



WORCESTER RIVER CRUISES

Educational Boat Trips
Worksheets and Teachers Notes



Worcester River Cruises
37 The Tything, Worcester WR1 1JL.
01905 611060

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Name: _____

Date: _____

River Features

Along this stretch of the River Severn, you may see natural features of the course of a river, such as meanders, beaches, small cliffs, eroded crumbling banks, and overhanging trees.

There are also many examples of man-made features, which have been built to help preserve the banks and to help navigation along the river. These include walls along the banks, boat moorings, locks, weirs and bridges.

Look out for natural and man-made features of the river. Make sketches of both types in the boxes below.

Natural	Man-made
Natural	Man-made



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Land use along the river bank

Make a survey of the varied use of land that you can see along the river banks. See if you can classify the uses into the following groups.

Some uses are directly because the land is next to the river e.g. water sports and tourist activities. Other uses could be because the flood plain is flat and fertile e.g. Worcester Race Course and farming.

Some could be the re-development of existing historical sites for a different use e.g. Brown's restaurant which used to be a grain store, and the building of homes in the old Oil Basin. Other uses may not appear to have a specific reason to be there.

River based	Flood plain
Historical	Other



Name: _____

Date: _____

Bridges across the river

In Worcester, there are 3 bridges crossing the River Severn. Each one has been designed and built to carry a different type of transport.

In the boxes provided, make a sketch of each bridge. Write what material has been used to construct each one.

Road Bridge

Materials used:

Foot Bridge

Materials used:

Rail Bridge

Materials used:

Which bridge is used the most? _____

Why do you think this is? _____

Can you think of any problems that this could cause in the city?

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Know your boat!

How good is your boat general knowledge?

See if you can beat your friends at filling in this boat quiz.

1. Who is the person in charge of the boat? _____
2. What is the front of the boat called? _____
3. What is the back of the boat called? _____
4. What is the kitchen area of a boat called? _____
5. If you stand on the boat and face the front, the left hand side is called the _____ side.
6. The right hand side of the boat is called the _____ side.
7. What colour light is on the port side? _____
8. What colour light is on the starboard side? _____
9. Motorised boats always pass each other on the same side. Which side is it? _____
10. What are the floors called on a boat? _____
11. This boat has no brakes! How do you think it can stop safely?

Captain

Decks

Starboard

Stern

Red

Port to port

Bows

Gallery

Port

Green

Reduce power, and put into reverse gear

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I-Spy on the river

Keep your eyes peeled as you travel along the river. How many of the following can you spot? Tick them off as you see them.

Score 5 points for each different item.

Swan	
Worcester Cathedral	
Road bridge	
Steps	
Fisherman or woman	
Radio Hereford & Worcester	
Another moving boat	
Lock	
Horse	
Severn View Hotel	
Train	
Life ring	
Worcester Rowing Club	
Duck	
Flag	
Fish	
Diglis Hotel	
Fountain	
Cafe	
Moored boats	

How well did you score?

90 – 100 Excellent! You are an eagle-eyed boater!

50 – 85 Well done! You have spotted lots of things.

0 – 45 Keep looking! You have made a great start.



Name: _____

Date: _____

River Flooding

This happens when water from heavy rain in the river catchment area rushes downstream. The extra water in the river channel causes the water level to rise and the flow of the river to increase.

Look out for signs along the river bank that the level of the water in the river has been higher than it is now.

Tick off the following if you see them:-

- Muddy water line on the trees
- Rubbish caught in the trees
- Soil washed away (eroded) between tree roots
- Any other examples that you can see

It is dangerous for boats to travel on the river if the water rises more than 1m. above the summer norm.

Why do you think this is?

Sometimes the river rises so high that the water spills out on to the surrounding land (the river flood plain). Worcester Race Course and Worcestershire County Cricket Ground have both been built on the flood plain as it is a large flat area, and does not matter too much if it gets under water sometimes.

Do you think that a river flood plain would be a good site for a new housing estate? Give some reasons for your answer.

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River Transport

Up until the 1940s, the River Severn was an important transport link between the cities of the Midlands and the sea ports of the Bristol Channel. At Diglis, the Worcester to Birmingham canal joins the river. Amongst the cargoes that were shipped, were cocoa beans to Cadbury's at Bournville, and metals, glass sand, grain and food stuffs to Midland cities. After unloading their cargo, the boats returned down river with salt and coal to Gloucester and Avonmouth. In the 1950s, some large oil companies used oil tankers to transport petroleum products up the river.

Look out for clues from the past e.g.

- Brown's restaurant used to be a grain warehouse.
- The Oil Basin (near Diglis) is being re-developed.
- Diglis Canal Basin is being re-developed.

The River Severn is no longer used much for commercial traffic.

Make a tally chart of the present river transport that you can see.
Which type is the most plentiful?

Trip boats	
Canal narrow boats	
Private motor cruisers	
Rowing motor cruisers	
Rowing boats	
Canoes	
Any other type of boat	

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River Wildlife

The river and its banks are home to a multitude of birds, fish, insects and small mammals.

Make a survey of as many different wild life creatures as you can see from the boat. Here are a few to start you off. Use the tallying system to record your findings.

Name of creature	Tally
Swan	
Duck	
Fish	

If you look carefully, you may spot a heron or even a kingfisher.

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Weather along the river

Look at these weather symbols. Choose the ones which best describe the weather today for your boat trip. Draw them in the box below.

Add some symbols of your own if you need to.



The river water can also give some clues about the weather. Look at the water and see if any of these conditions apply today. Tick them off if you see them.

- Sun reflected in the water.
- Water surface ruffled by the wind (not smooth).
- Fast flowing water (sign of recent rain further upstream).
- Circles in the water (raindrops falling in).

Mist often hangs over river valleys. Is this happening today? _____

The Severn valley lies in the same direction as the prevailing south-west winds. Wind often blows up the river valley (opposite way to the flow of the water). Is this happening today? _____

Clue – look out for a flag.

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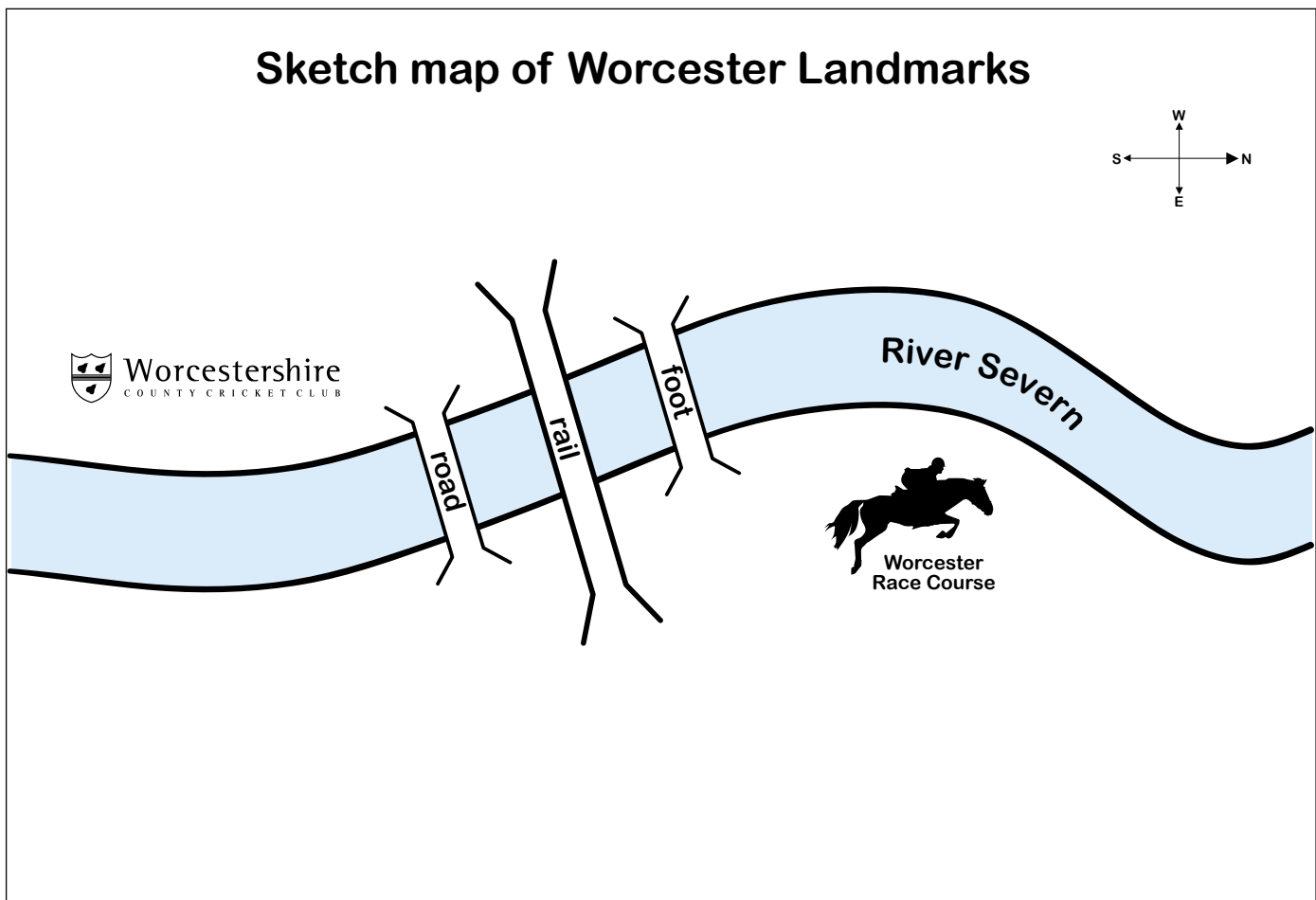
Date: _____

Worcester Landmarks from the river

Look out for the following landmarks as you cruise along the river.

- Worcester Cathedral
- Radio Hereford and Worcester
- Worcester Rowing Club
- Worcester Canoe Club
- Diglis Hotel
- Severn View Hotel
- The Glover's Needle (a very tall and narrow spire, that used to be part of St. Andrew's church)
- Any other landmarks that you wish to add

Record them on your sketch map below. The river and the three bridges have been drawn to start you off. If you wish, you may devise symbols for your landmarks and a key to explain them.





Teacher Notes for educational boat trips

About the worksheets

- These have been designed for students to perform field study techniques and activities whilst on board the trip boat.
- They could be used effectively within the geographical topics of Water and its effects on people and the environment, or a Contrasting locality in the U.K.
- Emphasis is given on students being able to maximise their time out of the classroom and to experience the river environment.
- Each worksheet focuses on differing aspects of the river, with plenty of opportunity to look around without too much recording on paper.
- Students could be given as many or as few worksheets as desired, according to their ability, age, length of trip, and purpose of your visit.
- Opportunities are given for data collection using tallying and recording surveys, observations, sketching, map making, drawing conclusions and a quiz.
- The sheets include a certain amount of information in order for the task to be completed independently, in pairs or in groups.
- If desired, the sheets could be distributed to the students in small groups, with each group focusing on a different topic area. Each group could then report back their findings in the classroom back at school.
- Some facts could be discussed further in the classroom e.g. mist in river valleys, building on flood plains, or why the foot bridge might have been built.
- Facts have been listed in bullet points so that relevant parts can be highlighted easily if required.



Teacher Notes for educational boat trips

About the river

- The River Severn used to be known to the Romans as Sabrina, and to the Welsh as Afron Hafren.
- It is the longest river in Britain, and flows for about 210 miles from its source to the sea.
- It rises as a boggy spring on top of Plynlimon in mid Wales.
- In its first 12 miles, it falls about 1,500 feet (463 metres).
- After passing through Ironbridge Gorge (the birthplace of the Industrial Revolution), the river heads south and becomes wider.
- By the time it reaches Worcester, it is in the latter stages of river development.
- Locks have been built to help maintain water levels and to keep the river navigable. The excess river water passes the lock via the weir.
- The River Avon joins the Severn at Tewkesbury (a confluence).
- By the time the river reaches Gloucester, it is tidal and no longer navigable because of shifting sand banks.
- The Sharpness Canal has been built to carry boats down to the sea from Gloucester.
- By the time the Severn reaches Frampton on Severn, it widens dramatically and develops wide mud flats.
- Severn bores occur several times a year to a variable degree, and are connected to the spring tides. They can come up the river as far as Upper Lode in the form of a wave riding against the river flow.
- The Severn Estuary has one of the largest range of tidal rise and fall in the world, and certainly the largest in Britain.



Teacher Notes for educational boat trips

River Transport

- In the past, the river has been an important transport link from the Midlands to the Bristol Channel ports.
- It was used for commercial traffic until the 1960s, when it started to go into decline.
- Barges, tugs, longboats, horse-towed boats and motor barges moved and trans-shipped varied cargoes. Severn trows were a flat bottomed boat with one or two sails. The flat bottoms enabled passage for variations in the depth of the water.
- Originally, gangs of men were employed to haul the boats along with ropes. They wore harnesses and were fiercely opposed to the introduction of horses to do their work.
- Cocoa beans, chocolate crumb, sugar and condensed milk was moved between the Cadbury factories at Bournville and Frampton on Severn.
- A variety of cargoes, including metals, imported grain, glass sand and foodstuffs to the Midland cities were taken up stream.
- Boats returned down stream with salt and coal to Gloucester and Avonmouth.
- Oil companies used tankers to transport petroleum products up the river. The Severn Traveller was built in the 1930s for this purpose. Oil was unloaded in the Oil Basin, which is near to Diglis lock. Shell-Mex had its depot there. The old tanks have only been dismantled in the last year or two, to make way for redevelopment.
- Goods were trans-shipped in the canal basins. Diglis Basin handled wine and grain amongst other things, and Lowesmoor Basin (further up the canal) dealt in timber and coal.
- At Worcester, access onto the Worcester Birmingham Canal is through the narrow lock at Diglis Basin.
- In days gone by, Worcester is reputed to have been the haunt of smugglers! There were many narrow alleys and hostelrys around the quaysides.
- Some old warehouse buildings have been converted into restaurants and apartments in the city.
- The road bridge was rebuilt and widened in 1931-2 with the increase in motor traffic.
- The railway bridge was opened in 1860 and rebuilt in 1904. It has a very long viaduct, and carries the former GWR route to Malvern and Hereford.
- The foot bridge (Sabrina Bridge) was opened in 1992. Note the symmetrical date plaque in the centre.



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Miscellaneous information

- Worcester Race Course and the Worcestershire County Cricket Ground have been built on the river flood plain, but are not easily visible from the river.
- The cottages built near to Diglis lock sometimes flood, and when they do, are often seen on the regional news.
- When facing the bows when on board the boat, the right hand side is starboard, with a green light.
- The left hand side is port, with a red light. The way to remember is, 'left' and 'port' both have 4 letters, and 'port' is a red drink!
- The Glover's Needle is all that remains of St. Andrew's church (a tall narrow spire). Gloves used to be made in Worcester at the Dent factory.
- Motorised boats pass one another on the port side (the opposite to road traffic).
- Boats do not travel on the river if it rises 1m. above the summer norm. This is because the water flows too fast, there may be debris in it e.g. fallen trees, and bridges become un-navigable.
- North Quay (where the 'Pride of the Midlands' departs from) and South Quay (where 'The Earl' departs from) were served by a branch of the G.W.R. from Worcester Foregate Street Station. This linked the river and rail networks. The line ran along the quayside through a small tunnel in the road bridge, thus connecting North and South Quays.
- At the time, it was hoped to extend the line down to Diglis lock, but Worcester Cathedral authorities refused permission for it to pass through their land.
- The old Oil Basin is near to Diglis lock on the east river bank. It is an inlet leading off the main part of the river, with a small foot bridge over the entrance.

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SERVICE FOR EVERY OCCASION AND EVENT. WHETHER YOU
ARE GETTING MARRIED, HOLDING A CONFERENCE OR SIMPLY
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AN EXPERIENCE TO CHERISH AND REMEMBER.

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