DEPARTMENT OF BIOLOGY
COLLEGE OF ARTS + SCIENCES
Bloomington

You Jump; I Jump!
Let's Compare Movement
Focusing on Indiana Science, Math, and English/Language Arts Standards
Developed by Indiana University's Biology Outreach Department
April 2020

Grade level: K – 3, however with the appropriate extensions, this activity can address higher grade levels.

Learning Objectives:
The student will name and list animals that jump.
The student will predict which animal jumps the farthest.
The student will research (with appropriate help from a caregiver) and list the approximate length the animals jump.
The student will create a space to show and compare how far animals jump.

Science Standards:
K.LS.2: Describe and compare the physical features of common living plants and animals.
1.LS.2 Develop a model mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs. Explore how those external parts could solve a human problem.
2.LS.3: Classify living organisms according to variations in specific physical features and describe how those features may provide an advantage for survival in different environments.
3.LS.3: Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

Math Standards:
K.M.1 Make direct comparisons of the length, capacity, weight, and temperature of objects, and recognize which object is shorter, longer, taller, lighter, heavier, warmer, cooler, or holds more.
1.M.1 Use direct comparison or a nonstandard unit to compare and order objects according to length, area, capacity, weight, and temperature.
2.M.2: Estimate and measure the length of an object by selecting and using appropriate tools, such as rulers, yardstick, meter sticks, and measuring tapes to the nearest inch, foot, yard, centimeter, and meter.
3.AT.3 Solve two-step real-world problems using the four operations of addition, subtraction, multiplication and division (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem).
3.DA.1 Create scaled picture graphs, scaled bar graphs, and frequency tables to represent a data set—including data collected through observations, surveys, and experiments—with several categories. Solve one- and two-step "how many more" and "how many less" problems regarding the data and make predictions based on the data.

English/Language Arts Standards:
K.RF.2.2: Recognize that written words are made up of sequences of letters.
1.RF.3.3: Orally blend sounds in words.

2.RF.4.2, Use knowledge of the six major syllable patterns (CVC, CVr, V, VV, VCe, Cle) to decode two-syllable words, independent of context.

Materials: Notebook, pencil, animal reference book or internet, measuring instrument, student made place markers (student creativity for place markers is highly encouraged)
Ideas for place markers: sticks from yard, popsicle sticks, sidewalk chalk, origami animal figures or cut outs

This activity can be setup as a one-time event or can be revisited as your child practices jumping farther or has interest in how far other animals jump. There are multiple extensions that you can choose to implement based on you and your child's needs.

Helpful links for research:
http://justfunfacts.com/interesting-facts-about-kangaroos/
https://animals.onehowto.com/article/which-animal-jumps-the-longest-distance-7052.html
https://blog.nwf.org/2011/03/the-amazing-lives-of-leaping-wildlife/

Have your child:
- Create a list of animals that jump.
- Help your child research the list of jumpers. Think about how far the animal jumps and why.
- Write a list or create a chart of how far the animals jump.
    o Possible extension-create a bar graph of the lengths.
- Create a start marker and animal markers. With items around the house (craft supplies, sticks from the yard, paper with rock paper weights, etc.) create markers with the animal name and the length it jumps. Don't forget the units.
    o Have extra markers to mark how far the student participants jump.
- Find and create an appropriate jumping zone.
    o Place start marker where all animals will begin to jump.
    o Measure each animal's jump length from the start position.
- Students will take turns jumping and counting how many of their jumps equal how far each animal can jump.
    o Possible extension- compare lengths of jumps using addition, subtraction, multiplication, and/or division. Ex: Alex can jump 3 feet. A kangaroo can jump 30 feet. How many times would Alex have to jump to equal one kangaroo jump?
        ▪ 3x__=30
        ▪ 30/3=__

Possible journal set-up (suitable for 3rd grade)

Animal Jump Chart
Date:

Animal	Jump Length (feet)	Adaptation of feature
Kangaroo	30 feet	Protection from predator
Flea	1 foot	Escape predators, find new host
Cricket	3 feet	