

SELF-GUIDED EDUCATIONAL ACTIVITY PACK: PONDS & POND LIFE



The Rare Breeds Centre is run by Canterbury Oast Trust, a charity supporting adults with learning difficulties.

When you get home, why not find out more at rarebreeds.org.uk

Introduction

This pack is designed to be an educational resource to support teachers of Key stage 1 students in outdoor activities when visiting the Rare Breeds Centre (RBC) although the activities could be easily adapted to suit older or younger children.

Here at the Rare Breeds Centre we are fortunate to have a variety of habitats on site such as ponds, ancient woodland, hedgerows and wildflower meadows. We believe these provide a great opportunity to teach students about the outdoor environment through nature-based activities.



While we offer pre-booked RBC led educational activity sessions*, this pack suggests self guided activities for schools and groups. All activities mentioned have links to the National Curriculum, provide details of any resources required and recommended location within the Rare Breeds Centre for the activity. A copy of our Schools and Groups Risk Assessment is available on our website.

Activities such as those suggested in this pack provide an opportunity for children to explore the natural environment which is home to a variety of wildlife. This pack focuses on providing an introduction to ponds and the wildlife associated with them.

*Small fee applies

Things to remember...

- Please be fully equipped for a visit to the RBC. Check out our FAQs online.
- Ensure that sturdy footwear and weather appropriate clothing is worn.
- Bring any activity specific equipment you may need. (By prior arrangement only, some equipment is available to hire from RBC.*)
- Activities take place in the natural environment please respect this by leaving the area as you found it.
- Rare Breeds Centre map (Downloadable at <http://www.rarebreeds.org.uk/online-resources>)
- You can always use your pre-booked trailer ride as transport to the top of the farm.

* Small fee applies



The Rare Breeds Centre is a registered farm member of FACE (Farming and Countryside Education). This pack has been developed by staff trained under CEVAS (Countryside Educational Visits Access Scheme). Some of the worksheets provided at the back of the pack have been adapted from a variety of sources in particular Woodland Trust Nature Detectives The Wildlife Trusts Wildlife Watch and RSPB.



Activity 1: Pond introduction

Curriculum links	Science, Geography and English
Equipment	Paper, pencils, clipboard
Suggested location	Top Pond
Time of Year	All year

Pre visit: Discuss with the children that a pond is an area of water that supports a variety of wildlife and give examples. Tell them that different plants and animals are found in the water and at the water's edge. Ask the children to draw a pond as they imagine it.

On the day: Ask the children to sit in a position so that they can all see the pond easily. Point out different features of the pond to the children. Then ask the children to look at the pond carefully for two minutes and draw the pond including the features you have pointed out.

After the children have finished drawing, encourage them to discuss what they have included in their pond drawing—how does this differ to the ponds they drew at school?

Post visit: This activity can lead on to a pond dipping activity. You could create a mini pond in the school grounds and then watch as the pond develops and wildlife move in over time (see info sheet).

Activity 2: Pond life spotting

Curriculum links	Science, Geography, English and Maths
Equipment	Worksheet, pencils, clipboards
Suggested location	Wildlife Garden pond, Julia's Pond or Top pond.
Time of Year	All year —spring/summer provides more opportunity for sightings.

Pre visit: Introduce the idea that ponds are home to a variety of wildlife. Ask the children what they think they might see in a pond, then suggest some other examples.

On the day: In small groups take the children on a walk around the pond, be careful not to get too close to the edge. Tell the children to look everywhere; out in the middle of the pond, above and below the surface of the water, at the pond edges and amongst the vegetation. Look for dragonflies, pond skaters, ducks, newts, frogs, whirligig beetles, and yellow flag iris.

The children can use the worksheet to tick off all the wildlife they spot. If they spot wildlife not on the sheet they should write or draw them at the bottom of the sheet.

Why not look at two ponds (garden and a larger pond) at the RBC and compare the wildlife seen?

Post visit: This activity can be extended and linked to numeracy by creating a class tally chart of the plants, birds, or insects seen visiting the pond. What animal was seen the most often by the class? What was seen the least often?

Activity 3 Pond plants

Curriculum links	Science, Geography, English and Maths
Equipment	Clipboards, pencils and paper.
Suggested location	Julia's Pond or Top pond
Time of Year	All year

Pre visit: Show the children pictures of the different types of plants that can be found around a pond and explain why the plants are found in different areas of the pond e.g. some root entirely underwater and some float on top.

On the day: Take the children to the pond and point out the different types of plants that are found in the pond and describe their features:

Submerged plants - those that grow entirely underwater.

Floating plants - such as Broadleaved pondweed which spread across the pond surface,.

Marginal plant - such as Yellow Flag Iris which root under water but have leaves and flowers above.

Bog plants - such as water mint which grows at the pond edge but is not permanently waterlogged.

Using the worksheet provided the children must match the plants to their natural position within a pond.

Post visit: You could follow this activity by comparing pond plants with terrestrial plants and discuss the similarities and differences between them.

Activity 4 Where in the pond...

Curriculum links	English, Geography, and Science
Equipment	Worksheet, clipboard, pencils.
Suggested location	Any of the RBC ponds.
Time of Year	March—June

Pre activity: Undertake one of the other suggested activities in this pack with the children to provide an introduction before this activity.

On the day: Talk to the children about what they have seen at the pond. Talk to them about whereabouts they saw the different plants and animals, 'Were they in or around the pond? Above or below the water?' Using the worksheet provided encourage the children to draw lines from the photos of the wildlife they saw when visiting the pond to whereabouts they saw it at the pond e.g. newts under water and dragonfly flying above the water surface.

Post visit: Ask the children 'Why they think they saw some animals at the pond and not others?' Use this to begin introducing the idea that living things have similarities and differences and can be grouped as such. You can even discuss the idea that different environments such as a pond or hedge support different plants or animals.

Activity 5: Dragonfly lifecycle

Curriculum links	Science
Equipment	Clipboards, pencils and worksheet
Suggested location	Darter pond, Wildlife Garden pond
Time of Year	Spring / summer—sunny days

Pre visit: Introduce the concept of lifecycles. Using the dragonfly lifecycle as an example discuss the differences between life stages.

On the day: On a sunny day, take the children to a pond which is in a sunny aspect. Ask the children to look for dragonflies. Describe the 3 different life stages of dragonflies, explaining that some stages of the lifecycle can be found underwater and others above the waters.

1. *Dragonfly adult* - exclusively found above the water, often darting across the water surface to feed.
2. *Eggs* - Female dragonflies will lay eggs either on the surface of the water or on foliage of pond plants.
3. *Nymph* - Nymphs hatch from the eggs and are found exclusively underwater until moulting (skin shedding). When the nymph grows, it sheds its skin in a process known as moulting and emerges as an adult dragonfly.

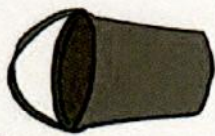
Using the worksheet provided encourage the children to tick off any of the life stages as they spot them. You might not see them all but can expand on this when you get back to school.

Post visit: Recap the lifecycle of a dragonfly by testing the classes knowledge. Why not compare the dragonfly lifecycle with the butterfly lifecycle or even human lifecycle? What are the key stages of each lifecycle? In what ways are they similar? This could lead on to discussing the needs of all living things.

How to build a mini wildlife pond

You will need:

- an old bucket or watertight container



- spade



- sand



- old bricks, rocks and pebbles



- native pondweed (eg. curled pondweed)



- 1 Dig a hole deep enough to hold your container.
- 2 Remove any sharp rocks and line bottom with sand.
- 3 Sit the container in the hole and fill the gaps with loose soil.
- 4 Build a pile of rocks and bricks in bottom, scatter pebbles and add pondweed. Fill with rainwater.



Pond life spotting

While looking at the pond keep your eyes peeled for wildlife all around the pond and tick the ones you see.



Pond skater



Water Mint



Toad



Yellow Flag Iris



Newt



Damselfly



Moorhen



Whirligig beetle

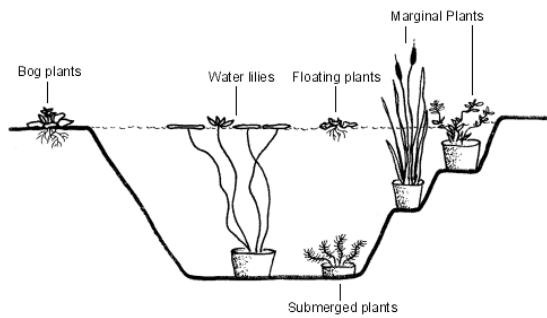


Water boatman

If you see other wildlife around pond then list them here:

Pond plants

Draw arrows to match plants to where they grow in the pond.

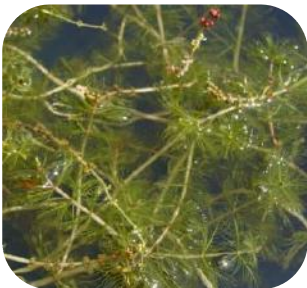


Underwater
Submerged

Both above & below
water
Marginal

On top
Floating

Edge
Bog



Water Milfoil

Yellow flag Iris

Broadleaved
pondweed

Water mint



Where in the pond...

You may have seen some of these at the pond. Draw a line from the ones
you saw to record where you saw them at the pond.



Bee



Pond Skater



Water mint



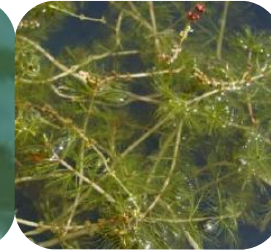
Damselfly



Moorhen



Whirligig
Beetles



Water Milfoil



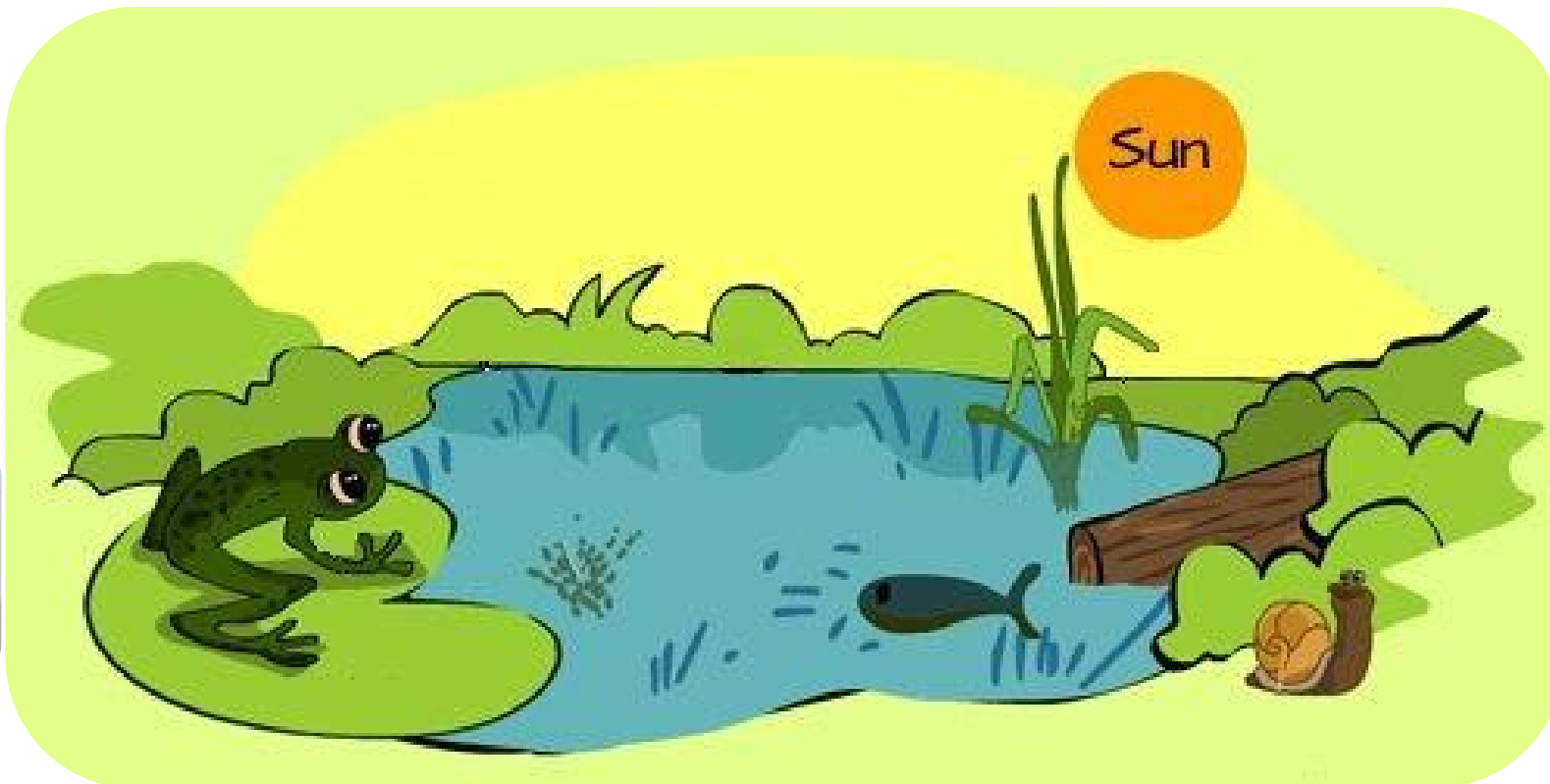
Butterfly



Yellow Flag Iris



Newt



Water
boatmen



Broadleaved
Pondweed

Dragonfly lifecycle

Spend some time watching the pond and if you spot any stages of the dragonfly lifecycle tick them off.

