WOODLAND TRUST

Pupil worksheet
Woodland maths facts

British woodland is very important to wildlife. An enormous number of plants and animals depend on woods for their survival. Just look at the amazing facts and figures below. The picture shows you the weights of living things in an average acre (4047 square metres) of beech woodland.

Glossary

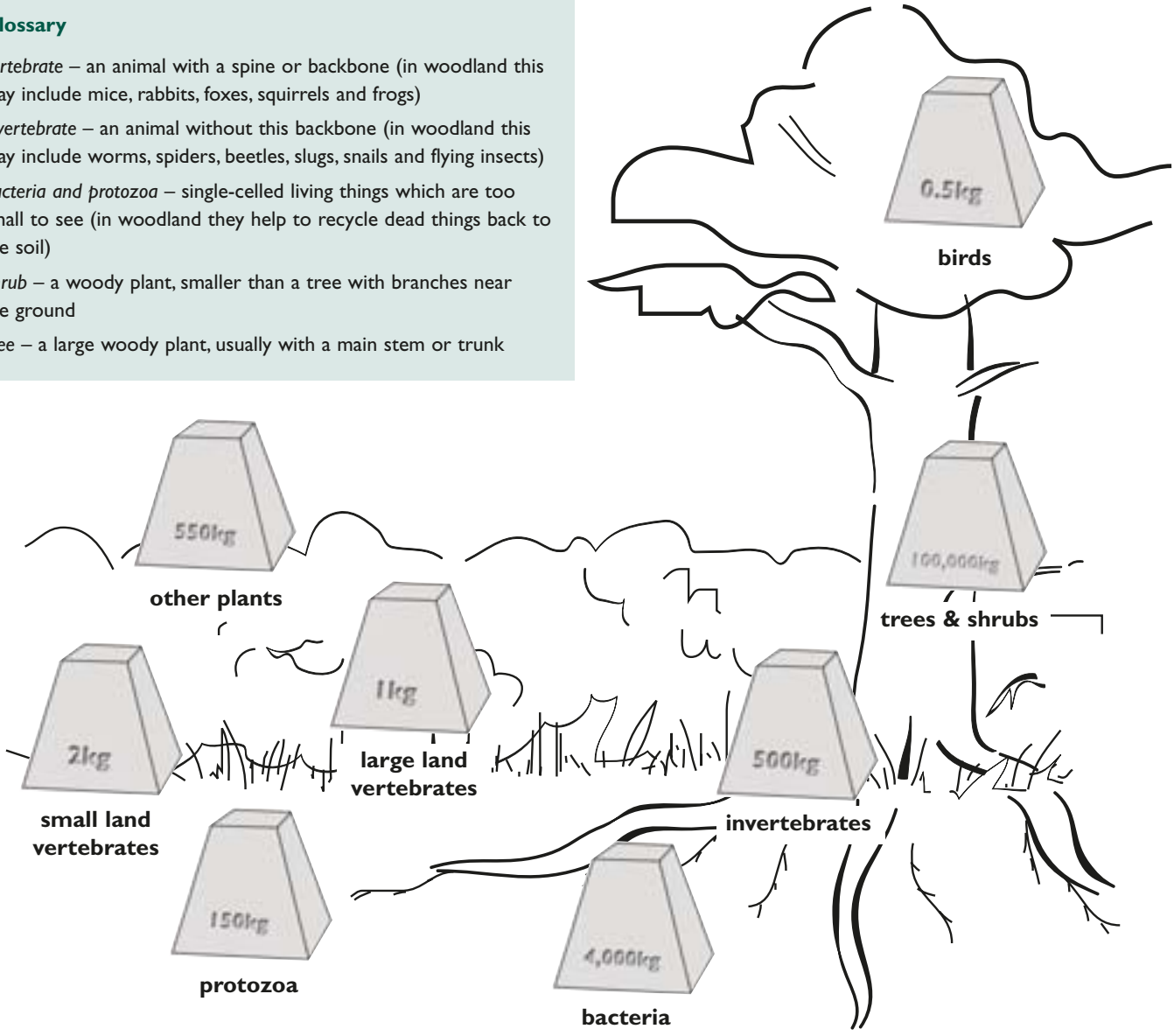
Vertebrate – an animal with a spine or backbone (in woodland this may include mice, rabbits, foxes, squirrels and frogs)

Invertebrate – an animal without this backbone (in woodland this may include worms, spiders, beetles, slugs, snails and flying insects)

Bacteria and protozoa – single-celled living things which are too small to see (in woodland they help to recycle dead things back to the soil)

Shrub – a woody plant, smaller than a tree with branches near the ground

Tree – a large woody plant, usually with a main stem or trunk



Compare these weights to an average adult African bull elephant, the world's heaviest land mammal, which weighs 7000kg.

Supported by the Heritage Lottery Fund

WOODLAND TRUST

Pupil worksheet
Woodland maths facts

Challenge one

Put all the woodland weights in order from the heaviest to the lightest. The first line of the table below has been completed for you.

Type of living thing	Weight
Trees and shrubs	100,000kg
	4,000kg
	550kg
	500kg
	150kg
	2kg
	1kg
	0.5kg

What is the total weight of plant life:
Trees and shrubs + other plants = _____?_____

What is the total weight of animal life:
Large land vertebrates + small land vertebrates + invertebrates + birds = _____?_____

Compare your two answers.
What does this tell you about plant life?
What does this tell you about animal life?

Challenge two

The 500kg of invertebrates includes:

225kg earthworms
40kg slugs and snails
22kg spiders
4kg beetles
209kg of other invertebrates

Use this data to draw a bar chart on squared paper (range from 4kg – 225kg), or use an ICT package such as Chart Wizard on Microsoft Excel to convert this data into a pie chart or bar chart.

Why do you think the earthworm numbers are so big and the beetle's so small?

There are 209kg of other invertebrates. Can you think what this might include?

WOODLAND TRUST

Teacher lesson idea
Woodland maths facts

Maths challenge

Leaves can be used for an unusual times tables activity. In a wood or local park.

- Find leaves with the appropriate number of leaflets or distinct lobes for the chosen times table
- Collect ten of each leaf, ensuring that they all have the same number of leaflets or lobes.
- Either use the leaves as a one-off activity to reinforce a particular times table – getting ten children to hold up one leaf each and class chant the times table

OR

- Back in the classroom, press the leaves, laminate and display as a times tables chart with appropriate labels.

Leaf suggestions:

3 x table: laburnum, ivy
4 x table: tulip tree
5 x table: maple, sycamore
7 x table: horse chestnut, dog rose

www.naturedetectives.org.uk contains more examples.