

Investigate how advances in technologies enable advances in science, and...

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Learning intention

- investigate how advances in technologies enable advances in science, and how science has contributed to developments in technologies and engineering

Teach and model

- examining karyotypes and applications of gene technologies, such as gene therapy and genetic engineering and biotechnologies used to produce therapeutic proteins
- recognising that the development of fast computers has made possible the analysis of DNA sequencing, radio astronomy signals and other data generated by major...
- considering how computer modelling has improved knowledge and predictability of phenomena such as climate change and atmospheric pollution

Check understanding

- Explain the main idea in investigate how advances in technologies enable advances in science, and... 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.