Biscuit's Basket — Extension Version

Ordering likelihood and reasoning about variation

"Predict, test, and notice how results wobble," says Ollie. "Then reason about why — that's real science thinking."

1. Place each event on the chance scale by writing it under the right word: *impossible, unlikely, equally likely, likely, certain*.

Events: "a tossed coin lands heads"; "the sun rises tomorrow"; "I roll a 7 on a normal 6-sided die"; "it rains at some point this month".

Chance word	Event
impossible	
unlikely	
equally likely	
likely	
certain	

2. Biscuit's basket has 9 brown gumnuts and 1 green. Predict: in **20** draws (replacing each time), how many brown do you expect? Explain your reasoning.

3. Run the experiment 20 times and tally.

Colour	Tally
Brown	
Green	

4. Did your results match your prediction exactly? Why do repeated experiments give slightly different results each time?

5. Biscuit wants the green gumnut to be **equally likely** as brown. How should he change what's in the basket? Explain.

6. If two classes each did 20 draws and combined their results into 40 draws, would the combined result be *closer* to the prediction or further from it? Explain what you think and why.