PROBABILITY QUEST

MISSION 1

MYSTERY BOX – SCRATCH ACTIVITY



MISSION BRIEF: A mystery box contains **7** blue balls and **3** yellow balls. There are **10** balls altogether.

LEARNING FOCUS: Theoretical Probability and Likelihood

Q1 PREDICT THE OUTCOME

If you randomly pick one ball from the mystery box, which colour is more likely to be selected?

Answer: [▾]

Q2 EXPLORE AND OBSERVE

Match each statement with the correct value.

Probability of picking a blue ball	▶ [▾]
Probability of picking a yellow ball	▶ [▾]
Total number of balls	▶ [▾]

Q3 CALCULATE THE PROBABILITY

Complete the following.

a) The probability of picking a blue ball is:

$$P(\text{Blue}) = \frac{7}{[\ \blacktriangledown\ ]}$$

b) The probability of picking a yellow ball is:

$$P(\text{Yellow}) = \frac{[\ \blacktriangledown\ ]}{10}$$

c) Which colour is less likely to be selected?

Answer: [▾]

Q4 CHECK YOUR UNDERSTANDING

A student says:

"If there are 7 blue balls and 3 yellow balls, picking a blue ball is certain."

Is the statement correct?

Answer: [▾]

Explain your answer briefly.

LIVEWORKSHEETS