

Food chains, webs and energy

Draw feeding relationships and compare energy transfer assumptions.

Name: _____ Date: _____

1. Draw grass to grasshopper to frog to hawk. Add grass to rabbit to hawk. Label roles.
2. Add a decomposer. Label its arrows as transfers of dead organic material.
3. Start with 10,000 energy units. Calculate transfers at 10% and 20%.

Transfer	10% kept	20% kept
Producer	10,000	10,000
1		
2		
3		

1. What does the arrow grass to rabbit mean?
2. Why is a food web more informative than one chain?
3. Is 10% transfer a law that applies to every ecosystem?

Teacher notes and answers

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The rabbit receives chemical energy by eating the grass. Arrows follow energy from food to consumer.

The web shows several connected feeding pathways and shared food sources.

No. The transfer fraction varies. Expected values: 10% gives 1,000, 100, 10; 20% gives 2,000, 400, 80.

Teaching notes

This is a deliberately small example. Diets vary by species, life stage and habitat. Do not present a custom diagram as automatically validated.

Open the matching resource

<https://kiwibee.io/en/simulations/food-webs-simulation>

Use the student page separately from this answer section. Model outputs are illustrative and depend on the stated settings.