

How Do We Problem Solve?

Easter Workshop two of two
Inspired by *Hippo Campus: Where We Learn*

PDF Guide + PDF with examples + audio walkthrough

April 2020

NEWLYN
ART GALLERY
& THE
EXCHANGE

How do we problem solve?

How do engineering and creative thinking come together? Inspired by themes from [Hippo Campus: Where We Learn](#), we will explore the ways we learn from experience by building physical structures from flat objects, exploring the differences between 2D and 3D thinking.

The exhibition takes its title from Bedwyr Williams' piece of the same name; Hippocampus being the part of the brain that enables memory and learning.

Take a look at our interactive [mind map](#) for the exhibition

Hippo Campus: Where We Learn is an Arts Council Collection National Partners Programme Exhibition. A group exhibition featuring works from the Arts Council Collection that explores alternative schooling, peer-to-peer learning and self-education.

For this workshop, you can work on your own, in pairs or groups.
Anyone can join in, including parents and family. It is entirely up to you.

You will need:

- sheets of paper (any size and colour)
- tape / glue stick

Ask an adult at home which room would be the best to work in as you will need some floor space and don't want to disturb other people in your house!

You can listen to the audio, where I talk you through each exercise.
There are two main exercises and two extensions with no time limit.

Have you ever had to really think about how to make something?
For example - what makes something strong? Is it the shape or the material? Does adding wet glue to paper make it weaker?

Exercise One:

We are going to make a tower out of paper and tape / glue only.
Try to make the tower as tall as you!

- You are only allowed to use paper and tape or a glue stick
- You are encouraged to make a base to support your tower

The challenge will be really thinking about the different ways that we can make the paper strong to build upwards. Discuss in groups or with an adult if you like. Take your time when constructing your tower and if something doesn't work, think about why it didn't and how you can get around that problem.

If you would like some inspiration, here are some great examples of [towers around the world](#).

If you need some help take a look at the other PDF which shows some examples. To make it a challenge, only look if you have to!

Done? When you've made your tower, you can also:

- Create a story behind it. Is it a skyscraper in a big city? Does Rapunzel live there?
- Measure it. Is it taller than you? Is it taller than anyone else in your family?

Exercise Two:

We are going to make a bridge out of paper and tape / glue only!
How big can you make it?

- You are only allowed to use paper and tape or a glue stick
- You are encouraged to make bases to support the bridge

The challenge will be really thinking about the different ways that we can support the bridge and add strength to the paper so it doesn't collapse! Discuss in groups or with an adult if you like. Take your time and if something doesn't work, think about why it didn't and how you can get around that problem.

If you would like some inspiration, here are some great examples of [bridges around the world](#).

If you need some help take a look at the other PDF which shows some examples. To make it a challenge, only look if you have to!

Done? When you've made your bridge, you can also:

- Create a story behind it. What kind of bridge is it? Where does it go to and from? What does it go over?
- How strong is it? What can you balance on it?
- Can you add buildings on your bridge?

Extension One:

Create a landscape, town or city around your tower and bridge.

For this you may want to use things from your recycling bin at home, such as toilet roll tubes, empty bottles, etc. (remember to ask an adult to help you with this). If you would prefer to stick to using paper, that is also fine.

You may want to start by mapping out your landscape, town or city on pieces of paper taped together and laid out on the floor. Think about where rivers, streets, fields might go. You can then add other buildings around this.

If you would like some inspiration, here are some great examples of [photos of cities](#) around the world.

Extension Two:

Add characters, animals and stories to your landscape, town or city.

You could make some animals or people, or use toys you already have to interact with your creations. There are no rules - let your imagination run wild and have fun with this!

You can also create a play with your new landscape, town or city, that you can perform. Get everyone to take part if they would like!

If you'd like to take a picture of the works you've made for us to share, please email them to: catie.close@newlynartgallery.co.uk.

If you are an adult and are on social media, feel free to share the work and tag us: [@newlynexchange](#) on Twitter on Instagram.

We would love to see what you've made and hope you've enjoyed these exercises!