

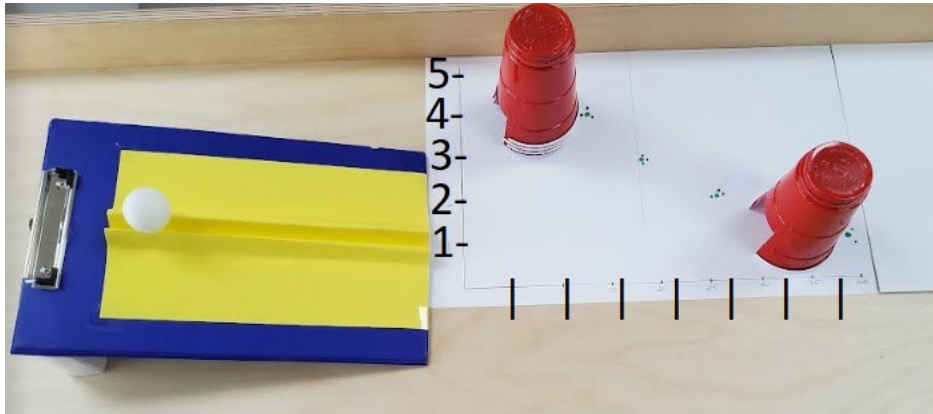
Real graphs from real data (Post Primary)

Read it -- Try it safely -- Explore it further.

A ball rolls down a ramp (with chute) and pushes a plastic cup across a table.

Ink dots are used to record how far the cups move.

The dots on the page reveal a graph. Can you see what the graph reveals?



What you need

1 ball, 5 plastic cups, a ramp (with chute) a scissors, pen & paper

What you should do

Put a large page on a table. Draw the scale and label the axes as shown

Horizontal axis shows the distance travelled by the cups (centimeters).

Vertical axis shows the number of cups stacked on top of each other.

Cut the same size opening in each cup.

Place the ramp on the table at the edge of the page.

Release the ball from the top of the ramp each time.

Record how far the cup moves each time by a dot on the page.

Vary the number of cups that are stacked.

Conduct several trials for each “number of cups”.

Record the average distance moved (green dot).

Observe the outcome which is an example of a graph from real data.

Extension activity:

Can you say how far you think 1½ cups would travel.

What would happen if the ramp was tilted more steeply?

What would happen if the ball rolled from the middle and not the top?

What would happen if a heavier ball was used?