

SITE VISIT TO RAMSCOMBE

INTRODUCTION TO SITE:

Ramscombe Forest leads you past huge majestic trees and gives you the possibility of spotting Red Deer as it meanders through Great Wood in the heart of the Quantock Hills.

The two-mile walk makes use of forest gravel tracks. The wood once provided timber to build ships and make charcoal. Now it is home to many types of wildlife. Whilst the trees around provide this valuable habitat, they will eventually provide pulp for paper, planking and furniture material for use in homes.

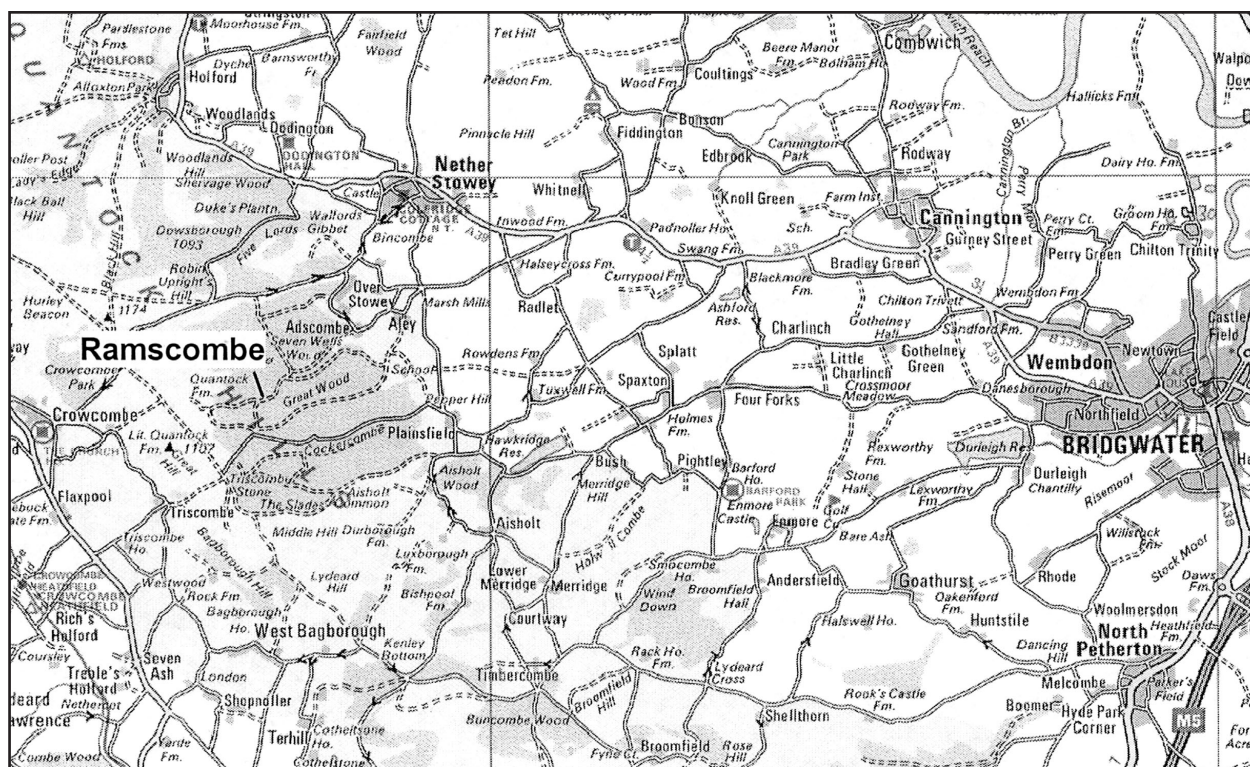
How to get there:

Directions:

From the North & West: On A39 follow signs for Nether Stowey, at Keenthorpe junction turn right and follow brown forest signs to Great Wood.

From the South: Follow signage for Nether Stowey, after the Plainsfield straight turn left at Marsh Mills crossroads and follow the brown Forest signs

From the East: On A39 turn off at Keenthorpe.



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It is possible for coaches to visit and park at the site, though special care must be taken through the surrounding country lanes.

Facilities:

There are toilets available at the site.

Picnic tables are available at the site but please remember to take all rubbish away with you.

ACTIVITIES THAT CAN BE UNDERTAKEN

Walk:

The walk is approximately 2 miles long and if no activities are undertaken, it will take about 1½ hours. There is the option of cutting down the length of the walk by going down the escape route. This is marked on the map.

There are different activities that can be undertaken whilst on the walk. Teachers can choose which would be most appropriate, although if you are following the scheme of work it is advisable to do the quadrat surveys.

Along the walk posts mark the different activity sites.

Activity 1: Tree Key

Time: 15 min

Resources: Worksheet 4

Objective: To use a key to identify different trees.

- ❖ Starting from the post children walk along and try to work out the different types of trees using worksheet 4
- ❖ Children record the types of trees observed on sheet.
- ❖ At the end of the activity, marked by a second post, discuss the different trees that children found.
What differences were there between the trees found on either side of the path?

Activity 2: Tree Rings

Time: 15 min

Resources: Worksheet 5

Objective: To make careful observations of tree rings and record the age of the tree.

- ❖ Children can look at tree rings from different trees and find the age of the tree by counting the rings.
- ❖ Children can record their findings on worksheet 5
- ❖ Discuss with children why some rings are bigger than others and differences between types of trees.

Activity 3: Viewing Site

Time: 15 min

Resources: Worksheet 6

Objective: To make careful observations of the environment around them.

- ❖ From activity post discuss with children what can be seen.
Are there areas where there are different types of trees? How can you tell?
What age do you think the trees are that you can see?
- ❖ Children record the different types of trees and different ages of trees on the worksheet 6.

ACTIVITIES THAT CAN BE UNDERTAKEN

Activity 4: Height of Trees

Time: 15 min

Resources: Worksheet 7, tape measures and protractors

Objective: To make careful observations of trees and work out their height.

- ❖ Go through worksheet 7 with children and explain the method of calculating the height of a tree.
- ❖ Children work in pairs to find the height of the tree.
- ❖ Discuss the heights that the children have come up with and compare with actual height.
- ❖ A tree has been accurately measured. 34m further along track look for the tree on the left of the track with the red topped post next to it.

Activity 5: Quadrat Survey of Coniferous Woodland

Time: 30 min

Resources: worksheet 3, quadrats, pooters, bug boxes, hand lenses, soft brushes, white trays

Objective: To make detailed observations and recordings of organisms found in a habitat.

- ❖ Remind children on how to use a quadrat and pooters.
- ❖ Using worksheet 3 children record the types of organisms found in the quadrat.
- ❖ Teachers may also want to use ECOLOG to record remote data, such as light and temperature, which can be used in the classroom when talking about the results.

Activity 6: Mirror walk

Time: 10 min

Resources: Mirrors

Objective: To observe the environment around us and to draw simple conclusions.

- ❖ Starting from the first post children work in pairs. One child leads the other up the hill, while the other child looks into a mirror to observe the tree canopy.
- ❖ Halfway up the slope the children swap roles.
- ❖ At the end of the activity discuss with children, what did they see? Could they see the sky? How far did the branches come over? Why do they need to come over so far?

Activity 7: Quadrat Survey of Deciduous Woodland

Time: 30 min

Resources: Worksheet 3, quadrats, pooters, bug boxes, hand lenses, soft brushes, white trays

Objective: To make detailed observations and recordings of organisms found in a habitat.

- ❖ Remind children on how to use a quadrat and pooters
- ❖ Using worksheet 3 children record the types of plants found in the quadrat.
- ❖ Teachers may also want to use ECOLOG to record remote data, such as light and temperature, which can be used in the classroom when talking about the results.

ABOUT THE UNIT

In this unit children will have the opportunity to explore habitats and look at the differences between them. They will then explore some of these differences in investigations.

Experimental and investigative work focuses on:

- making careful observations and measurements
- using results to draw conclusions and suggesting explanations for these using scientific knowledge and understanding.

Work in this unit will be based in the classroom and includes a field trip to Ramscombe where children can investigate deciduous and coniferous woodland.

This unit takes approximately 6-8 hours.

Where the unit fits in

This unit can be used instead of Unit 4B Habitats and Unit 6A

Interdependence and Adaptation, or parts of it may be used to fit in with these units.

Children need:

- to be familiar with the ideas of habitats and feeding relationships

Links with QCA Science Units 3F, 5B, 6A, 6D and ICT and Geography.

Vocabulary

In this unit children will have opportunities to use:

- words relating to habitats eg habitat, organism, adaptation
- expressions for summarising and drawing conclusions.

Resources

- quadrats
- pooters
- hand lenses
- mirrors
- soft brushes
- white trays
- bug boxes

Resources may be available from the Quantock AONB Service

EXPECTATIONS

at the end of this unit most children will:

- Identify some local habitats and their characteristics;
- name some of the organisms that live there and;
- describe how animals in two habitats are suited to the conditions.

some children will not have made so much progress and will:

- Identify some local habitats;
- name a few of their characteristics of the habitats and;
- name a few of the organisms that live there.

some children will have progressed further and will also:

- Identify habitats according to their characteristics and the organisms that can be found there;
- identify and describe how organisms are;
- suited to their habitats.

LEARNING OBJECTIVES CHILDREN SHOULD LEARN

- To make comparisons and recognise differences in different habitats.
- Look at photographs 1 and 2 from resource pack, ask children what they can see in each photograph.
- Discuss the similarities and differences in each photograph.
- Look at photographs 3 and 4 discuss the similarities and differences.
- Introduce the terms organism and habitat, children may suggest what types of organism may be found in these habitats.

Activity: Using worksheet 1 children mark on the key features of the two habitats.

POSSIBLE TEACHING ACTIVITIES

LEARNING OUTCOMES CHILDREN

- Children recognise and record differences and similarities between two habitats.

Differences in photographs 1 and 2 may include: light, plants on the ground, space between the trees, different tree types.

Differences between photographs 3 and 4 may include: as above and also leaves on the tree.

A **Habitat** is a place where a group of living things are found.

An **Organism** is a living thing such as an animal or a plant

- To plan an investigate to collect information.

Review last week's work on different habitats. Remind children of the similarities and differences that they found.

Discuss with children how it may be possible to measure the differences between the two habitats. Record ideas on the board.

Show children a quadrat and equipment for collecting and viewing small creatures and explain how to use them.

With children draw up a simple outline of an investigation to look at the different organisms that can be found in a habitat within the school grounds.

Discuss with children what factors may affect plant growth in a certain area or the types of creatures that may be found. e.g. light or temperature, discuss how these might be recorded.

Show children ECOLOG as a way of recording temperature and light. Include this within the investigation.

Activity: Children write up the plan of the investigation using worksheet 2.

Quadrats are available from the Quantock AONB Service.

ECOLOG is a portable data logger with built in sensors and external sensors that can be added on. Measurements can be taken and then downloaded onto computer. All

Somerset schools should have access to an ECOLOG ask your ICT or Science

Co-ordinator if you are unsure how to use it.

Talk to children about the safe collecting of

animals e.g. do not touch with hands; use a soft brush for collection; use a container that the animals can breathe in; always return animals to where they were found.

LEARNING OBJECTIVES CHILDREN SHOULD LEARN

- to carry out an investigation using equipment and materials appropriately.
- To make careful observations and measurements, including the use of ICT for data logging.

POSSIBLE TEACHING ACTIVITIES

Review children's investigation plan from last week, remind them on the correct use of a quadrat.
Split the class into two groups, Each group carries out their investigation in a different habitat.
e.g. Group 1: School Field, Group 2: Under or near a hedge or bush
While children are using quadrats allow children to collect remote data, using ECOLOG, from each habitat.

Activity: Using observations from their habitat children can complete the write up for the investigation using worksheet 3

- To make comparisons and identify associations in their own measurements and observations.

Look at examples of children's observations from previous lesson. Discuss the similarities and differences between the two different habitats.
Show children the information from ECOLOG
e.g. temperature and light for each habitat.
Discuss how these might have an effect on the types of organisms that live in a habitat.
e.g. One plant or animal may prefer shade whilst another prefers light.

Introduce the term Adaptation, discuss how this might refer to some of the plants the children have looked at.

Optional Activity: Children record the ECOLOG data onto their write ups and explain why a particular plant may be found in a particular habitat.

Talk with children about visit to Ramscombe in the next lesson.
Discuss with them the different habitats they may see, remind children of photographs from first lesson.

LEARNING OUTCOMES CHILDREN

- Make observations that are relevant to the investigation

- Identify plants from their investigation that are adapted to their particular habitat.

Prepare information from ECOLOG for children to look at
Adaptation: The way in which plants and animals are suited to their particular habitat.

POINTS TO NOTE

LEARNING OBJECTIVES
CHILDREN SHOULD LEARN

POSSIBLE TEACHING ACTIVITIES

LEARNING OUTCOMES
CHILDREN

POINTS TO NOTE

Site Visit to Ramscombe

- To use observations, measurements and other data to draw conclusions.
- Discuss with children the results of the quadrat survey from Ramscombe.
- Identify organisms from the survey that are adapted to their particular habitat.

What organism did they find in each habitat?

If available look at the ECOLOG readings and discuss how these might explain children's observations.

Activity: Use worksheet 3 to write up the observations from the quadrat survey.

ADDITIONAL TEACHING ACTIVITIES

Use keys to identify different organisms found in habitats

Make up your own keys, using a branching database, to help identify organisms. All Somerset schools should have Flexi tree on computers.

SITE HEALTH & SAFETY REVIEW

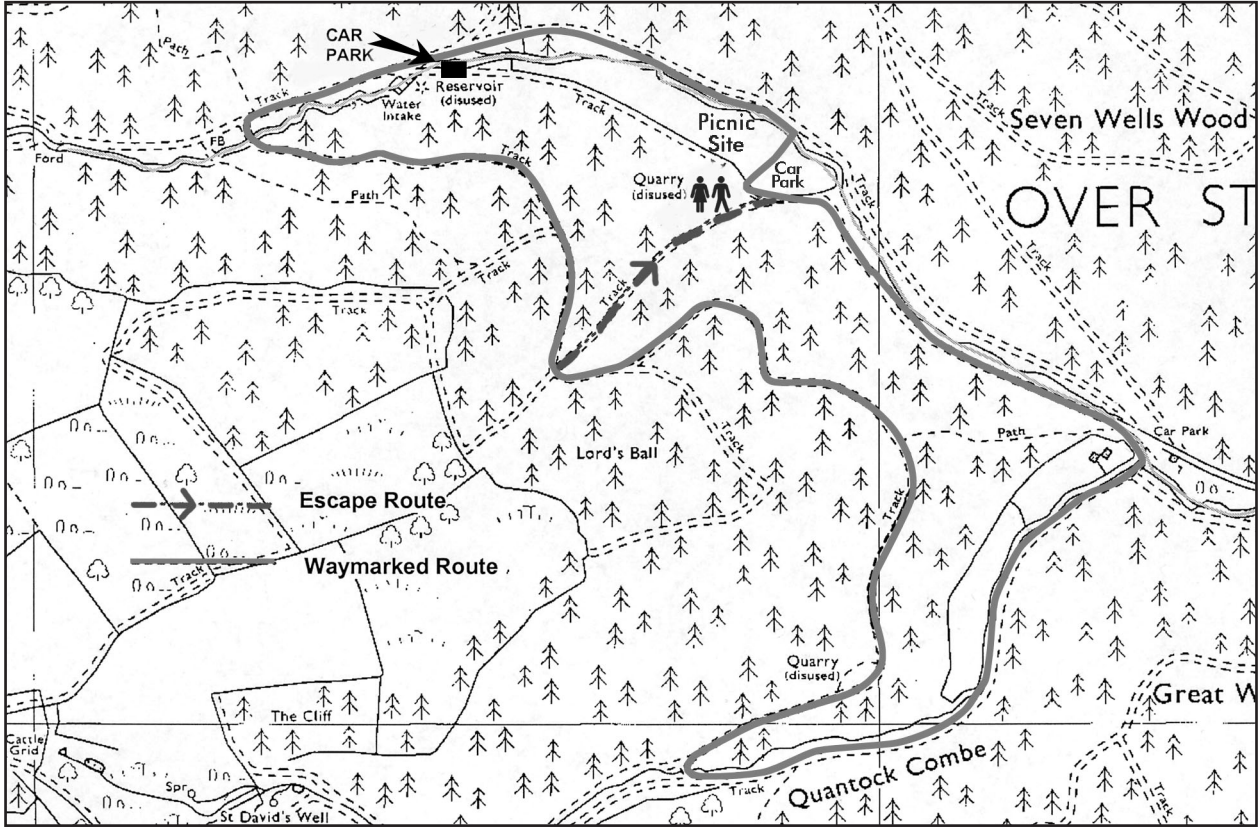
Leaders Name:	
Activity:	Ramscombe Site Visit
Date & Time:	

First Aid Provision:		
Lone Working Procedures:		
Emergency Procedures:	Escape route marked on map	
Incident Reporting Procedures:		
Identified Hazards	Who at Risk?	Risks from Hazards (H.M.L) Include how they will be managed
Other vehicles on Forest Road	Students & Leaders	L. Supervise students when on main Forest Road, walking against flow of traffic.
Route surface	Students & Leaders	L. Route survey carried out twice a year by Forest Enterprise staff. Any problems found with route to be reported as earliest possible time to AONB Service.
Ramscombe Stream	Students & Leaders	L. Leaders to be aware of stream (site map) and supervise students.

Conditions:

1. This form is for visits that fall outside the CDM Regulations.
2. The Leader is aware and agrees to comply with all Health & Safety Legislation.
3. All accidents should be reported to the event Leader within 24 hours.

RAMSCOMBE SITE PLAN



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Signed and Agreed as an accurate statement of Health and Safety matters

Signed on behalf of

(School)

Dated

Deciduous Woodland



The main features of deciduous woodland are:

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Coniferous Woodland



The main features of coniferous woodland are:

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Comparing Two Different Habitats - Summer

Comparing Two Different Habitats - Winter

Coniferous Woodland



The main features of coniferous woodland are:

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Deciduous Woodland



The main features of deciduous woodland are:

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WORKSHEET 2

Investigation to find the different organisms in a habitat

What we will use:

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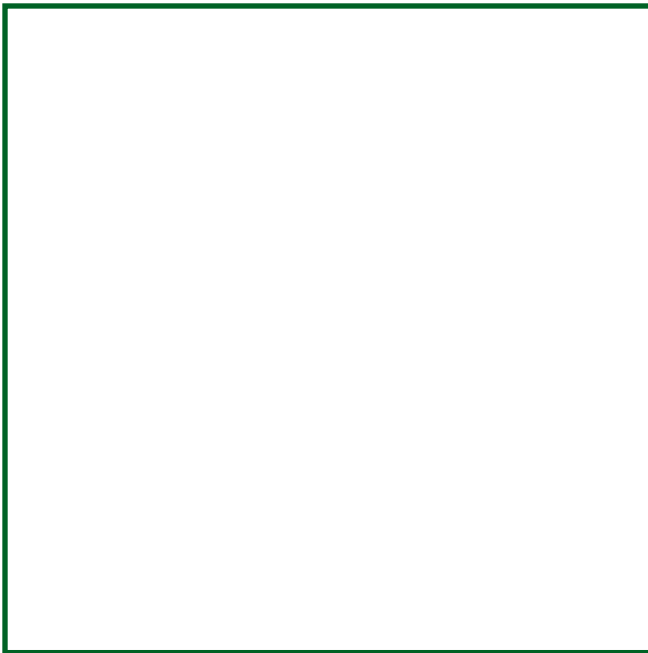
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What we will do:



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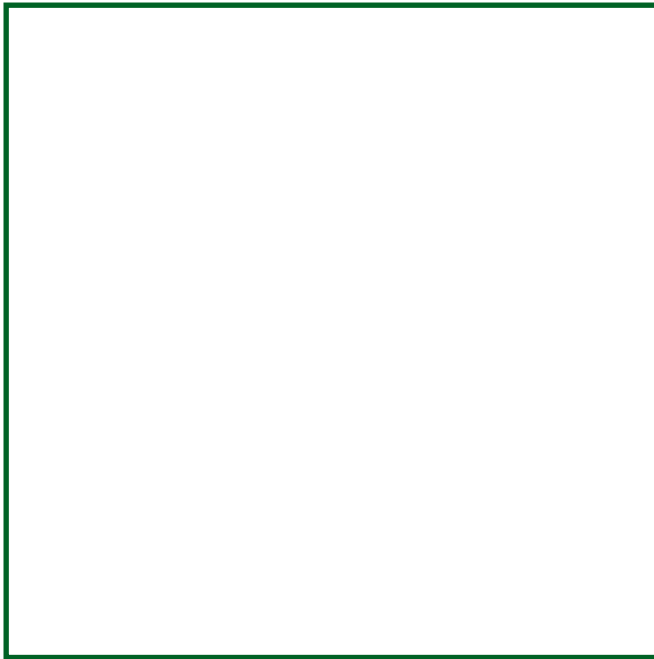
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Investigation to find the different organisms in a habitat

Name of Habitat: _____

Light: _____ Temperature: _____ °C

This is a drawing of our quadrat.



These are some of the plants we found:

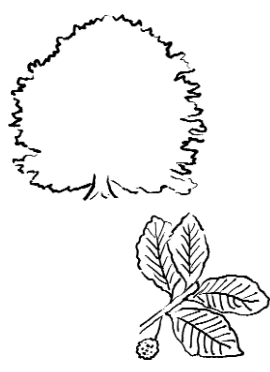
Name	Drawing
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These are some of the animals we found...

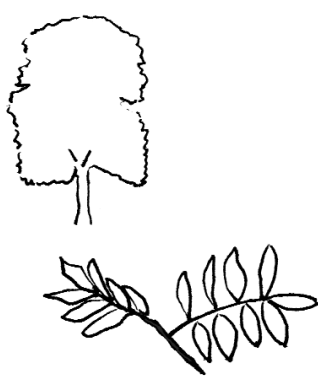
Name	Drawing	Name	Drawing
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WORKSHEET 4


Tree key



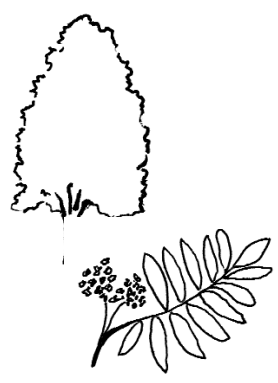
Beech



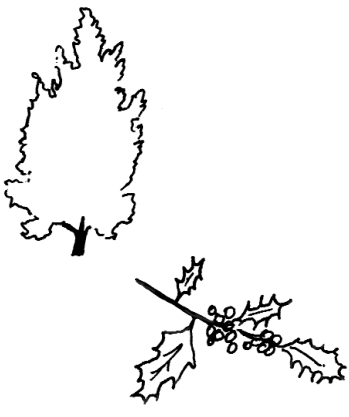
Ash



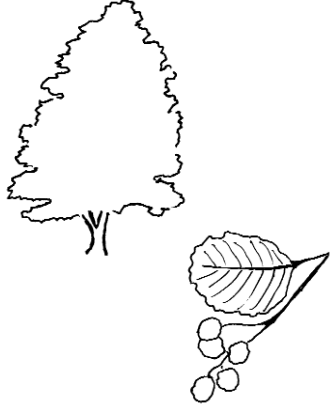
Oak



Rowan



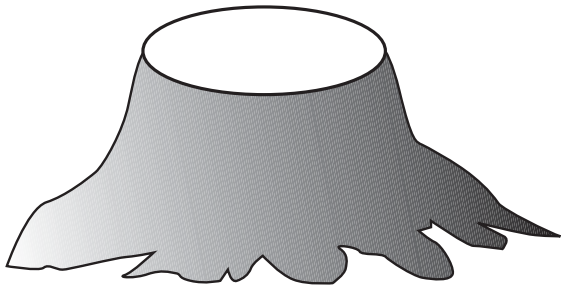
Holly



Alder

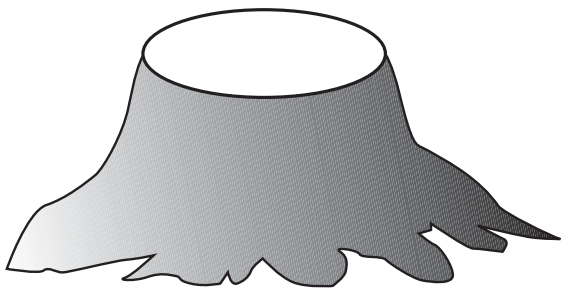
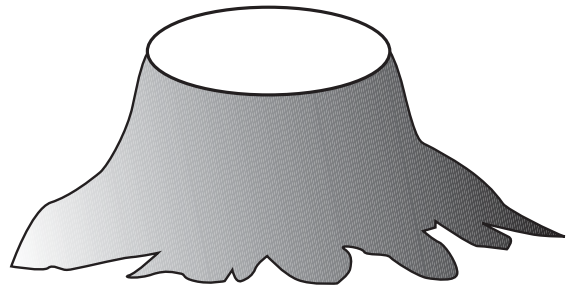
Tree	Tally	Total

Tree Rings



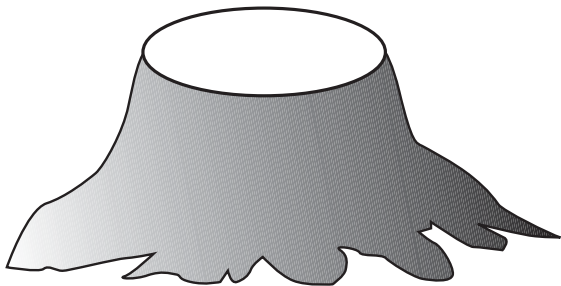
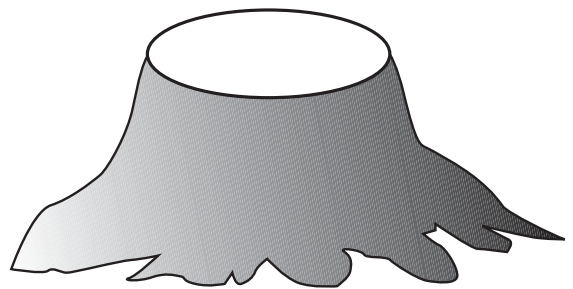
Tree Name:

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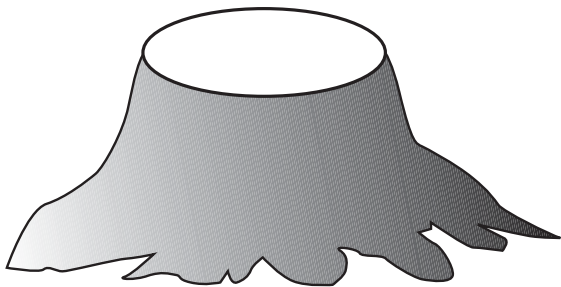
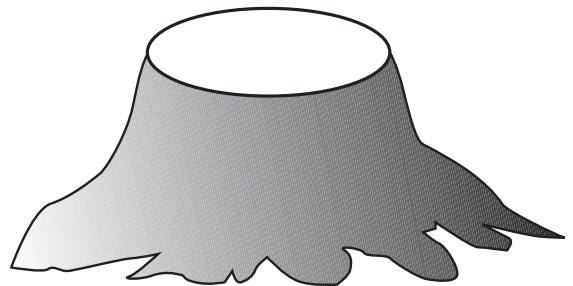
Tree Name:

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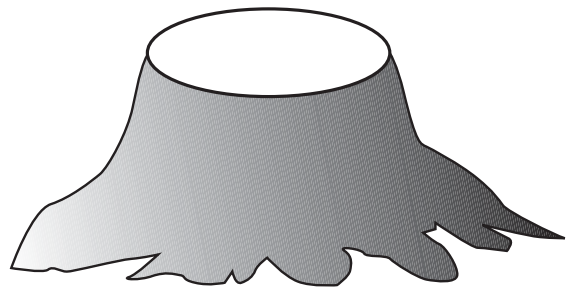
Tree Name:

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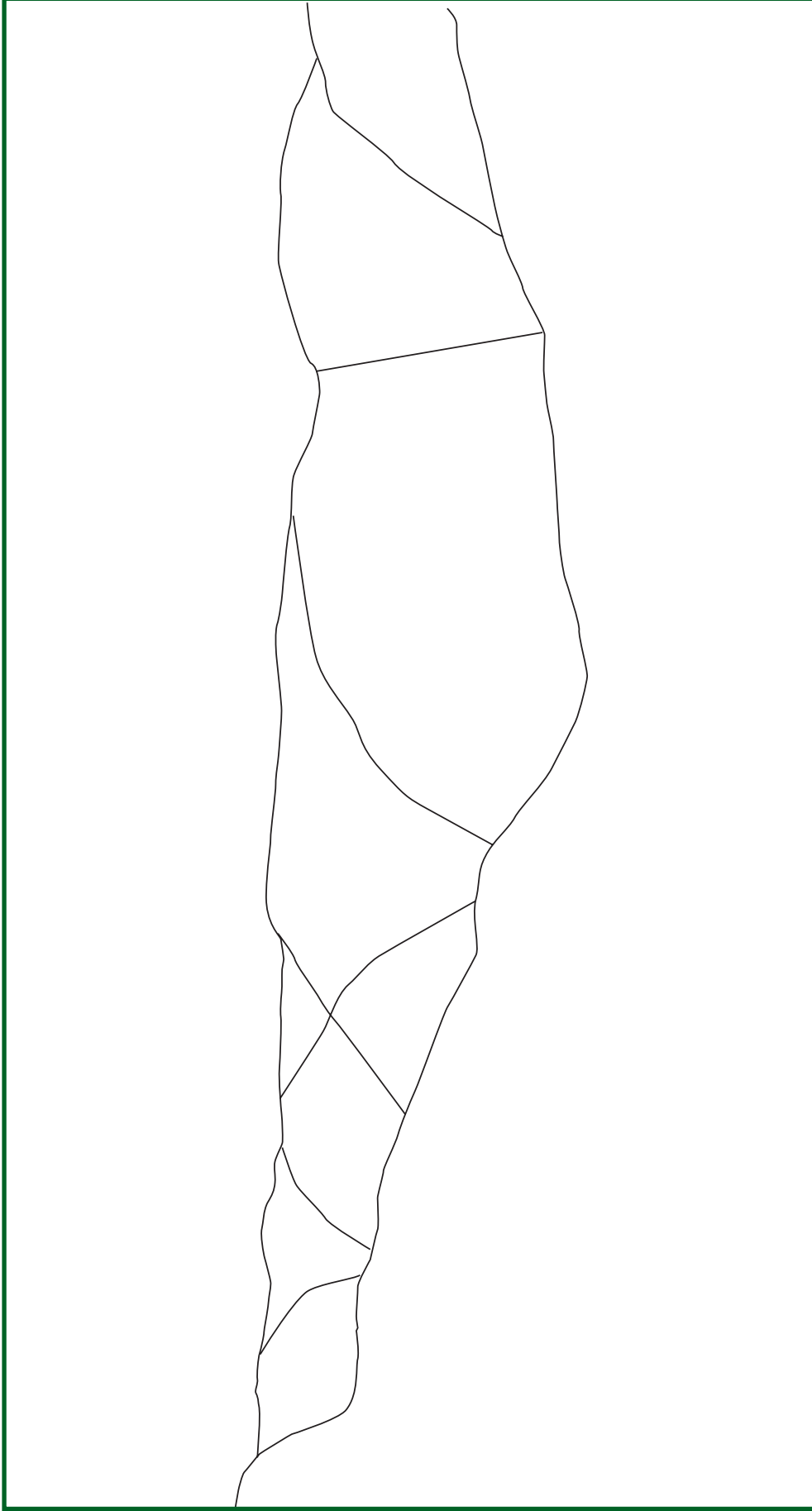
Tree Name:

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Write the age of the tree in the trunks

A Forest View



Use this picture to help you draw the view.
What different types of trees can you see? What age are the trees?

A Forest View

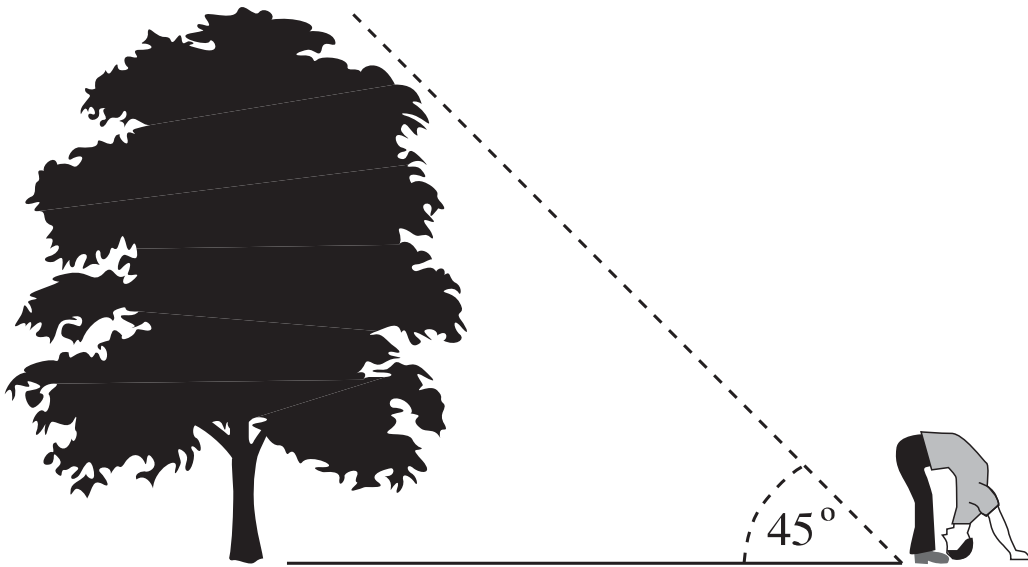


For your reference when you are back in the classroom

WORKSHEET 7

Can you work out the height of a tree?

To see how high a tree is, find a spot where, looking under your legs you can just see the top of the tree. The distance from this spot to the base of a tree is the approximate height.



How does this work?

For a normal healthy person the angle formed by looking through your legs is approximately 45° .

This means that the distance to the tree should be around the same height as the tree.

Work out the height of a tree.

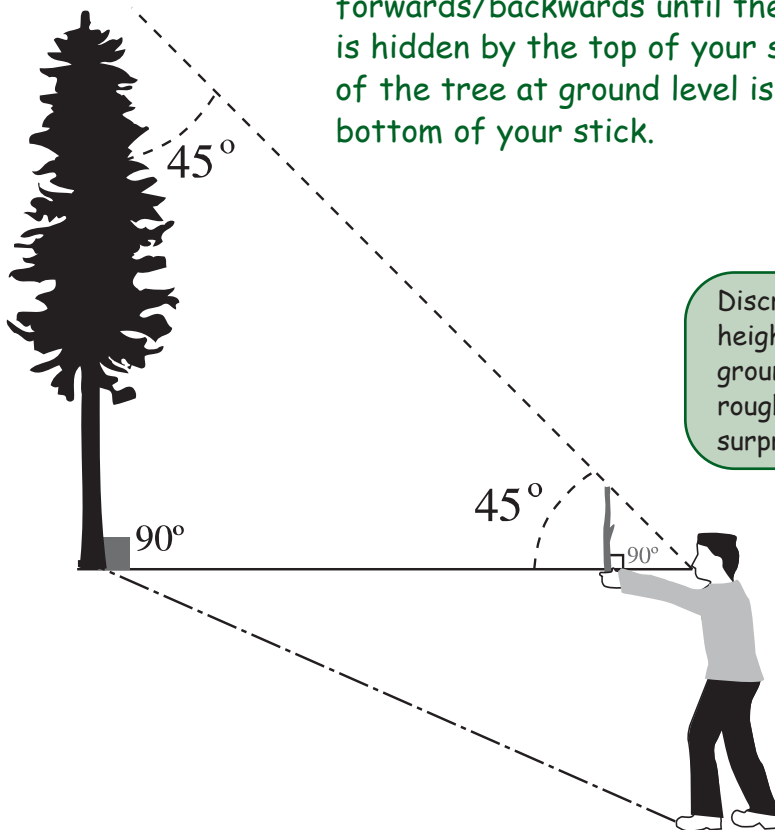
metres

cms

The height of a tree - Stick Method

To see how high a tree is, find a fairly straight stick that is about the same length as the distance between your outstretched arm and your cheek.

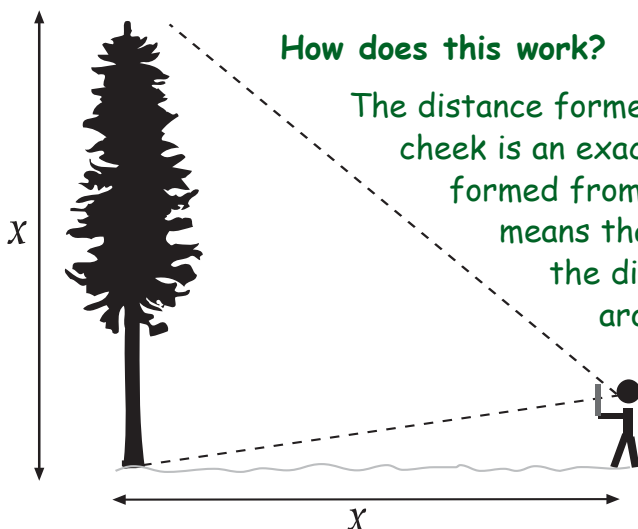
Hold the stick upright at arms length and walk forwards/backwards until the top of the tree is hidden by the top of your stick and the base of the tree at ground level is hidden by the bottom of your stick.



Discrepancy would be the height your eye is above the ground - but it is only a rough method anyway but surprisingly accurate.

Work out the height of a tree.

metres	cms
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How does this work?

The distance formed between the stick and your cheek is an exact smaller replica of the one formed from your cheek to the tree. This means that once again the angle is 45° and the distance to the tree should be around the same height as the tree.