graph would have the same shape if you measured the hand span of students in grade 1 and in university? Explain your prediction.

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4. What advantage might large hands have for humans? What advantage would small hands have
5. What other human characteristics might be measured in the same way?
6. What prediction could you make about index finger length in humans?

**Conclusion:**

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