**Year 5 Design Technology Home Learning Project**

**Structure: Build a bridge that opens and closes**

Your task is to plan, design and make a bridge that open and closes. The bridge will need to be strong enough and you can test this using a toy car or a small, heavy object. Look at the website below for some inspiration.

[**https://www.designboom.com/technology/10-amazing-movable-bridges-around-the-world-07-14-2017/**](https://www.designboom.com/technology/10-amazing-movable-bridges-around-the-world-07-14-2017/)

You can make the bridge using items you have in your home. Take a look at the videos below which have used spaghetti and lollypop sticks. You might be able to think about lots of other items that you can you easily find and that may have important qualities for a structure such as a bridge.

[**https://www.youtube.com/watch?v=rTdQL2KeTn0**](https://www.youtube.com/watch?v=rTdQL2KeTn0)

[**https://www.youtube.com/watch?v=b9niGbPGqs8**](https://www.youtube.com/watch?v=b9niGbPGqs8)

**Learning outcomes of the project .**

Research existing bridges

 Design products fit for a purpose

Use a wide range of tools to join and cut

Use a wide range of materials

Reflect on your work

**Plan .**

Think about the equipment you will need:

which items will you need?

How many items will you need?

What will your bridge look like?

Which parts will it use to balance?

What can you use to support your bridge in standing up?

Where can you attach this?

What will you use to make the support?

Research 4 main types of bridges: beam, arch, cantilever and suspension.

**Design**  .

What will you need the bridge to do in order to be successful?
How will your bridge look?

Think about:
- Size
- Front and back view
- How it will stand up
- Colours and design
- Materials: which material will be best to use to make your bridge strong?

**Make .**

Using the items and equipment in your plan, put your plan and design together.

 Be careful when using scissors and other sharp objects!

Take lots of photographs of this step to document the stages of the build.

**Evaluate .**

Is there anything that you need to change?

Could you have made the bridge a different way?

Is there anything that can be improved?

If you were to make it again, what changes would be made?