







Use this pack alongside our **MAD Museum Activity Pack: Ages 8 to 11** to enhance your pupils' learning experience **during** and **after** your visit to **The MAD Museum**.

Together, both packs cover **maths, science, design and technology**, and **art and design** with ideas on how to bring these subjects to life in the classroom.

DURING YOUR VISIT


-  Complete our **MAD Picture Quiz**, which encourages children to thoroughly investigate our exhibits and makes sure they're fully engaged with everything they see.
-  As part of completing our **Feel the Force** sheet, ask your pupils to split into teams and build their own marble runs using our **giant marble run wall**. Encourage them to get hands on so they can answer the questions on the sheet.
-  Complete our **Marble Run Fun** sheet, which combines learning about forces with angles. You could use the second set of questions on this sheet to inspire an experiment back in the classroom. **Using protractors to measure your angles, create simple marble run slopes from cardboard or card**. Which angle helps your marble to roll the furthest? Try a variety of obtuse angles from 91° to 179° . Try out different angles on the marble run wall at The MAD Museum first.
-  Complete our **Get in Gear** worksheet – can you get your brain cogs whirring?
-  Ask your pupils to draw their favourite machine at the museum. Later, they can write about why they liked it.

AFTER YOUR VISIT

 You've seen **gravity** and **air resistance** in action at The MAD Museum – now explore it further in the classroom. Test how quickly a series of different objects fall to the floor. Here are some items you could use:

- A marble
- A feather or a lightweight sheet of paper
- A tennis ball
- A sheet of paper scrunched up into a ball of the same size
- A toy soldier with a parachute


Count in seconds how long they take to reach the floor and use our **3D Shape Challenge** bar chart sheet from our **Before** pack to record which object moves the fastest. Discuss **why** it moves the fastest.

 Test your pupils' understanding of moving toys and the cam mechanism using page 1 of our **Make a Moving Toy** sheet. In it, they can draw their favourite toy from The MAD Museum and also label a basic automaton (moving toy).

 Move on to making a moving toy. Children can use the designs on page 2 of our **Make a Moving Toy** sheet for inspiration or they can use them on their own toys.

AFTER YOUR VISIT CONTINUED...

 To extend the art and design element of this project, ask your pupils to imagine their toys are going on sale at The MAD Museum. **Can they design colourful logos for their toy? Can they design packaging too?**

 Finally, there's a **Heath Robinson** poster in The MAD Museum. William Heath Robinson was a British artist famous for his funny drawings of gadgets and contraptions. You can find many of his illustrated inventions on Google Images – show your pupils for fun and inspiration. Also look at the drawings of American cartoonist **Rube Goldberg**, who did similar zany creations to Heath Robinson.

<http://heathrobinson.org/index.htm>

<https://www.rubegoldberg.com>

