Home Learning Task 7 – 9   Chance - Likelihood of events

Experimental Probability Task Worksheet

Mathematical language: outcome, equally likely, chance, event, frequency, probability

Task : For this task you will be conducting a series of experiments. Before commencing the experiments you will need to collect the following materials.

Materials needed: Paper cup, matchbox, ruler, bottle top

Your task: For each of the experiments you will need to complete the following steps.

1. Before starting each experiment, record a prediction of the outcome after 30 trials.
2. Perform each task 30 times, observe and record your results.
3. Calculate the probability for each task (paper cups example below)

$$\text{e.g. Pr (cup lands up)} = \frac{\text{frequency of cup up}}{\text{total number of outcomes}} = \frac{\text{frequency of cup up}}{30}$$

Experiment 1 – Paper Cups

Possible outcomes

Complete your prediction and record your observations in a table like this

	Prediction	Observation		
OUTCOME	Frequency	Tally	Frequency	Probability
Landing up				
Landing down				
Landing on side				

Experiment 2 – Matchboxes

Possible outcomes

Complete your prediction and record your observations in a table like this

	Prediction	Observation		
OUTCOME	Frequency	Tally	Frequency	Probability
Landing on its side				
Landing flat				
Landing on its end				

Experiment 3 – Ruler

Possible outcomes
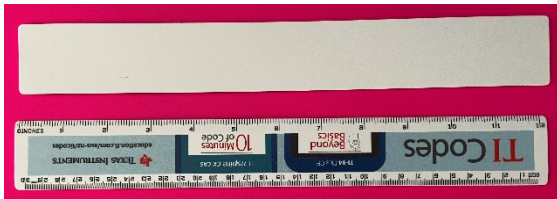
Complete your prediction and record your observations in a table like this

	Prediction	Observation		
OUTCOME	Frequency	Tally	Frequency	Probability
Curved side down				
Curved side up				

Experiment 4 – Bottle top

Possible outcomes

Complete your prediction and record your observations in a table like this

	Prediction	Observation	
Right way up	Frequency	Tally	Frequency
Upside down			

Reflection

1) Based on your 30 trials, which events (experiments) had equally likely outcomes?
2) How did your predictions for each experiment compare with the trials?