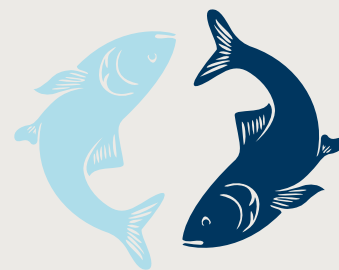


UNLOCKING FISH FUN

Activity Sheet FISHY MARBLE RUN

This activity sheet accompanies a matching video tutorial, use them individually or together to best suit you.



UNLOCKING
THE SEVERN

Many different species of fish live in the River Severn, including one species called the twaite shad. Unlocking the Severn is working hard to help the shad, and lots of other species, move up and down the river as part of their natural migration. Shad migrate once a year and travel from the sea up the river to their spawning grounds where they lay their eggs.

However, fish like the shad face many challenges on their journey to the spawning grounds. These can include barriers in the river such as weirs, as well as fishermen and natural predators such as otters. This activity will guide you through making a marble game that replicates the amazing journey shad make. Help your marble-fish avoid the hazards to safely reach the spawning grounds!



This is Diglis Weir in the River Severn, a barrier to migrating fish like the shad. Unlocking the Severn are building a fish pass here to help these fish swim up and around the weir to continue their journey!



UNLOCKING FISH FUN

FISHY MARBLE RUN

You will need:

- An old cereal box
- 2 delivery boxes (one made of thin cardboard, one made of thick cardboard)
- Masking tape
- A sharp pencil
- A fat pen
- A small bottle of hand gel
- An egg box
- A pair of scissors
- A lump of plasticine or Blu Tack
- Some colourful paint
- A marble or steel ball



TOP TIP: A bit about masking tape

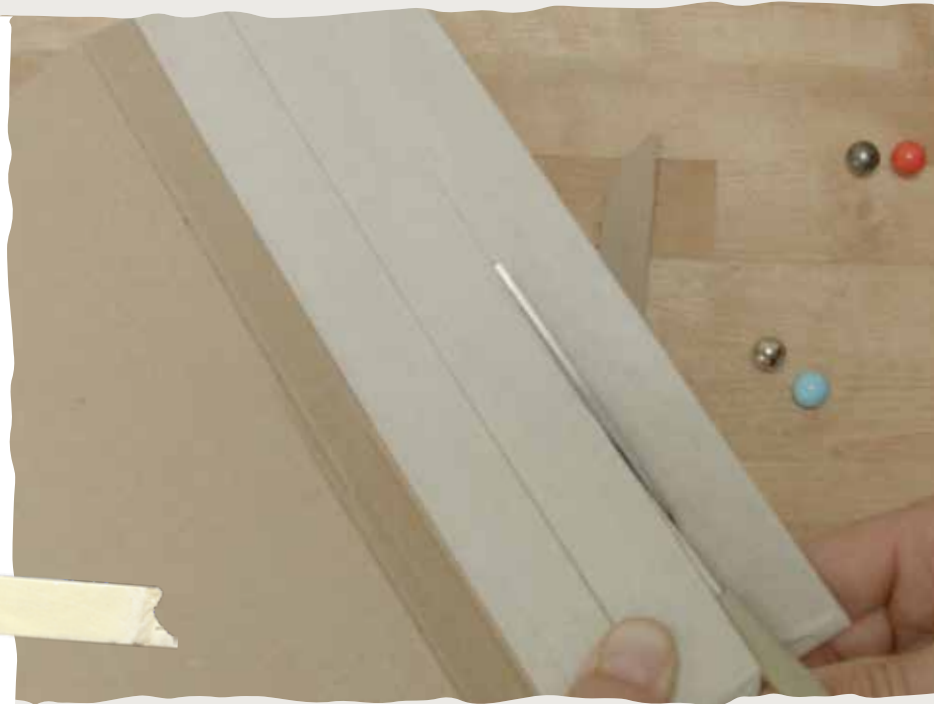
Using masking tape is a great way to make models. You can easily rip it, without using scissors, and stick things down without waiting for glue to dry. Its flexible too, is you make a mistake you can easily pull off the tape, move it and reapply. In this activity we are using quite a thin masking tape which is 2.4 cm wide.



STEP 1

Lets get started!

- Open and flatten the thin delivery box.
- Using strips of masking tape, mark out three strips running the length of the packaging.
- Cut these out, creating 3 straps of cardboard.



STEP 2

- Use the strips you have just cut to measure the same width on the cereal box. Cut along this line – cutting the box in half. You will now have two trays, one deeper than the other.
- Reinforce the corners of both trays with masking tape, inside and out.





STEP 3

- Bend the 3 straps you cut in stage 1 to make a rough diamond shape in the bottom of the deeper cereal box tray and stick it down with masking tape. Make sure the bottom of the diamond reaches the edge of the cereal box, this will be where your marble is guided to when it falls through a hole!
- Where the bottom of the diamond meets the edge of the box, use your pencil to poke a hole through the cereal box. Use the fat pen or your thumb to make the hole wide enough for the marble to fit through.
- Reinforce the hole with masking tape and then again push your thumb or fat pen through until it is the right size.



- Check that the marble easily fits through the hole. You will close your maze soon and don't want to accidentally trap your marble in there!





STEP 4

- Draw an egg shape in the bottom of the other half of the cereal box. This needs to be slightly smaller than the diamond you have just created. Push your pencil through the egg and carefully cut it out with scissors. Make sure you have help from an adult if you need it.



- Get your piece of thick cardboard. Ideally it will have ridges sandwiched inside. These look a bit like crocodile teeth or waves in the ocean!

- Lay the cereal box onto the thicker cardboard and trace around it with a pencil or pen. Cut out the shape slightly inside the line. Take your time and ask for help from an adult if you need to.



- Check this cut out card fits into the cereal box on top of the diamond straps. If it is too big just trim some off. If it is too small don't worry you can patch it up later with masking tape.



STEP 5

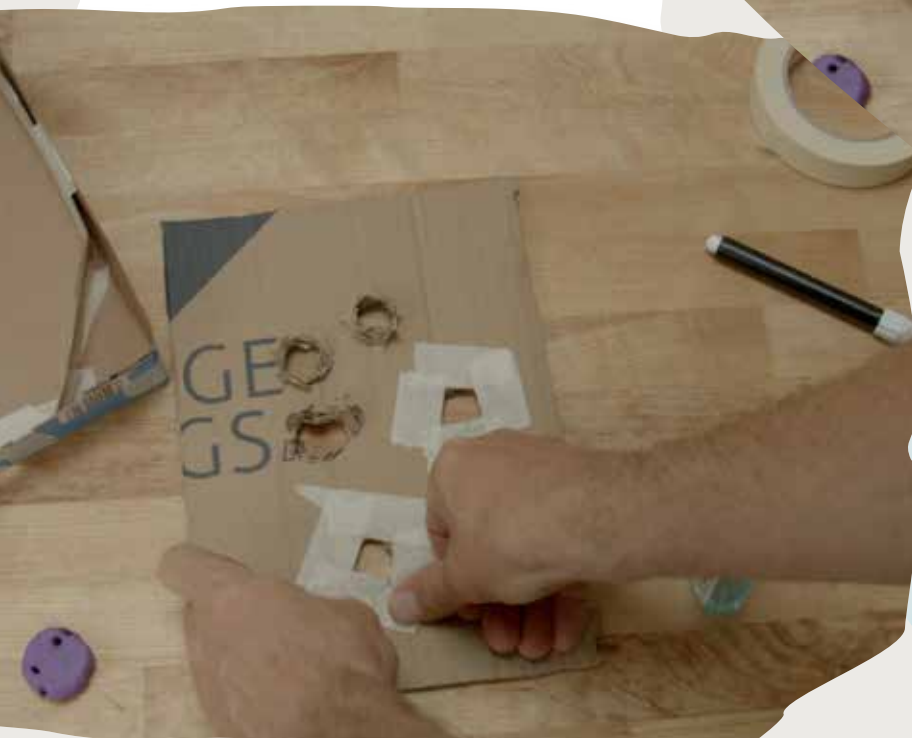
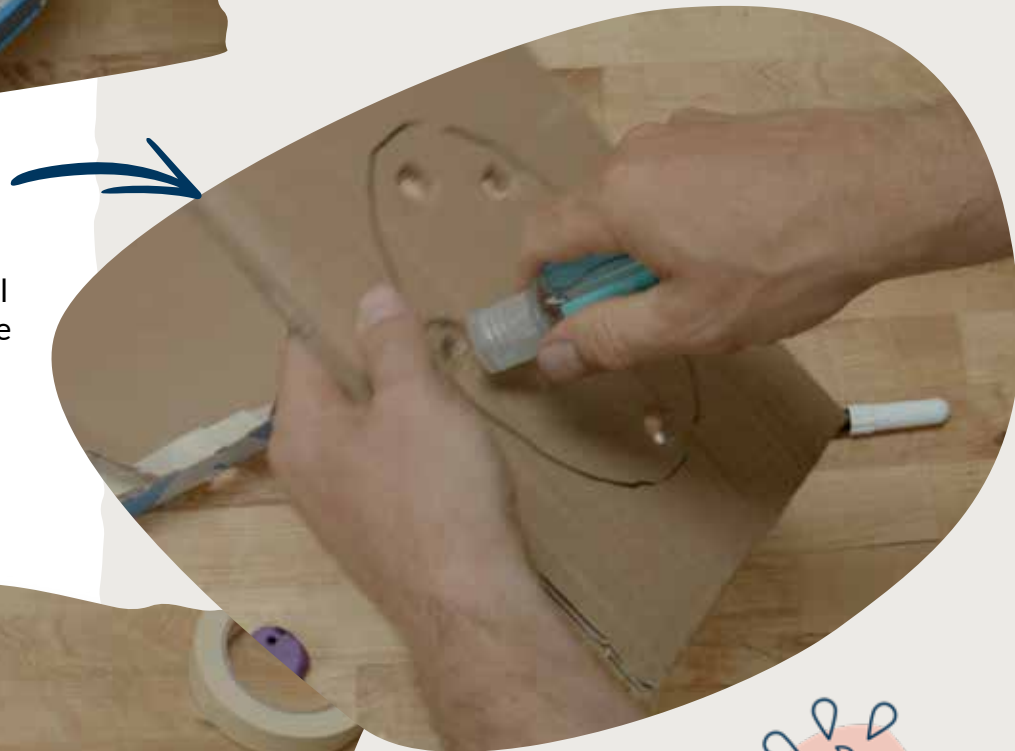
- Place the thick card under the egg shape and trace the egg onto the thick card.

- Push your pencil through the cardboard to create 4 or 5 holes within the egg shape. Place the plasticine or Blu Tack under the pencil as this will help you create the holes.



- Expand these holes with a fat pen and even the life of a small bottle of hand gel, until they are large enough for the marble to fall through.

- This can be a little tricky to ask for extra help from an adult if you need to.



- Once the holes are the right size, flatten the edges inside and out. Check again that the marble rolls through easily.

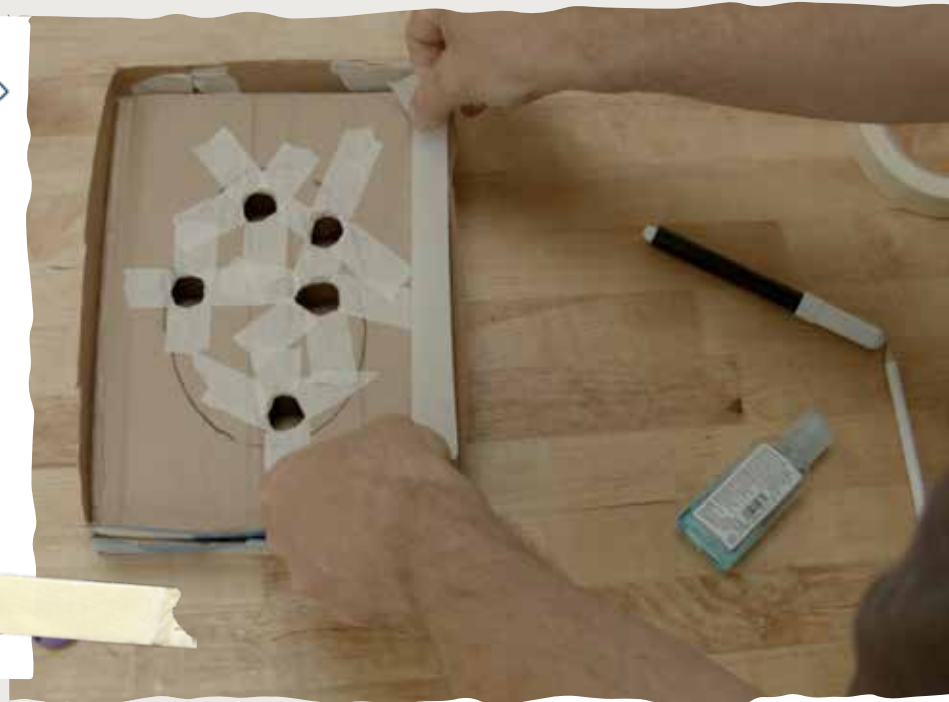
UNLOCKING FISH FUN

FISHY MARBLE RUN

STEP 6



- Place the thin half of the cereal box inside the deep half, so it is resting base down on top of the diamond shape.
- Place the thick card with the holes inside both boxes so that the egg shapes line up and the holes look straight to the bottom of the boxes. Use masking tape to secure.



STEP 7



- Now to make the ball trap, to catch the marble when it falls out.
- Remove the lid of the egg box and cut off the side with the square hole in it.
- Stick the remainder of the lid to the cereal box in front of the hole.



STEP 8



- Make more masking tape strips from the remainder of the thin card. These strips will make the maze.



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STEP 9



- This is the really fun part – making the maze!
- Think about how the ball could move around. You want to think about making the ball go near the holes, so the maze will be a challenge to complete.
- Use the cut strips, fold them and shape by eye. Once you are happy you can stick them down. These will make the walls of the maze.



Whenever you make a section, check that the ball will be able to travel down between the walls. Pull up the masking tape and move the walls if things are too tight.

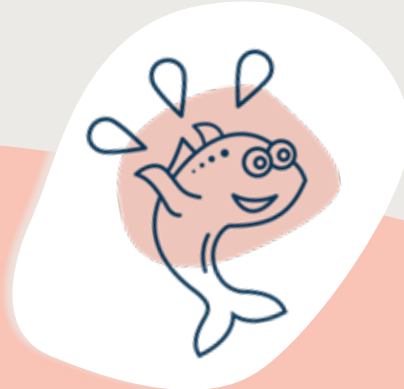


STEP 10

- Once you are happy with the maze, cover it all in masking tape to help the paint stick. Smooth the tape down.
- Enjoy painting the maze! Think about what the maze represents, the seawater start, the watery river environment, the hazards facing the fish and the spawning grounds that are their goal! Have fun and get creative with your designs!



Extra ideas to take it further:



- Why not challenge a friend or sibling to beat your best time using the marble run?
- What happens if you use different types of boxes to make your marble run bigger or smaller?
- Research a different migratory fish like the salmon and see how its journey is different to that of the shad. What time of year does it migrate? Which rivers can it be found in?
- Write a story or poem about a migrating fish, what kinds of things would it see? Who might it meet?



We hope that you have lots of fun making your fishy marble run and we would love to see it.

Please share your creations with us on social media and tag us

@SevernUnlocked and use the hash tag **#UnlockingFishFun**.

Or you can contact us via our website:

www.unlockingthesevern.co.uk