

Design and conduct repeated chance experiments and simulations using digital...

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Learning intention

- design and conduct repeated chance experiments and simulations using digital tools to model conditional probability and interpret results

Teach and model

- using samples of different sizes with and without replacement from a population to identify when the difference in methods becomes negligible
- recognising that an event can be dependent on another event and that this will affect the way its probability is calculated
- using simulations to gather data on frequencies for situations involving chance that appear to be counter-intuitive, such as the three-door problem or the birthday...

Check understanding

- Explain the main idea in design and conduct repeated chance experiments and simulations using digital... using an example.
- Show the idea in a second way: with words, a model, a diagram or symbols.
- Apply the idea to a short unfamiliar situation and justify the result.

Teaching cautions

- Ask the student to explain their choice, not only state an answer.
- Check that key vocabulary is understood in a new example.
- Mix representations so the skill is transferred rather than copied.

Quick lesson sequence

- Connect to prior knowledge and introduce the key vocabulary.
- Model one clear example, then solve a second example together.
- Finish with an independent check and a short student explanation.