The Ogden Trust

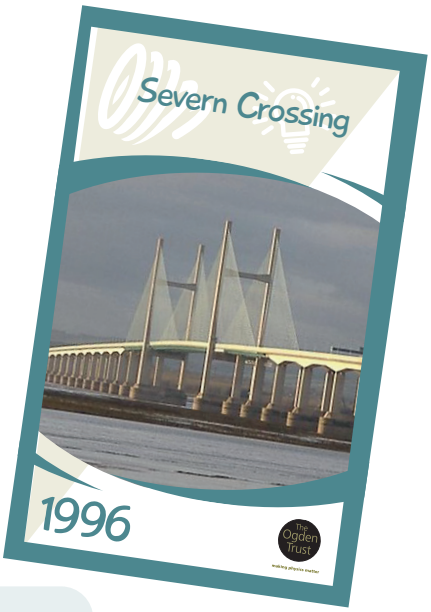
making physics matter

Scientific ideas over time

Age 5-7 years

Timeline card sort game - longest bridges

Introduction



A simple game for KS1 children who are learning about the strength of different materials and how the shape of materials can be changed by squashing, bending, twisting or stretching. In playing the game, children will develop a historical awareness of how our scientific understanding of forces and materials has changed over time to allow us to construct longer bridges. Children will also develop their mathematical skills in sequencing dates. The aim of the game is for the children to correctly sequence the cards chronologically and to get rid of all the cards in their hand. As they play the game, children should be encouraged to talk about what materials they think have been used to build each bridge.

Materials per pair/group

- One set of 24 laminated cards for each group of children.
  The cards are available to download from https://www.ogdentrust.com/resources
- A timer of some kind – egg timer or stopwatch.

Instructions

- The cards are shuffled in a pile, ensuring that the date side is downwards and hidden. The cards feature some of the most famous bridges in the world, some of which were considered to be the longest when they were first built. The cards are dealt so that each child has four cards which they place date side down on the table in front of them.
- The remaining card pile is placed date side down in the middle of the table. The top card is turned and placed in front of the pile revealing a bridge and the date it was built. The timeline will form around this card. (Earliest to most recent, left to right).
- Players take it in turns to place cards from their set of four in the timeline. Without revealing the date, they slide the card into the position they think it belongs.
- The card is then turned over. If it has been placed in the correct position the player has managed to get rid of a card from their hand. If it is in the wrong position, then the card is returned to the bottom of the pile and the player takes a new card.
- Play continues until a child manages to successfully place all of their cards in the timeline. Each go must be taken within an allocated time limit, we suggest one minute.

Taking it further

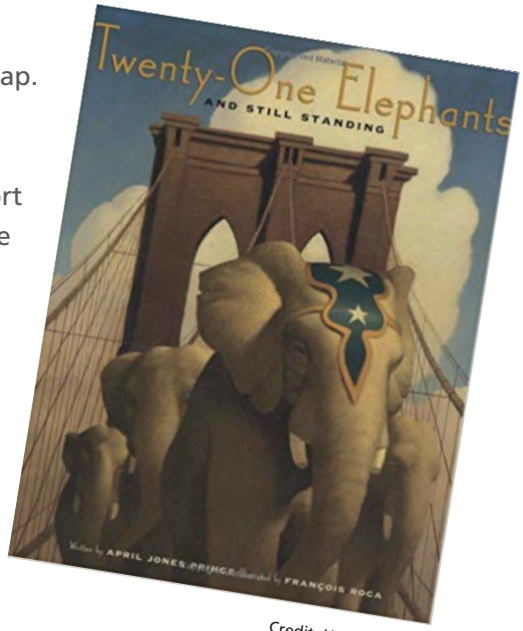
This resource can stimulate a wide range of cross-curricular learning opportunities that will support thematic learning in the classroom. Here are a few suggestions to get you started:

Science – children can investigate materials to explore which have the best properties for making a bridge. This is a great opportunity for children to begin to plan their own scientific tests and think about what they can measure to compare the materials.

Maths and science – the children can work as a class to explore patterns between the length of bridges and when they were built. They can construct block diagrams or pictograms to compare data from the cards and identify patterns and trends.

Geography – children can try to locate all of the bridges on a world map.

English and science – the book *Twenty-One Elephants and Still Standing* by April Jones Prince would be an excellent resource to support thematic learning at KS1. It is a stunning picture book that tells the true story of how Phineas T. Barnum (The Greatest Showman) reassured people that the newly built Brooklyn Bridge was safe to cross by sending over 21 of his elephants. A fabulous context for problem solving involving bridges as well as inspiring a variety of writing projects.



Credit: HMH Books 1