

The position and location of objects in 3 dimensions in...

describe the position and location of objects in 3 dimensions in different ways, including using a three-dimensional coordinate system with the use of dynamic geometric software and other digital tools

Learning intention

- describe the position and location of objects in 3 dimensions in different ways, including using a three-dimensional coordinate system with the use of dynamic geometric software...

Teach and model

- locating aircraft/drones using latitude, longitude and altitude as a three-dimensional coordinate system
- constructing three-dimensional objects using 3D printers or designing software that uses a three-dimensional coordinate system
- comparing and contrasting two-dimensional and three-dimensional coordinate systems by highlighting what is the same and what is different, including virtual maps versus...

Check understanding

- Explain the main idea in the position and location of objects in 3 dimensions in... 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.