

DESIGN AND TECHNOLOGY

Bridges

Age 3-7



Get ready for your next field trip... under and over bridges!

▶ Learning Areas

- › Understanding the purpose of a bridge
- › Creating a freestanding structure

▶ Before Your Trip to see Bridges:

What is a bridge? What stories have bridges in them? Why do we need bridges? Get children to think about bridges over rivers like in the Billy Goats Gruff story. Ask them to discuss their own experiences of walking over bridges. What would have happened if the bridge wasn't there?

▶ Immersive Experience

Allow students time to explore the scenes on their own first, making sure that they are in a safe position. After a minute or so of independent exploration, turn the headset screens off using your teacher dashboard to bring students back into the room. Collect student ideas about points of note, then dive back in, making sure you draw attention to:

- › The shape of the bridges, including any supports
- › What the purpose of each bridge is

Bridges Collection

Look for these icons



Subject

Area of Study

DESIGN AND TECHNOLOGY

BRIDGES

English

Instructional texts

Geography

Landmarks

Physical Education

Gymnastics

Art

Design

Computing

Digital Literacy

After the ClassVR Session

What did you notice about the different shapes of bridges? What materials from the classroom could you use to create these shapes?

Follow-Up Activities

- › Use a range of different materials such as paper, card, cardboard, Lego to make a range of different bridges. Test these bridges by putting a small object in the middle to test whether it will stay standing. If it didn't, what could be changed to make the structure stronger? What type of supports could be added? Refer to the VR experiences to get ideas on how to make their structure more stable.
- › Use modeling clay to mold the shape of a bridge. Test the bridge by placing objects of increasing weight in the centre. How did they make the structure stronger? For more challenge, take some of their modeling clay away to encourage them to think more carefully about the structure of their bridge.
- › Design, make and evaluate a bridge that will allow them to cross a dangerous river. What materials will they need? How can they ensure that it's safe?

Links Across the Curriculum

ENGLISH – *Instructional Texts*

Use photos from your Design and Technology Project to create a set of instructions on how to make a bridge. Ensure that it includes a list of resources needed and numbered steps showing what to do. Imperative verbs should be used throughout with adverbs being added for more detail.

GEOGRAPHY – *Landmarks*

Ask students to guess where in the world these bridges might be, based on the surrounding area. Allow them to discuss how these bridges are useful in the context they are used. Why are some bridges considered landmarks? What is a landmark?

PHYSICAL EDUCATION – *Gymnastics*

Get students to use their body to form the shape of a bridge. Ask them to do this in three different ways. Once they have done this, get them to challenge themselves further by having only 3 points of contact with the floor. How can they use their knowledge of structures to create a stable base with their bodies? Is it easier to balance on one hand and two feet or two hands and one foot?

ART – *Design*

Ask students to draw the rough shape of each of the bridges that they see. Discuss which one is their favourite to look at and why. Tell students that they will design a bridge to a place of their choice. How can the design of the bridge reflect what they will find on the other side?

COMPUTING – *Digital Literacy*

Give students access to Google Earth and ask them to search for one of the bridges shown in the VR experience. First, have them zoom right in to street view and use their mouse to look at the surrounding area. Then, ask them to zoom out so that they can find out the city, country and finally continent the bridge can be found in.