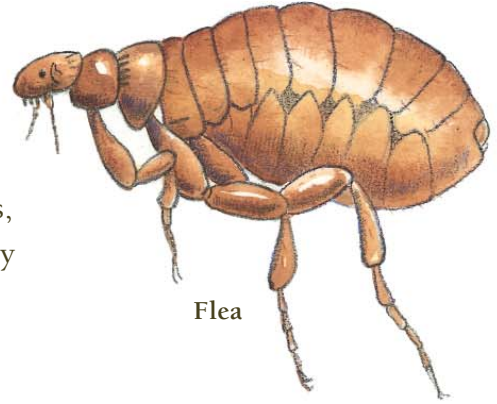
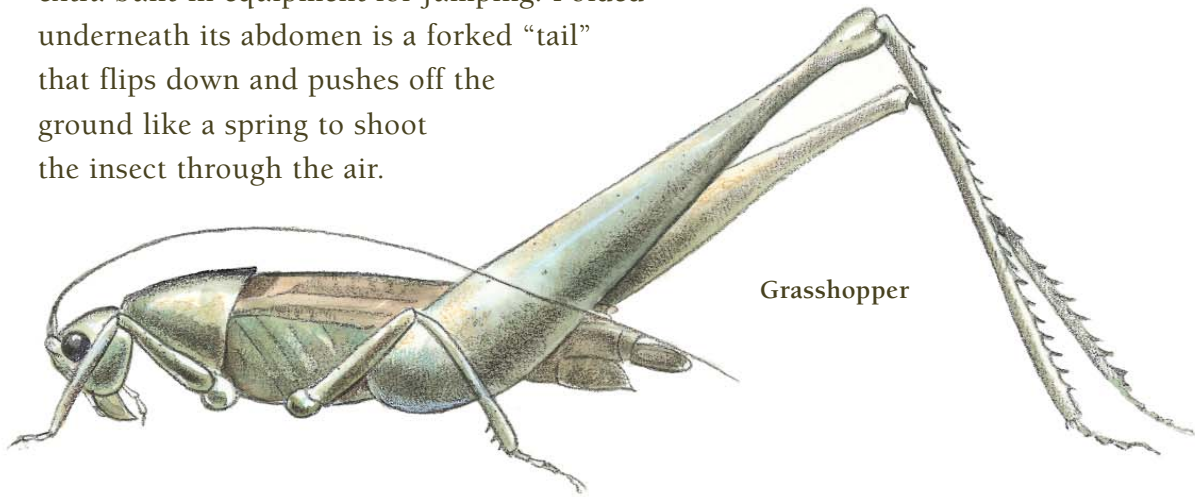


Springs and things

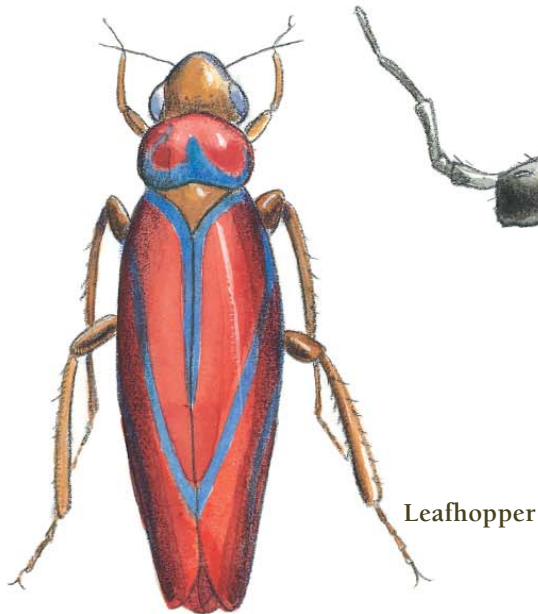
If you could jump as well as a grasshopper can, you would be able to travel the length of a football field in just three jumps. Insects such as grasshoppers, leafhoppers and fleas can leap a long way because they have strong leg muscles and small bodies that don't weigh very much. A flea's body is so thin that it can easily hop between an animal's hairs. A springtail has extra built-in equipment for jumping. Folded underneath its abdomen is a forked "tail" that flips down and pushes off the ground like a spring to shoot the insect through the air.



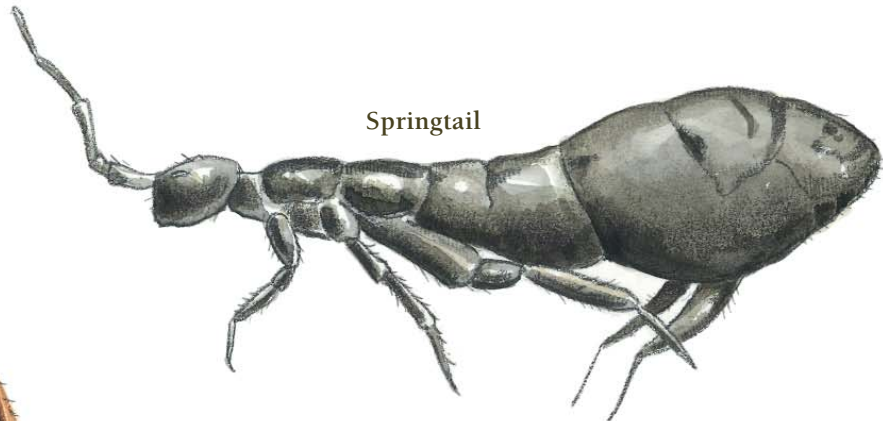
Flea



Grasshopper



Leafhopper



Springtail



Measuring up

Find out how you can measure your own jumps and compare them to these mini-Olympians.

You'll need:

a string about 1 m
(3 ft.) long
a tape measure
tape
a calculator

1. In an open space, stretch a piece of string across the floor and tape each end down so that it stays in place.

2. Stand with your toes just touching the string and jump forward as far as you can, landing on your feet.

3. Have a friend measure the distance from the string to where your toes landed.

4. Measure your height without shoes on.

5. Figure out how far you can jump compared to your height by doing the following calculation. Where do you fit into the chart below?

$$\text{Distance jumped (cm or in.)} \div \text{Height (cm or in.)} \\ = \text{Number of body lengths jumped}$$

Long distance leapers

Grasshopper



30

Flea



40

Leafhopper



100

Springtail



200

Number of body lengths traveled in one jump