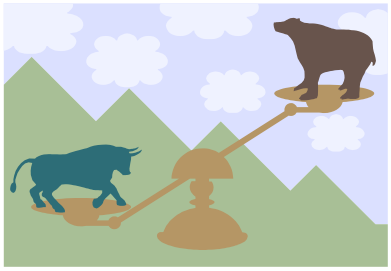

EQUAL SHMEQUAL

by

Virginia Kroll

After watching two children at the playground, Mouse and her friends want to play tug-of-war but they can't figure out how to make equal teams. Should the teams be plant eaters vs. meat-eaters or fur vs. scales? The decision is finally made by weight.

To transition to these activities, remind your students of the animals' dilemma. Ask them to suggest ways, other than the ones suggested, which they might use to form teams. You may wish to read the book up to page 16, and pause to ask them to propose ways to form teams. Then finish the book and compare proposals. Make sure to review the concept of "equal" and "=", and the role the equal sign plays in an equation; each side must be equal for it to balance.

MATERIALS: Activity #1 - T Charts, animal names on sentence stripping, tape, markers. Activity #2 - 1 sheet of animal pictures (wolf, bobcat, deer, turtle, rabbit, mouse, bear) per child, 1 set of large, laminated pictures of the same animals (or plastic replicas or photos), scissors, glue, crayons/colored pencils (optional), paper to glue animals on, in order of size. Activity #3 – balance scale, weights, zipper/slide bags.

ACTIVITIES: Activity #1: Talk with the children about some of the ways the animals grouped themselves in the story. Make a T Chart of these groupings and other, e.g. carnivores vs. herbivores, fur vs. no fur, large vs. small, feathers vs. no feathers, etc. Encourage them to come up with other ways to sort them. Have them brainstorm other forest or woodland animals (pumas, foxes, moles, beavers, otters, owls, quail, woodchucks/groundhogs, squirrels, chipmunks, woodpeckers, jays, elk, ducks, moose, etc.) and continue sorting.

Activity #2: Using the large size animal cutouts, have your students take turns putting the animals in order from smallest to largest. Next, place all but one or two pictures on the chalk rail in the correct order. Have students place the missing animal(s) where they go size-wise. (Studies have shown that this concept or sense of "between-ness' is one of the hardest concepts for children to master.) Do this varying the missing animals, and number of missing animals, as time permits.

Activity #3 -- Experiment with varying combination to see what would actually balance. Determine a unit of weight to use to compare the weights of the animals (perhaps bear weights or pennies). How many units would equal the weight of each animal? You will probably wish to do this in advance or at least find out a range of possible weights. According to the American Bear Association, an average male black bear weighs around 2501bs. [My estimation for the weights of the various animals (just a guess!) is mouse =1, turtle = 4, rabbit = 15, bobcat = 35, Wolf = 65, deer = 145, bear = 266.] Allow the children to determine how they could use backwards thinking to find out the animals' various weights. " .....if the bear weighs _____ units, and the mouse weighs __units, how much would the weights of the other animals be?" If your playground is lucky enough to have a seesaw, take your students outside and have them experiment with each other. Ask your students how they think the teams would form equally if other animals such as those in activity #1 were added.

Kroll, Virginia. Equal Shmequal. Illus. by Philomena O'Neill. Watertown, MA, c2005. ISBN#1 570918910 In order to have fun at a game of tug-of-war, forest animals balance the teams by using a see-saw. Includes non-fiction math notes for meanings of equal.

WEBSITE LINKS:
http://www.wpsweb.com/gr11/wpslesson_bear_weigh.htm Website wit primary lesson plans
http://www.americanbear.org/Size.htm Website of the American Bear Association
http://www.polarbearsinternational.org/bear-facts/about-the-polar-bear/ Website of the organization Polar Bears International

STANDARDS:
BSL: 1.1, 1.2, 1.3, 1.4, 1.8, 1.11, 3.1, 3.3, 3.4, 5.1, 5.2, 5.4, 6.2, 6.3, 9.1, 9.7, 11.3, 12.1, 12.4, 12.8, 12.12, 12.14
NCTM: 1a, 1c, 2a, 3b, 3c, 4b, 4d, 4e, 5a, 5b, 5c, 5d, 6a, 1Oa, 10d, 13a, 13b
SCS: A1, A2, B1, C1, C3, H2, H3, H4, H5