

# Energy Flow in an Ecosystem

Grades 6-8 Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Context and evidence

Food web: grass -> grasshopper -> frog -> hawk; grass -> rabbit -> hawk; berries -> mouse -> owl; mouse -> hawk.

## Your investigation

1. Identify two producers and three consumers.

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2. Trace two different energy pathways ending with the hawk.

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3. Predict one direct and one indirect effect if grasshopper numbers fall sharply.

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4. Explain why arrows show energy transfer rather than 'who eats whom'.

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5. Write a claim-evidence-reasoning response: protecting plant diversity supports ecosystem stability.

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# Energy Flow in an Ecosystem

## Learning goals

Reason accurately, use evidence, show a method and communicate a defensible conclusion.

## Response guidance

**Responses should respect the direction of energy flow and distinguish immediate effects from longer, indirect changes. Multiple predictions can be valid when justified.**

1. Identify two producers and three consumers.
2. Trace two different energy pathways ending with the hawk.
3. Predict one direct and one indirect effect if grasshopper numbers fall sharply.
4. Explain why arrows show energy transfer rather than 'who eats whom'.
5. Write a claim-evidence-reasoning response: protecting plant diversity supports ecosystem stability.

## Extension and assessment

Ask learners to compare methods, revise one response after feedback and identify the evidence that most changed their thinking.