River Thames Boat Project

River-Based Experiments

KS2

About the charity

The River Thames Boat Project is a charity with a 30 year history and we are all about making the Thames accessible. We provide therapeutic cruises for people of all ages with disabilities and for older people, as well as environmental education days for primary school children which are linked to the National Curriculum. We have two specially adapted wheelchair accessible community boats *Thames Venturer* and *Thames Discoverer* and we operate on the river between Chiswick and Windsor. A staff team of four with an amazing group of 70 volunteers work together to support the charity, maintain the boats, deliver our activities and help at fundraising events. We rely on grants, donations and our own fundraising to subsidise the cost of our days on the river.

To book a cruise or an education day, to volunteer or to make a donation, please get in touch:

info@thamesboatproject.org
www.thamesboatproject.org
0208 940 3509
Registered Charity 1080281

Normally, we run two education programmes from *Thames Venturer*, our converted Dutch Barge, as well as informal sessions for youth groups and children's groups. We can offer bespoke sessions upon request.

'School on the River' is a KS2 hands-on Geography and Science workshop, lasting a full school day and based at Teddington Lock. Children learn from the environment around them, explore the foreshore and do science experiments into the health and history of the river.

'Eco Venturers' is for KS1 or KS2 eco-warriors who want to achieve an eco-schools green flag, or who are interested in sustainable technology, recycling and river wildlife. Eco-Venturers links to the National Curriculum. The KS1 session runs at Teddington Lock and the KS2 session takes place at Kingston riverside.

'Drastic Plastic' is a unit all about plastic pollution and its global impacts. Children consider where plastic waste comes from, how to prevent it, and how to replace plastic in their lives. They model how plastic flows along the Thames to join the sea, just like the water. It can be incorporated into either a 'School on the River' or 'Eco Venturers' day.

Youth groups, children's groups and informal education: we run river clean-ups and a variety of environmental activities for Beavers and Cubs, Woodcraft Folk and other youth groups. In addition, we also offer residentials. Youth and adult groups can enjoy exciting sleepovers or weekends away, enjoying both boating and environmental activities on our Dutch barge, *Thames Venturer.*

About the activity pack

During the current difficult times, all activities on our boats are suspended. We really look forward to being back on the river later in the year once the government restrictions are lifted. We know that we will be able to enjoy special time on the river with all our clients and supporters again, when the time is right. The boats are waiting patiently for us.

In the meantime, we have created this video and the accompanying worksheets in this pack as an alternative to the education activities we normally deliver on board our boats, but which have been put on hold for now. Some of the activities from the 'School on the River' and 'Eco Venturers' education programmes have been adapted for children to complete at home so they can still engage with the river and the project. Hopefully, this pack will provide an insight into the programmes we would usually run and some informative entertainment for children in anticipation of when we can resume our education days.

Notes to Parents and Teachers

This River-Based Experiment pack with the accompanying video and the Eco-Activity pack have been created so that the activities can all be completed from home, using equipment that will likely be in your home already. Each activity is adapted from our education programmes and links to the National Curriculum so can be used as a supplementary learning material or as an informative practical activity for children. The experiments in the videos are aimed at KS2 but can also be enjoyed by KS1 as they give a 'virtual' experience of being on the river. For the rocks and soils experiment, it is possible to conduct your own experiments at home using improvised equipment (if you have access to). It is worth watching the video first and assisting your children throughout. Otherwise, both experiments have been recorded so that children can still get the full experience from the video, without requiring any equipment. Feel free to pause, rewind and fast forward the video in order to get the most out of the clips. We hope these activities will help to keep children engaged until schools can join us on the river once more!

Investigating Rocks and Soils Experiment

Equipment needed:

A device to watch the corresponding video on, rocks and soils worksheet (on next page), pen or pencil.

Extension: if you have measuring jugs, a funnel of some sort, cotton wool pads, a timing device and can obtain some soil and/or gravel from your garden or outdoors area you could even try to conduct the experiment at home yourselves – with the help of an adult, of course! (There is a list of equipment used for the experiment on the worksheet and it will be worth watching the video first, before trying to copy it at home.)

Links to curriculum:

KS2, Geography, Science.

Learning objectives:

To learn/revise water cycle; to cover aspects of the geography and science of the river; to understand how to conduct a fair scientific test; to conduct/observe a filtration experiment on rocks and soils found within the Thames Basin.

Activity instructions:

Watch the video that accompanies this activity. Follow along with the experiment and you will be prompted when to fill in the worksheet. Feel free to pause and rewind the video so you can think about and answer the questions and complete the worksheet fully.

Key words:

- Source
- Meander
- Estuary
- Tributaries
- Impermeable
- Porous

Investigating Rocks and Soils

as part of the water cycle

I am testing: ☐ Clay ☐ Gravel ☐ Alluvium ☐ Chalk

My Prediction

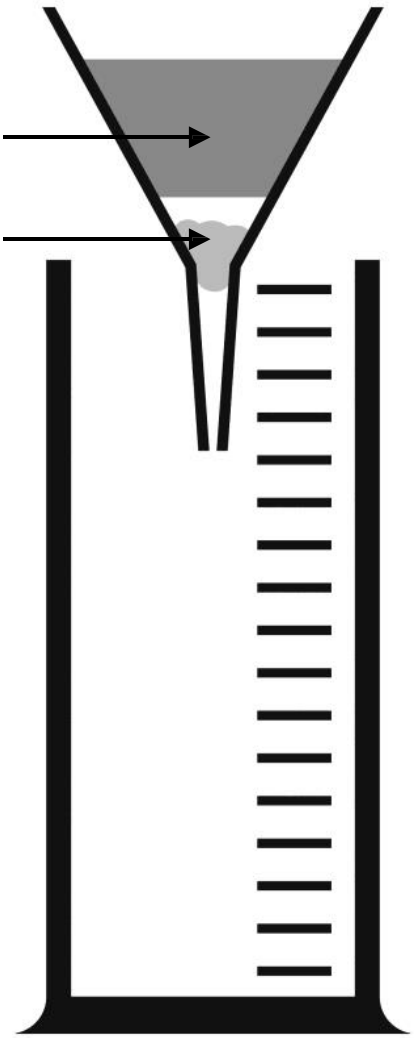
I think water will pass most quickly through…

☐ Clay ☐ Gravel ☐ Alluvium ☐ Chalk

My Experiment

What we will need:

1 large funnel and cylinder
1 small funnel and cylinder
1 stopwatch
1 tablespoon of material
1 damp cotton wool pad
100ml Water



My Results & Conclusions

Time	
Water Appearance	
Amount of water passed through	
What happened to the material	
This material could be used for	

Water passed most quickly through…

☐ Clay ☐ Gravel ☐ Alluvium ☐ Chalk

Water Survey Experiment

Equipment needed:

A device to watch the corresponding video on, water survey worksheet (on next page), pen or pencil.

Links to curriculum:

KS2, Geography, Science.

Learning objectives:

To find out whether the River Thames water is of good quality; to find out whether the River Thames is a good habitat for wildlife; to think how they can safeguard the river from litter and pollution; to cover aspects of the geography and science of the river; to understand how to conduct a fair scientific test.

Activity instructions:

Watch the video that accompanies this activity. Follow along with the experiment and you will be prompted when to fill in the worksheet. Feel free to pause and rewind the video so you can think about and answer the questions and complete the worksheet fully. If you live near the river or have visited the river, you can use your own observations and knowledge to assess the river quality.

Key words:

- pH
- Acidic
- Alkali

Water Survey

Can the River Thames support plant and animal life?

First observations of water quality

Look at the river from the boat.
How would you describe the look of the water?

☐ Clear ☐ Cloudy

☐ Green ☐ Brown ☐ Blue ☐ White Other: _____

How would you describe the River Thames water quality?

☐ Very good ☐ Good ☐ Fairly good ☐ Fair ☐ Poor ☐ Very poor

Measurements of water quality

Temperature:
Air ____ °C
Surface of river ____ °C
Bottom of river ____ °C

pH of water: ____ pH

Oxygen: Is there evidence of plant life?

☐ No ☐ Yes

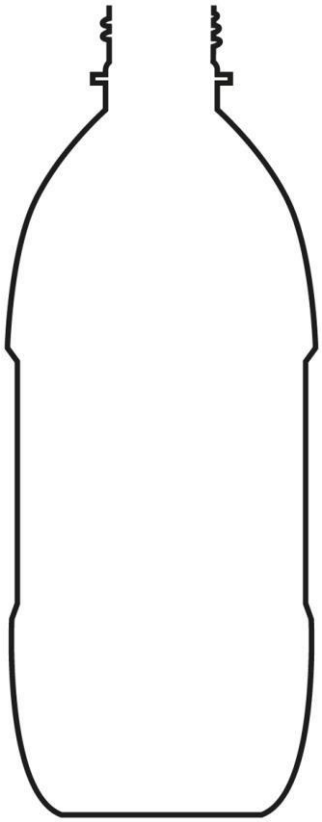
Is there light reaching the river?

☐ No ☐ Yes

Is there anything that spoils the look of the riverside?

☐ No ☐ Yes (write down what you can see)

What might make the water cloudy?



Water quality assessment

How would you describe the River Thames water quality?

☐ Very good ☐ Good ☐ Fairly good ☐ Fair ☐ Poor ☐ Very poor

A note from the River Thames Boat Project

We hope you enjoyed both activity packs and the river-based experiment video. We are looking forward to being back on the river as soon as possible and hope you can join us! If you are interested in organising a trip with us, getting involved with the project, or donating, please contact the charity and continue to support us! You can get in touch with us via:

info@thamesboatproject.org
www.thamesboatproject.org
0208 940 3509
Registered Charity 1080281

Stay safe and thank you!

From the Team at River Thames Boat Project