

Learning Objective

To develop criteria and design a prototype bridge for a purpose.



<i>Success Criteria</i>	<i>Self-Assessment</i>
<ul style="list-style-type: none"><i>Write design criteria according to a given brief.</i>	
<ul style="list-style-type: none"><i>Design a prototype model according to design criteria.</i>	

Choose 3 of the scenario cards below and design bridges that would suit the scenario. Make sure you draw the design and fully annotate it identifying materials used etc. If you have materials at home you may wish to make them.

<p>A farmer needs a bridge so his cattle can get over a ditch into the next field. It must be quite wide, so the cattle can cross quickly and as a herd. It must be built cheaply using natural materials that might be found on farm land.</p>	<p>A new road bridge is needed to cross a valley. The valley is very wide. Residents say that the bridge must be very beautiful so that it does not ruin the views.</p>	<p>A new railway bridge is needed to cross over a road. It does not need to be attractive, but it does need to be very strong and very flat to allow the heavy trains to cross easily.</p>
<p>A new bridge is needed for cyclists and pedestrians to cross a motorway safely. The bridge must be high so lorries can pass under it, but there isn't enough room on either side for long, straight ramps going up to a high deck.</p>	<p>The owner of a beautiful, old mansion needs a new bridge to go over the moat. It must have a flat, hard-wearing surface and be made of local stone so that it is in keeping with the design of the mansion.</p>	<p>A new footbridge is needed to cross a stream. It will connect two footpaths used by lots of people of all ages, so it must be safe, easy to cross and have something for pedestrians to hold on to.</p>