



Buttonwood Park Zoo

Pre-Visit Lesson: Animal Adaptations

Aim: For students to recognize the value of a key human physical adaptation.

Instructional Objectives: Upon completion of this lesson, students will be able to:

1. Define the term, *physical adaptation*.
2. Explain why an opposable thumb is an important physical adaptation.

Materials: *Finger Challenge* activity sheet
objects for passing (pennies, pencils, etc.)
timer or stopwatch

Procedure:

1. Divide the class into groups of 4 students and give each group a *Finger Challenge* activity sheet.
2. Using the “Finger Key,” have the students label the fingers on the hands of the activity sheet.
3. Have each group choose 4 of the 6 finger combinations listed on the sheet. Have them write their 4 choices on the appropriate lines.
4. Each group must select two students to pass the objects back and forth, a time keeper who will signal the start and end of one-minute intervals, and a recorder who will count the number of successful passes and record that number on the activity sheet.
5. Have the students chosen as passers to begin passing the objects back and forth between them using the finger combinations they chose. The timer and recorder will keep track of how many successful passes they make with each combination in one minute. A successful pass means the object was transferred from the fingers of one student to the fingers of the next student without being dropped.
6. After the groups have completed all four finger combinations, ask the class, “Which combinations worked the best? Why?” Explain that unlike most other animals, humans have an opposable thumb. Opposable means the tip of the thumb can touch the tips of the other fingers. Discuss how an opposable thumb allows humans to manipulate small objects and do things that would otherwise be very difficult. Explain that an opposable thumb is an example of a physical adaptation.
7. A physical adaptation is a feature on an animals body that makes the animal better suited for survival in its habitat.
8. Contrast the human hand with the paws of a dog or a cat. Do they have opposable thumbs? Explain that the paws and feet of different animals are adapted for different purposes.



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Finger Challenge

Directions:

1. Use the “finger key” to label the fingers on the two hands below.
2. Choose 4 “Finger Combination Choices” and write them on the appropriate lines.
3. For each finger combination chosen, pass an object between two people using only those two fingers for one minute.
4. Count how many times the object was passed without being dropped and record the number on the appropriate line.



Finger Key

P = pinkie
R = ring
M = middle
I = index
Th = thumb



Finger Combination Choices

Ring & Index
Index & pinkie
Thumb & index
Pinkie & thumb
Middle & ring
Thumb & middle

Finger Combinations	Number of Successful Passes
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____