

Aim

- I can use a wider range of tools and equipment to perform practical tasks accurately.

Success Criteria

- I can explain different techniques used to join card to other materials.
- I can apply these methods when making a marble run bridge.
- I can select appropriate tools and equipment to help me create an accurate and precise finish.
- I can evaluate the different joining methods thinking about strength, functionality and aesthetics.

The Journey of the Marble

What makes a good marble run?

A good marble run allows the marble to travel slowly from the top to the bottom of the run. When making a marble run, designers try to make the journey as long as possible.



The Journey of the Marble



This marble run includes a 'bridge' between 2 towers.

Where do you think the marble starts?

Where will it end up?

In which part of the run does the marble travel the quickest?

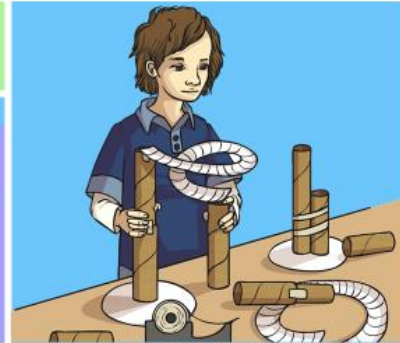
Where in the run is it travelling slowest?

The Journey of the Marble

Your task today: design your own marble run!

It needs to include:

- 2 vertical towers
- 1 bridge that joins the 2 towers
- Joins that are strong, tidy and allow the marble to run



Joining



A small, thin half tub catches the marble and directs it down the bridge.



The ends of the cardboard tube are shaped and small cuts are made to help the tube to fan out and accurately fit the other tube.

Joining



Making Bridges

Apply the techniques that have been demonstrated to help you make your own marble run bridge.

Remember to select the best tools and equipment for the job.



Making Bridges

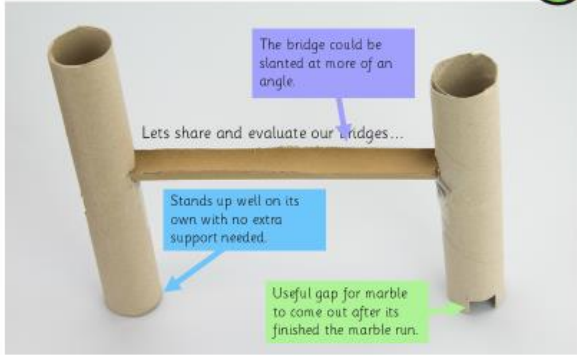


Craft knives are a useful tool to help cut paper or card very accurately.

Health and Safety

Craft knives are extremely sharp and should only be used under close supervision of an adult. Always use a metal ruler and a cutting board when cutting when using a craft knife. Keep your hand far away from the blade. Remember to place the cover back on the knife after you have used it.

Evaluating the Bridges



Evaluating the Joining Techniques



Joining Evaluation

Draw a picture of the most effective joining method you want.

Describe the method (think about strength, functionality and aesthetics).

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