

Design, create and test algorithms involving a sequence of steps...

design, create and test algorithms involving a sequence of steps and decisions that identify congruency or similarity of shapes, and describe how the algorithm works

Learning intention

- design, create and test algorithms involving a sequence of steps and decisions that identify congruency or similarity of shapes, and describe how the algorithm works

Teach and model

- listing the properties or criteria necessary to determine if shapes are similar or congruent
- using the conditions for congruence of triangles and similarity of triangles to develop a sorting algorithm; for example, creating a flow chart
- evaluating algorithms for accuracy in classifying and distinguishing between similar and congruent triangles

Check understanding

- Explain the main idea in design, create and test algorithms involving a sequence of steps... 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.