

THE MAD MUSEUM

SECONDARY EDUCATION

CHILDREN AGED 11-16 YRS

INFORMATION PACK FOR EDUCATORS | JUNE 2023



CONTACT US

THE MAD MUSEUM
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IN THIS PACK

The MAD Museum

Henley Street, Stratford upon Avon, Warwickshire.
CV37 6PT

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Website: www.themadmuseum.co.uk

THE MAD MUSEUM

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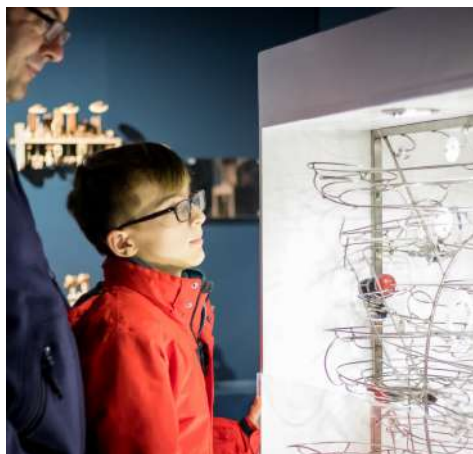
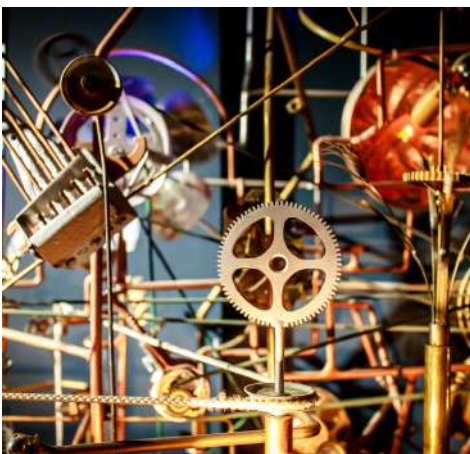
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THE MAD MUSEUM



ART . DESIGN . PHYSICS . ENGINEERING . MATHS
MARVEL, INTERACT & EXPLORE AT THE UK'S ONLY MECHANICAL ART VENUE

GENERAL INFORMATION

WHAT IS THE MAD MUSEUM?

The Mechanical Art & Design Museum, or 'MAD Museum' for short, first opened in 2012 and is the UK's only permanent venue for mechanical art.

There are around 70 pieces of mechanical art on display, specifically called Kinetic Art and Automata. Think Heath Robinson mixed with Wallace and Gromit and Scrapheap Challenge. These hands-on exhibits all display creative inventiveness, clever design and physics principles.

LOCATION

The MAD Museum, Henley Street, Stratford upon Avon, CV37 6PT

OPENING TIMES

Last entry 45mins before closing time

April - September

Weekdays 10:00am - 5:00pm

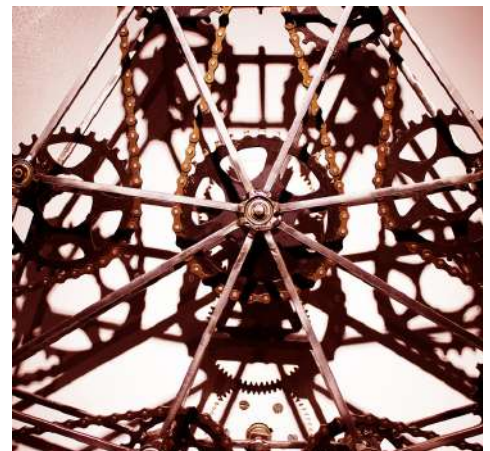
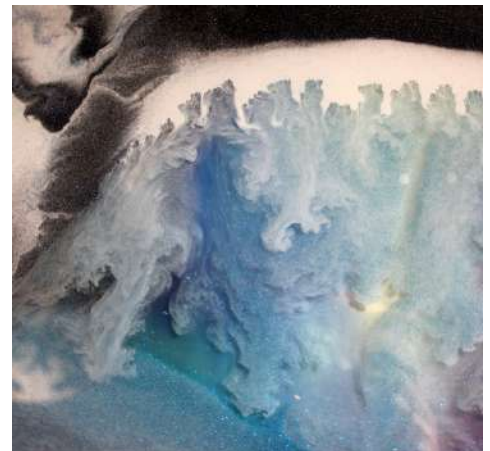
Weekends/ Holidays 10:00am - 5:30pm

October - March

Weekdays 10:30am - 4:30pm

Weekends/ Holidays 10:00am - 5:30pm

PRICES & TIMES



ART . DESIGN . PHYSICS . ENGINEERING . MATHS
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DISCOUNTED GROUP PRICES

Offered to groups of more than 10 learners.

Learners aged 11-16yrs (Year 7-11)

£5.50 per head

Supervising Adults/ Teachers

1 free per 10 learners

Extra Adult- £6.50 per head

This price gives you:

- Entry into The MAD Museum.
- A brief introduction to The MAD Museum.
- Support from knowledgeable staff members.
- Free recce visit for 2 teachers.
- KS3/ KS4 National Curriculum areas covered.
- A pre-completed risk assessment form.
- Electronic KS3 activity packs.
- Discounted automata kits and marble kits.
- Free teacher resources.
- Drawing and camera sessions.



FREE RECCE TRIPS

Once you have booked a group visit to The MAD Museum, you are eligible for free tickets. Come and visit our museum prior to your group trip for a 'planning visit', please let us know and we will post you 2 complimentary tickets.



TIMES TO VISIT

*Warwickshire term time only.

April - September

10:00am - 5:00pm

October - March

10:30am - 4:30pm



Groups usually take up to an hour to experience The MAD Museum.

All group visits must be pre-arranged. We only accept educational groups during weekdays in *Warwickshire term times and within museum opening hours.

The listed group discount rates, available times and additional services (e.g. activity packs) are not available during weekends, holiday periods, teacher training days or bank holidays.

* sometimes we extend our holiday times, please talk to a member of staff or check the website for more details.

JOINT TICKETS

VISIT BOTH THE MAD MUSEUM AND...



**SHAKESPEARE'S
SCHOOLROOM &
GUILDHALL**

OR

**STRATFORD UPON
AVON'S BUTTERFLY
FARM**





SHAKESPEARE'S SCHOOLROOM & GUILDHALL



STRATFORD UPON AVON'S BUTTERFLY FARM

Entry into The MAD Museum and Shakespeare's Schoolroom & Guildhall -

Learners aged 11-16yrs
£12.50 per learner

Supervising adults
1 free per 10 learners
£17.00 for additional adults

Entry into The MAD Museum and Stratford upon Avon's Butterfly Farm -

Learners aged 11-16yrs
£11.85 per learner

Supervising adults
1 free per 10 learners
£12.80 for additional adults

Offered to groups of 10 learners +

A trip to Shakespeare's Schoolroom & Guildhall includes:

- Information provided by our informative guides
- Short Film by Michael Wood on the history of the Guildhall, which he calls "one of the most magical and important buildings in Britain"
- Lesson with a Tudor Schoolmaster
- Quill writing
- Dressing up in Tudor Master clothing
- Interpretation of medieval wall paintings, the Court of Record & Stratford's Guildhall.

LOCATION: Church St, Stratford-upon-Avon, Warwickshire CV37 6HB

OPENING TIMES: 11:00am - 5:00pm

DISTANCE BETWEEN BOTH VENUES:
4-minute walk, 0.2 miles

A trip to Stratford upon Avon's Butterfly Farm includes:

- An introduction to SBF in the Education Area
- Lockers for coats, bags and packed lunch storage
- Tour guide with expert knowledge
- Meet the Mini-Beast handling session
- Access to the wildflower garden

LOCATION: Swan's Nest Lane, Stratford upon Avon, Warwickshire CV37 7LS

OPENING TIMES: Apr-Sep 10:00am - 6:00pm, Nov- Feb 10:00am -5:00pm, Mar - Oct 10:00 - 5:30pm

DISTANCE BETWEEN BOTH VENUES:
8-minute walk, 0.4 miles

ADDITIONAL SERVICES



ART . DESIGN . PHYSICS . ENGINEERING . MATHS
MARVEL, INTERACT & EXPLORE AT THE UK'S ONLY MECHANICAL ART VENUE

Before

Engage your pupils in the exciting world of mechanical art and design before your visit to The MAD Museum. Over the next two pages, we've got lot of ideas to help you bring physics, design and technology, and elements of art and design, to life in your classroom.

BEFORE YOUR VISIT

- At The MAD Museum, you'll have many opportunities to see **energy, forces and motion** in action. Show your pupils this creative video from the band OK Go. Discuss the simple mechanisms and forces on show: <https://www.youtube.com/watch?v=qybuF-r17Y8w>
- Discuss **kinetic energy** (the energy an object has because of its motion) and how it relates to **kinetic art** (art that moves). Kinetic art moves as a result of **force** – it can be triggered by a human blown by the wind or powered by a motor, for example.
- Look at these different types of kinetic art and explore the **forces** that power them:
 - **Chris Burden's Metropolis II** – a motorised toy car sculpture: <https://www.youtube.com/watch?v=ilacDon5yE>
 - **A kinetic lego sculpture by JK Brickworks**, which can be motorised or operated with a crank: <https://www.youtube.com/watch?v=piKHT1qnl8pw>
 - **Alexander Calder's Rouge Triumphant** – a wind-powered mobile: <https://www.youtube.com/watch?v=UyfgQb85grE>
 - **Anthony Howe's** wind-powered kinetic metal sculptures: <https://www.howearth.net>



During

Use this pack alongside our **MAD Museum Activity Pack: KS3, Marvellous Minds** to enhance your pupils' learning experience **during** and **after** your visit to **The MAD Museum**

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

DURING YOUR VISIT

- Make sure each pupil has a copy of pages 1 to 6 of our **MAD Museum Activity Pack: KS3, Marvellous Minds**. It's packed with questions about our exhibits to encourage your class to get up close to our creations, and to fully explore and understand how they work.
- Ask your pupils to find examples of energy transfer in The MAD Museum other than the one in our LED Panel. Set them a challenge to find examples of:

- Sound energy
- Kinetic energy
- Potential energy



After

AFTER YOUR VISIT

Test your pupils' understanding of what they have learnt about forces and motion with a quick quiz. You could complete this quiz on the journey back to school. (Answers on the left.)

- Which force always acts in the **opposite direction to the motion of an object**?
- Gravity is a non-contact force – **true or false**?
- Are the forces on a stationary object **balanced** or **unbalanced**?
- Which type of friction acts on parachutes to slow them down?
- Can you think of three ways to reduce friction?
- A force is a push or a _____?
- Force don't just change the speed of an object, they can also change its form – **true or false**?
- Forces are measured in...?
- Does air resistance on an object **increase** or **decrease** as its speed increases?
- When two or more forces are acting on an object, it is known as **r_____ force**.

QUICK QUIZ ANSWERS

1. Friction
2. True
3. Balanced
4. Air resistance
5. By using lubricant or a smoother surface, such as ice, or by streamlining the object in motion
6. Pull. It can also be a twist or turn
7. True
8. Newtons
9. Increase
10. Resultant force

- A roller coaster ride experiences the same energy and forces as a rolling ball machine. Ask your pupils to complete our **Engineer a Roller Coaster** challenge, completing all the questions on the sheet as part of the task. As part of the project, they will need to draw the roller coaster, describe it and understand the forces at play. As a further option, they can also design a poster to advertise it.
- Introduce the project with a BBC KS3 video on designing a safe roller coaster: <https://www.bbc.co.uk/education/topics/zfh8q6f>



TEACHERS RESOURCES

Resources which provide Key Stage 3 and Key Stage 4 teachers with additional engaging lesson ideas, tips, interesting facts and resources.

These packs will help you make the most of your visit to The MAD Museum and support the curriculum for Maths, Science, Design Technology, Art and Design.

There is a **Before your visit** section, **During your visit** section and an **After your visit** section.

The Teachers resources work alongside the Activity packs (information on the next page about these packs).

Teachers Resources Free!

Once your booking is finalised, we will email you an electronic version of the relevant Teachers resource packs.

“ The teachers packs really helped to support not only the trip and my class, but me as well! Lesson planning made easier – thank you! ”

Jack Green from Park Hill Junior School

LEARNERS ACTIVITY PACK

Activity packs for learners to do while in the museum and after their visit.

Forces

Forces can cause objects to change shape, change direction and change speed. Forces can make stationary objects move by turning or twisting them, speeding them up or slowing them down, or changing direction. Gravity and friction are examples of forces that constantly affect objects.

Barbara Simmons - Kitchenator
Watch the balls move up the lift mechanism. Which 2 of the following forces are causing the balls to move upwards?
(a) Electrical force
(b) Tension force
(c) Spring Force
(d) Applied Force

Sir Isaac Newton - English physicist and mathematician, most famous for his law of gravitation, was instrumental in the scientific revolution of the 17th century.

Newton's Laws of Motion:
1. An object's speed will only change if a force is applied.
2. Speed or acceleration is proportional to the force.
3. Every action has an equal and opposite reaction.

Robert Moore - Rolling Ball Machine
Find an area of the machine where the balls slow down. Aside from friction, name a type of force that could be responsible.

The ball is travelling at a constant speed of 4 cm/s. Which one of the following statements is false?
a) 300 m/s

Energy

Energy is the ability to do work and make all movements. Energy can be transferred from one place to another in many different forms.

Bryan Parkes - The Eye
Circle what type of energy activates the eye?
Kinetic Energy Sound Energy Motion Energy Thermal Energy

Name 3 different types of energy.
Fill in the missing letters and then match the words up with the images.
P O T N I A energy
K N T I energy
L I T energy

LED Panel
Which is the type of energy transfer that is occurring?
a) Light energy → electrical energy
b) Electrical energy → Kinetic energy
c) Electrical energy → Light energy

Which two of the following are the most energy efficient?
a) Low-energy bulb
b) Tungsten filament light bulb
c) Candle

The light emitting from the panels reaches you at a speed of...
a) 300 m/s

Engineer your own Roller Coaster

Using inspiration from the rolling ball machines around The MAD Museum, design your own roller coaster...

Important things to think about when designing:

- Forces and friction
- Air resistance
- Materials
- Movement

Essentially a roller coaster is being pushed off a hill. Remember acceleration is key. Newton's law of motion states you can't have acceleration without a force.

What is the name of your ride?
.....

What is its thrill factor? = very tame $5x$ extreme!
.....

You can get all sorts of roller coasters - water rides, tunnels, big drops, loops and hoops. What kind of a roller coaster do you plan on designing?
.....

Explain how your roller coaster will start moving and climb to its highest point?
.....

During

WE PRINT
50p each

YOU PRINT
Free

Engaging KS3 and KS4 packs for learners to complete during and after their visit to The MAD Museum. These packs consist of find-and-answer exhibit questions, a quiz, design challenges and drawing activities.

Either we can print and supply the packs on the day of your visit for 50p per pack OR we email you the electronic version for you to print and bring on the day of your visit, this is a free service. For both, we will provide clipboard and pencils for each learner.

“

These were a brilliant addition to the visit. It kept the students quiet and engaged for ages.

”

Simon Benson, Year 8 Teacher





Make the most of your time in The MAD Museum with these suggested FREE activities.

DRAWING SESSIONS

The MAD Museum is packed full of creativeness and design ingenuity. From a design perspective, the exhibits themselves consist of different textures, colours, materials and complex designs. This is a great place to try out different ideas.

Please bring your own sketching utilities.
No charcoal or paints.

COST: free but please give us prior warning so we can make arrangements.

CAMERA SESSIONS

As the only permanent mechanical museum in the United Kingdom you'll be sure to get some truly unique shots.

Experiment with unusual compositions, lighting effects, contrasting colours and motion.

Bring your own camera, you are very welcome to bring additional accessories such as lighting and tripods.

COST: free but please give us prior warning so we can make arrangements.



“
**INSPIRED AT
MAD THEN
PROVIDED
WITH AN
ACTIVITY
TO DO
BACK
IN THE
CLASSROOM
-PERFECT!**
”

Jonathan Knuckle, Portsmouth Academy



LOWER SECONDARY: TAKE AWAY CAM AUTOMATA AND LINKAGES KITS

FOR BACK IN THE CLASSROOM



1 Cam Automata Kit with Support Materials - £4.00

1 Linkages Kit with Support Materials - £4.00

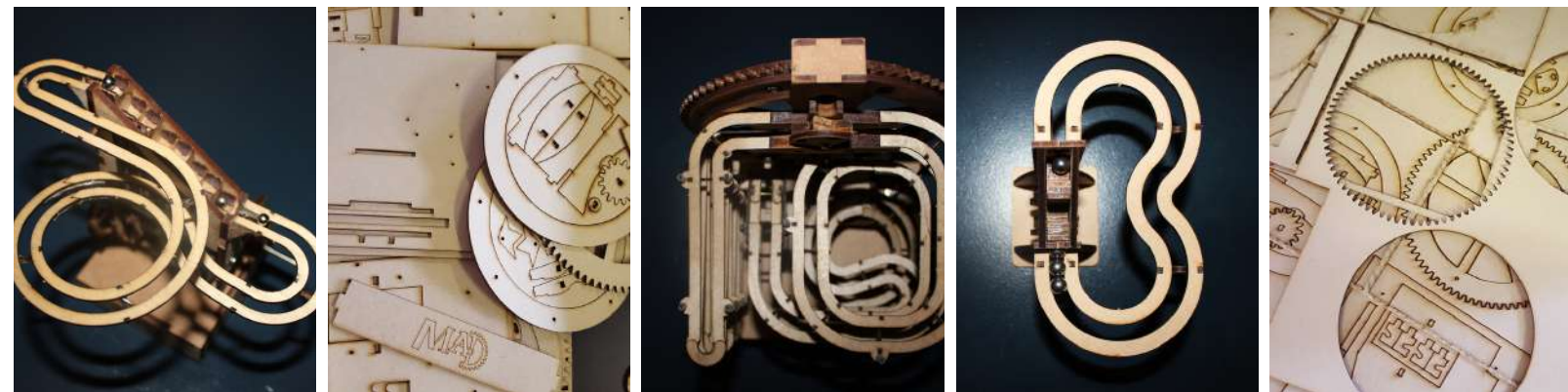
You can either collect the kits from The MAD Museum or we can post the kits via Royal Mail (approx. £10) to your doorstep. Pre-booking is essential.

Teach your class about cogs, cams, wheels and movement with this classroom activity. Both our Cam Automata and Linkages kits help learners to explore the science of movement.

We recommend a museum visit to support this activity but it's not essential.

Each pupil is given the wooden parts to construct a moving model. Comprehensive instructions are included.

What you get	Wooden Kits (decorative 'toppers' not included)
Duration	45mins - 1 hour
Subject focus	Design Technology, Engineering and Art
Appropriate for	5yrs +
No. of kits available	No limit
Support material	Instructions and teachers lesson plan. A video for teachers detailing how to make the kits. Teachers and Pupils worksheet.



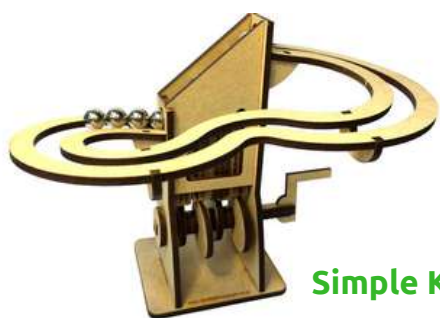
UPPER SECONDARY: TAKE AWAY AUTOMATA MARBLE KITS

MADE BY THE MAD MUSEUM

After your group visit, take away automata kits to make and keep. These are sold in our gift shop but as part of a group booking, we can offer you a discount on these kits.

There are 4 different types to choose from;

KIT NAME	YOUR DISCOUNTED RATE	REDUCED FROM
Simple Kit	£6.00 per	£7.99 per
Marble Machine 1 Hand Cranked	£12.00 per	£14.99 per
Marble Machine 1 Motorised	£15.00 per	£19.99 per
Marble Machine 2	£30.00 per	£40.00 per



Simple Kit

We will email you the instructions for the kits you purchase. These instructions are easy to follow for 11yrs +. Construction takes around 2hours, there is no minimum or maximum number of kits you can order but pre-booking is required. We recommend a museum visit to support this activity but it's not essential.



Marble Machine 1
Hand Cranked

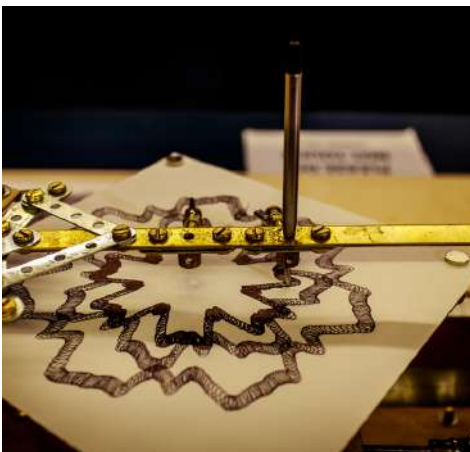
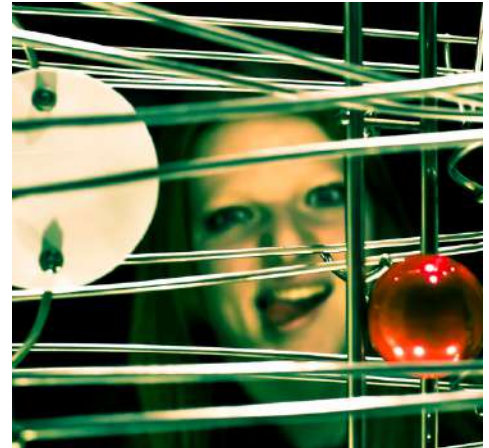


Marble Machine 1
Motorised



Marble Machine 2

BOOKING TRIPS



ART . DESIGN . PHYSICS . ENGINEERING . MATHS
MARVEL, INTERACT & EXPLORE AT THE UK'S ONLY MECHANICAL ART VENUE

BOOKING TRIPS

Please get in touch to book your trip:

Email: bookings@themadmuseum.co.uk

Tel: +44 (0)1926 865 839

When making a booking please have the following information to hand:

- Name of School/ Academy
- Location
- Name of organiser
- Email
- Date and Time you would like to visit
- Number and Age of Learners
- Whether you would like one of our Joint Tickets, if so, clarify which
- Number of Supervising Adults
- Whether you would like any of the additional services we offer

PRICING SUMMARY

ADMISSION: LEARNERS

The MAD Museum	£5.50 per head
The MAD Museum + Shakespeare's Schoolroom & Guildhall	£12.50 per head
The MAD Museum + The Butterfly Farm	£11.85 per head

ADMISSION: SUPERVISING ADULTS/ TEACHERS

In all three venues	1 free per 10 learners
Additional adults at The MAD Museum	£6.50 per head
Additional adults at The MAD Museum + Shakespeare's Schoolroom & Guildhall	£17.00 (1 free adult per 10 learners)
Additional adults at The MAD Museum + The Butterfly Farm	£12.80 (1 free adult per 10 learners)

ADDITIONAL SERVICES

Teachers resources - before, during & after packs	Free - electronic
Activity packs	£0.50p per pack or free
Drawing sessions	Free
Camera sessions	Free
Automata Cam Kits and Linkages Kits	£4.00 per kit (free collection or standard Royal Mail postage)
Marble Machine Kits	Range from £6.00 - £30.00 per kit

HELPFUL INFORMATION



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FREQUENTLY ASKED QUESTIONS

How long do visits to the museum usually take?

Trips usually last up to 1 hour.

Can you take photos and is filming allowed?

Yes, you can take as many photos and videos as you wish.

Do you have toilet facilities and baby changing facilities?

The museum does have toilets. We also have baby changing facilities in the museum's disabled toilet.

Is there somewhere to leave coats and bags?

When your group arrives, we will store away everyone's coats and bags. Teachers are welcome to put their belongings in our locked kitchen.

Do you have wheelchair access?

We have wheelchair access throughout the museum. Find out more on page 20.

Does The MAD Museum cater for special needs?

Our members of staff are experienced in caring for a broad spectrum of abilities. Find out more on page 19.

Can we eat in the museum?

I'm afraid no food or drink is permitted in the museum. We don't have any in-house facilities but the museum is based right in the heart of the town, so there are plenty of places to eat and drink close by. Weather permitting(!), it's a 5-minute walk from The MAD Museum to a nice picnic area next to the River Avon and the Royal Shakespeare Company.



SPECIAL EDUCATIONAL NEEDS

The MAD Museum is multi-sensory and hands-on. We encourage our visitors to press buttons and interact with tactile objects. Within this venue are a wide variety of sounds, lights, movements and colours on display. These all work together to provide an exciting, multi-sensory experience.

The museum also helps with the development of social communication, cognitive skills and visual memory.

We installed MAD Marbles, which is essentially a giant wall on which we ask people to construct their own marble runs using inspiration from around the museum. This activity encourages the exploration of personal creativity, teamwork and understanding through what is principally a rather fun, tactile game.

This independent museum is relatively small meaning those with emotional and behavioural difficulties have the space to move around the museum freely while also never being out of sight.

Our members of staff are experienced in caring across a broad spectrum of abilities and learning needs. We want you to have the best possible experience so please let us know how we can help.

With regards to pre-planned group visits, we can tailor their experience at The MAD Museum to their particular needs. Planning visits, resources and risk assessment documentation is available on request.



ACCESSIBILITY

Location

The museum is located on the first floor, above Lakeland and between Toni & Guy and The Cornish Bakery on Henley Street. It is based on the opposite end of Henley Street from Shakespeare's Birthplace and Windsor Street Car Park and Coach Drop off.

Wheelchair Access

Please refer to following accessibility sections for further information. To summarise, there is wheelchair access throughout this attraction. We have lift facilities at the museum's entrance, disabled toilets and extra reading material if required. There are no restrictions with regards to interacting with the exhibits. All assistance dogs are welcome.

Accessibility at The Museum's Entrance

The MAD Museum's entrance is well lit and there are no steps in this area. Visitors can either use the staircase or utilize the lift to access the museum.

The lift can be found at the far wall of the museum's entrance (white lift door with a silver, pull handle). The lift carries one wheelchair user/ push chair at a time. There is a clear audio announcement in the lift and the buttons are labelled with braille text. The lift will bring the user out into the museum's shop and reception area.

Accessibility in the Museum

Visitors enter the museum on the left of the reception desk and exit through the gate on the right (facing the desk). The museum is situated entirely on one floor; no ramps or steps are present in the museum. Everyone can move through the museum at their own pace and spend as long as they wish in any particular area.

Environment

There is a good contrast between the floor (light grey) and walls (navy blue) in the museum. Clear surfaces such as glass and plastic casing have contrasting markings on them. Clear signage (colour contrasted, large lettering and pictograms) are used throughout the attraction. No natural light is present, spot lights illuminate everything throughout the museum. There are several seats dotted around the museum at appropriate intervals and the museum's cinema room also has seating.

Guide dogs and pets

We welcome guide dogs but pets and other animals are not permitted in The MAD Museum.

PARKING FOR COACHES

WINDSOR STREET COACH DROP-OFF CV37 6NL

This is the closest coach terminal to The MAD Museum. The terminal is provided to drop off visits and return later to pick them up.

Distance to MAD: 2-minute walk

Directions to MAD: From the Coach Terminal, cross the road onto Henley Street. Walk down this pedestrian road (pass Shakespeare's Birthplace on your left). Towards the end of the road, on the left, you will find The MAD Museum located between The Cornish Bakery and Toni & Guy.

THE RIVERSIDE COACH & CAR PARK At the Leisure Centre. CV37 6YY

Distance to MAD: 10-minute walk

Directions to MAD: From the Riverside Coach Park, turn left and walk towards the river down Bridgeway. Slight right to Bridgefoot then onto Bridge Street (this is the town's high street). Keep walking up Bridge Street, at the roundabout cross over onto the pedestrian street called Henley Street. The MAD Museum is a few doors down on the right, between The Cornish Bakery and Toni & Guy.

DISABLED PARKING

Please contact The MAD Museum on 01789 269356 for disabled parking options.



LINKS TO OUR MOST UP-TO- DATE INFORMATION

Safety is of paramount importance to us. We re-assess our risk assessment form every month.

To download the latest version, please click on the link below or alternatively, we can email or post the form to you.

[RISK ASSESSMENT FORM](#)

View our current Group Booking T&Cs here...

[**GROUP BOOKING TERMS & CONDITIONS**](#)

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