

## Building bridges

### Learning aims

- Explore materials with different properties
- Look for patterns and relationships and be curious about how things work
- Collaborate with others to share and develop ideas
- Be confident to take risks and persist with challenges
- Develop vocabulary.



### Resources

- Books or photographs of a range of different bridges
- Magnifying glasses
- Building materials to construct a bridge.

#### Small scale example construction material could include:

- Lollipop sticks
- Card
- Glue, sellotape, string, stapler, paper clips etc.
- Lego
- Straws
- Foil
- Items chosen by the children.

#### Large scale example construction materials could include:

- Crates, tyres, cardboard boxes, wooden pallets
- Long pieces of wood
- Wooden blocks
- Cloth material
- Tubes
- String etc.
- Items chosen by the children.

## Activity Outline

1. As part of British Science Week, take part in a STEM (science, technology, engineering, and maths) activity with children. You can link the activity to their current interests or introduce a new experience to broaden their thinking. It's an opportunity to provide an exciting, science based and fun challenge
2. Prior to the activity, visit your local library to gather some books on bridges. There may be bridges in your local area that you can photograph to look at with the children. If you have a bridge close to your setting then you could take the children on a walk to visit the bridge. Try to include images of different types of bridges: arch bridge, truss, cantilever, suspension, cable stayed bridge etc.
3. Begin by asking children about their experiences with bridges. Do they all know what a bridge is? Have they crossed a bridge before? Is there a bridge near their home? Look at the books or images of bridges that you have gathered. Talk about the structures of the bridges - some have arches underneath, look at the different materials the bridges are made of, the pillars, the ropes or the cables that the bridge uses in its structure. Ask children to consider how the bridges hold the weight of the vehicles or people using the bridge
4. Encourage children to use the magnifying glasses to examine the images to see if they can see joints and how the bridges have been joined together
5. You can choose to do the bridge building activity on a small or large scale, or you can choose to do both. Talk to the children about building a bridge. You could introduce a context, story or props linked to children's interests. Decide with them who needs to cross the bridge
6. Encourage children to think about what materials they might need for their bridge idea and to look at all the resources available in and around the nursery to support their project. You might want to revisit the resources in your creative or design and technology area prior to the task
7. Talk to children about their ideas and support them to work together to solve problems, explaining to you and each other how they are solving problems
8. Take photos of the children's bridges and scribe a narrative of their creative ideas and problem solving.

## Extending the activity

Further explore different types of bridges, find the names and locations of bridges in your area and see what types of bridge they are.

## Special considerations

Follow your outings procedures/risk assessments for visits to local bridges.