Estimation Olympics

Compete in three Olympic events where your prowess with estimation outweighs your athletic abilities!

Strands:

Number & Quantity	X
Algebra	
Functions	
Geometry & Measurement	X
Statistics & Probability	

Materials Needed:

- Masking tape
- 2 Meter sticks or metric measuring tapes
- Metric ruler
- Scrap paper
- 3 small sponges of various sizes, (cosmetic or kitchen sponges recommended)
- Container for water
- Towel
- Container with ml measuring lines
- *Estimation Olympics Recording Sheet*, 1 per team

Where:

Outside	X
Inside	X
On-line	
On-site	

Set-Up:

- Each player competes against a partner in all three events.
- Set up each event station:
  - **Water Squeeze**: Place sponges and metric ruler near the container full of water. Place the ml measuring container and a towel for drying hands a foot away from the water container.
  - **Lateral Jump**: Tape down a 2-foot long starting line perpendicular to the jumping surface. Place a meter stick or metric measuring tape at this station.
  - **Step the Distance**: Tape down a 2-foot starting line perpendicular to the walking surface. Place a meter stick or metric measuring tape and scrap paper at this station.

Pre-Game Play:

- Allow players to practice each event without using measuring tools. Players should estimate volumes and distances during practice rounds.

Object of the Game: Be the player with the most accurate estimations of distance and volume throughout these events.

Playing the Game:

1. **Water Squeeze**: Choose a sponge. Measure its dimensions and record them on the *Estimation Olympics Recording Sheet*. Estimate how much water you think you can squeeze out of the sponge. Record this estimate. Soak sponge and count slowly to 7 to let excess water drip. Into the ml measuring container, squeeze as much water out of the sponge as possible. Record the measurement. Repeat using the same sponge, squeezing it dry 2 times.
2. **Lateral Jump**: Record your estimate on the *Estimation Olympics Recording Sheet*. Stand on two feet to the right or left of the line. Jump sideways across the line as far as you can. Land on two feet. Record your distance from the starting line to the edge of the foot closest to the line. Repeat, doing 2 jumps in succession.
3. **Step the Distance**: Squeeze a sheet of paper between your knees and take a step. Estimate this distance and record the length on the *Estimation Olympics Recording Sheet*. Start behind the line and step once. Measure the distance from the line to the back of your heal that is closest to the line. Record the distance. Repeat, taking 2 steps in succession.
4. a. At the end of each event, find the difference between your estimate and actual data for each trial.
   b. Find the sum of all the differences for all three events; this is your *Estimation Olympics* score.
   c. The player with the lowest sum of differences for all 3 events wins.

Think About It:

5. For which event were your estimates most accurate? Why was your accuracy best for this event?
6. What helped you estimate accurately?

Variations:

Solo Event: To take less time, prepare only one event. All players compete in the same event. Compete in a different event the next time you play the game.

Predict and Play: From your previous trials, predict the volume or distance if you complete a total of 5 squeezes, 5 jumps, or 5 steps. Complete the 5 squeezes, jumps, or steps trial. How close were your predictions to your measured amounts?

Extensions:

- When you complete the event, use data from **Water Squeeze** or **Step the Distance** to graph some of your results. Answer the questions on the *Estimation Olympics Recording Sheet*.

Helpful Hints:

- Stick the landing on Lateral Jump. If you fall, or lose your balance and use your hand, your jump does not count, and you must repeat the trial.
- Before and after each trial, record on your *Estimation Olympics Recording Sheet*; estimate before and record measurement after.