



Build a bridge over your river

Links to the Key Stage 2 and 3 Design and Technology National Curriculum

Bridges are a common sight on our river. Many of our towns and villages were built at crossings where people get get from one side of the river to another. Some of these may have started as fords where shallow water allowed people to cross the river on horses or by wading.

A bridge meant that people could cross the river even when it flooded in winter. As technology improved people could build stronger and bigger bridges. The oldest bridge on our river, at Kildwick, was built in 1313 for the monks of Bolton Abbey. It has lots of small stone arches or **spans**.

Pollards bridge in Horsforth is 200 years old and was built out of iron. This meant it could have one single span across the river. The newest bridge on the river is part of the Citu development in Leeds. It was lifted into place in one piece by a crane.

What you need

Your challenge is to build a bridge. Be creative and use what you can find in your house. Think about the **properties** of your materials and how best to use them to build a bridge.

Lego is heavy and can be laid together with strong bonds. Could you use it like stone to build many arches? Card is lighter and strong. Could you use it to make larger spans like the steel bridge at Citu?

Your challenge

Try to build a bridge. Decide on clear design criteria before you start. **Design criteria** are the precise goals that a project must achieve in order to be successful. It could be you want your bridge to cross a 50cm gap or support the weight of four toy cars.

Experiment with different shapes. Folding paper or card can make it into stronger shapes. Look at real life designs on the internet for inspiration.

Why not show us your designs on Facebook or Twitter @airerivertrust?

Find out more about how the Environment Agency is using engineering to help return Salmon to Skipton at www.airerivertrust.org.uk



To book a free Key Stage 2 River Defenders school session email contact@airerivertrust.org.uk

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