

19 Food chains and energy – Part 1

Name: _____ Class: _____ Date: _____

Vocabulary 词汇

Write each word three times. 把每个单词抄写三遍。

English	中文	Write it 3 times (English)		
energy	能量	_____	_____	_____
food chain	食物链	_____	_____	_____
producer	生产者	_____	_____	_____
consumers	消费者	_____	_____	_____
food web	食物网	_____	_____	_____
decomposer	分解者	_____	_____	_____
trophic level	营养级	_____	_____	_____

Recall

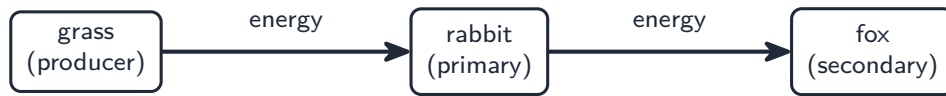
The **Sun** is the source of **energy** 能量 for almost all life. Energy flows from organism to organism as they feed, and is lost as heat at each step.

New ideas

Read these first, then do the Practice.

■ 1 Food chains

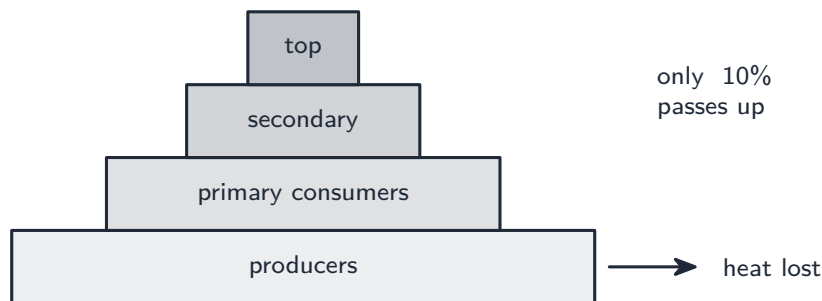
A **food chain** 食物链 shows energy passing from a **producer** 生产者 to **consumers** 消费者. The arrows show the way the energy flows:



A **food web** 食物网 is many food chains linked together. A **decomposer** 分解者 feeds on dead matter.

■ 2 Energy pyramids

A **trophic level** 营养级 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]