

Models, including food webs, to represent matter and energy flow...

use models, including food webs, to represent matter and energy flow in ecosystems and predict the impact of changing abiotic and biotic factors on populations

Learning intention

- use models, including food webs, to represent matter and energy flow in ecosystems and predict the impact of changing abiotic and biotic factors on...

Teach and model

- analysing food webs to show feeding relationships between organisms in an ecosystem and the role of microorganisms
- modelling how energy flows into and out of an ecosystem via the pathways of food webs
- predicting the effects on local ecosystems when living things such as pollinators or predators are removed from or die out in an area

Check understanding

- Explain the main idea in models, including food webs, to represent matter and energy flow... 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.