Julia Robinson
Mathematics Festival®

education
التعليم
above
فوق
all
الجميع

DATA LEAF

Level	3 (Age group 11-14)
Resources Required	Leaves Ruler Pen or Pencil
Alternate Options for the Resources	As an alternative to leaves, have players collect sticks, twigs, stones, or other outdoor objects that are large enough for players to measure. The teacher can provide popsicle sticks, straws, and other manufactured items to supplement the objects that players find outside.
Strand Covered	Shapes & Measurements, Statistics & Probability
Targeted Skills	Calculate mean, median, and mode
Inspired by	Third Space Learning, Julia Robinson Mathematics Festival - Gordon Hamilton
Time Required	30 minutes (for game) 10 minutes (setup)
Previous Learning Required	Using a ruler Adding, subtraction, multiplication, and division of numbers 1-100
Support Required	Low supervision

Rules of the Game:

Goal	There are at most three winners of this game: the player with the highest mean, the player with the highest median, and the player with the highest mode.

Steps	Step 1: The teacher tells players that they are going to collect 10 of the biggest leaves they can find. Step 2: The teacher gives players 15 minutes to go outside and collect 10 of the biggest leaves they can find. Step 3: When players return, the teacher gives each player a ruler. Step 4: players measure each of their leaves rounded to the nearest centimeter and record their measurements. Step 5: players calculate the mean, median, and mode of their leaves. Step 6: There may be up to 3 winners: the player with the highest mean, the player with the highest median, and the player with the highest mode.
Enrichment	● Have players collect more than 10 leaves. ● Have players collect leaves so that their mean, medians, and modes are closest to a particular number e.g. 20 cm. players will need to use their estimating skills. ● Have players calculate range in addition to mean, median, and mode.
Simplification	● Have players collect fewer than 10 leaves. ● Have players calculate only one of the measurements mean, median, or mode. Every player has to calculate the same measurement.