19 Food chains and energy – Part 1

Name: _____ Class: _____ Date: _____

Vocabulary

Write each word three times.

English	Write it 3 times (English)		
energy			
food chain			
producer			
consumers			
food web			
decomposer			
trophic level			

Recall

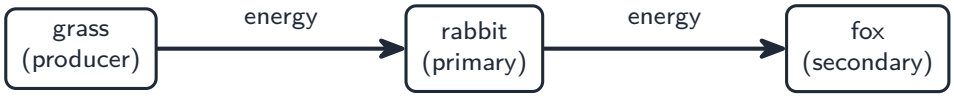
The **Sun** is the source of **energy** for almost all life. Energy flows from organism to organism as they feed, and is lost as heat at each step.

New ideas

Read these first, then do the Practice.

■ 1 Food chains

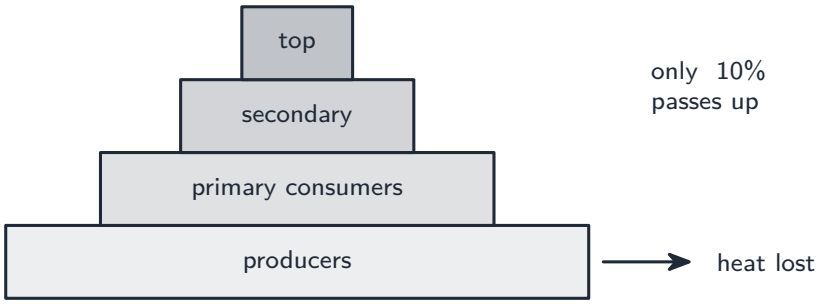
A **food chain** shows energy passing from a **producer** to **consumers** . The arrows show the way the energy flows:



A **food web** is many food chains linked together. A **decomposer** feeds on dead matter.

2 Energy pyramids

A **trophic level** is a feeding position. Only about **10%** of the energy passes to the next level (the rest is lost as heat), so the levels get smaller:



This is why food chains are short, and why eating plants is more energy-efficient.

Watch out: arrows in a food chain show the way **energy flows** (eaten → eater), not who eats whom. Only about **10%** of the energy passes to the next level (the rest is lost as heat), which is why food chains are short.

Practice

Try these in order.

19.1 What does an arrow in a food chain show? [1]

19.2 What is a *producer*? [1]

19.3 In the chain grass → rabbit → fox, which is the secondary consumer? [1]

19.4 About what percentage of energy passes from one trophic level to the next? [1]

19.5 Why are most food chains short (fewer than five levels)? [1]

19.6 Challenge. A field can feed more people if they eat the wheat directly than if the wheat is fed to cattle and the people eat the beef. Explain why. [2]