Line and rotational symmetry of shapes and create symmetrical patterns...

recognise line and rotational symmetry of shapes and create symmetrical patterns and pictures, using dynamic geometric software where appropriate

Learning intention

- recognise line and rotational symmetry of shapes and create symmetrical patterns and pictures, using dynamic geometric software where appropriate

Teach and model

- identifying rotational symmetry of shapes by tracing around various shapes and objects to create an image, and using the image to test and record which different rotations result in...
- using dynamic geometric software or generative artificial intelligence tool to manipulate shapes and create symmetrical patterns; for example, creating tessellation...
- using stimulus materials such as the motifs in Central Asian textiles, Tibetan artefacts, Indian lotus designs and Islamic artwork to investigate and discuss line and rotational...

Check understanding

- Explain the main idea in line and rotational symmetry of shapes and create symmetrical patterns... 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.