Tameside Cultural Services

REACHING OUT

We want to reach out!

As schools return, we look to support each school's efforts to get involved with the rich tapestry of culture and creativity within the borough. Tameside Cultural Services have been looking at how we can best use our years of experience and resources to support schools. We will link in with the Philosophy for Children, as well as the National Curriculum, the schools' recovery curriculum and the Five Ways to Wellbeing: Connect, Be Active, Take Notice, Keep Learning and Give.

Each month, we will share information relating to our education offer as well as giving further ideas and ways to engage with our offer in your classroom. There will be activities from each of the Cultural Services teams and we will take the opportunity to highlight one of our site based workshops as when we are able to, we cannot wait to welcome you back to our sites and great outdoors.

INDUSTRIAL TAMESIIDE

Less than 200 years ago the Industrial Revolution changed every aspect of daily life for the people of Tameside.

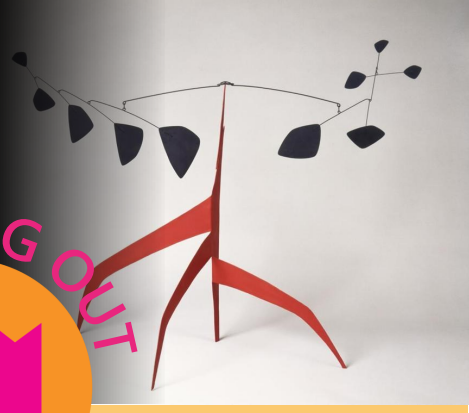
Focussing on the timeline of change, participants will learn how the cotton industry, coal industry and local canals played a part in making Tameside Industry thrive. How did Denton become one of the most important towns in the UK with regards to the hatting industry?

culture Tameside

Tameside Metropolitan Borough

Tameside Cultural Services

KINETIC BALANCE SCULPTURE



REACHING OUT

Being inspired by what all the marvellous Victorians did during the Industrial Revolution with amazing inventions and so many new things that moved and powered our world it is time for you to make your own balancing kinetic sculpture.

Looking at the work of the famous artist Alexander Calder lets get creative!

Portland Basin Museum's collection can expand, inspire and stimulate a child's learning and also tie directly with local heritage and your curriculum. This activity will get pupils thinking about science, how things move and balance. They will also share their creative resources.

What is a Kinetic Sculpture:
A 3 dimensional artwork that moves.

National Curriculum links

Art and design programmes of study

Key stage 1 Pupils should be taught:

to use a range of materials creatively to design and make products.

to use drawing, painting and sculpture to develop and share their ideas, experiences and imagination.

to develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form and space.

about the work of a range of artists, craft makers and designers, describing the differences and similarities between different practices and disciplines, and making links to their own work.

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National Curriculum links continued

Key stage 2 Pupils should be taught:

to develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design.

Pupils should be taught:

to improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials (for example, pencil, charcoal, paint, clay)

about great artists, architects and designers in history.

Science curriculum

Aims: The national curriculum for science aims to ensure that all pupils:

are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

Key stage 1

Working scientifically.

During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- asking simple questions and recognising that they can be answered in different ways.
- observing closely, using simple equipment.
- performing simple tests.
- identifying and classifying.
- using their observations and ideas to suggest answers to questions.

gathering and recording data to help in answering questions.

For more information or to discuss please email:
portland.basin@tameside.gov.uk
or visit;
www.tameside.gov.uk/museumsgalleries/workshops

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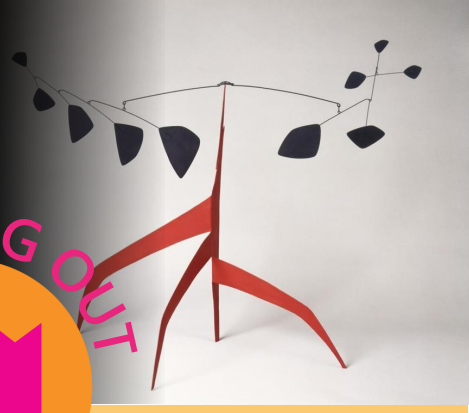

REACHING OUT

The challenge:

Your challenge is to create a kinetic sculpture that you can make move and balance.

Instructions

Prepare the cardboard pieces

* Cut the cardboard into different basic shapes such as squares triangles and rectangles of a similar size.
* Paint the shapes & let dry.

Prepare the Tube

* Flatten one end of the cardboard tube and staple to hold closed.
* Cut a small V-shape in the centre of the flattened end.
* Glue the open end of the paper towel tube to a 15cm square piece of cardboard.

Optional: Once the glue is dry, paint the tube and cardboard base. Let dry.

Gather materials

Once you have done all your preparation and your paint is dry, collect your base, pipe cleaners, cardboard shapes and beads.

Start sculpting:

* Add to your base a long skewer at the top. This will rest in the V-shape you cut out. If needed secure with tape. This will be the main arm that everything hangs and balances from.
* Thread two cardboard shapes onto a long skewer (through the corrugations) placing them on either end of the skewer. Try to balance the skewer and shapes on the tube base.

Continue adding shapes: Continue adding cardboard shapes and the shorter skewers to either side of the long skewer.
Use tape if necessary to.

Resources

Paper Towel Tube (or make a tube from card)

Cardboard

Bamboo Skewers (snip off sharp ends and cut some of the skewers in half)

Pipe Cleaners (cut into shorter pieces)

Beads

Tape

Scissors

Glue or Hot Glue Gun/ Glue

Stapler

Paint & Paintbrush (optional)

Your imagination!

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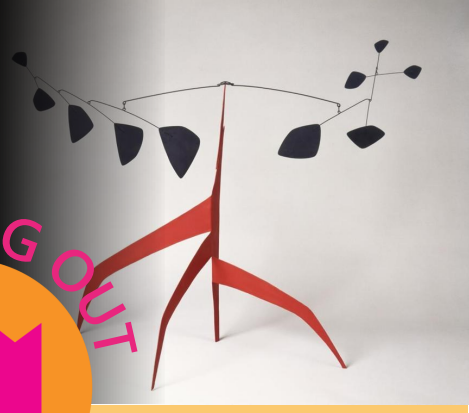
KINETIC BALANCE SCULPTURE



REACHING OUT

Added extras: Thread beads onto the pipe cleaners and use the pipe cleaners to connect the cardboard shapes together.

TOP TIPS

* Make a small notch in the centre of the skewer to help it catch on the cardboard.
* Test out the sculpture as you add shapes and beads. It will need to be adjusted to make it balance. Be patient and keep testing. There is the perfect balance point; you just have to find it!
* If any 'bits and bobs' fall of the skewer tape them into place.
* Avoid placing anything near the centre of the skewer so the shapes don't hit the base tube.

Extension idea: You could continue to look at the work of Alexander Calder and create a painting inspired by his sculptures. Perhaps you could just focus on the colours he uses and change the theme of the art piece.

Plenary: On completion, time should be spent discussing the sculpture and outcome. Suggested questions: Did you find it easy to make your sculpture balance? How can your sculpture move? What did you learn? Could you change your sculpture so it to responds differently?

See following page for 'step by step' photographs

Resources

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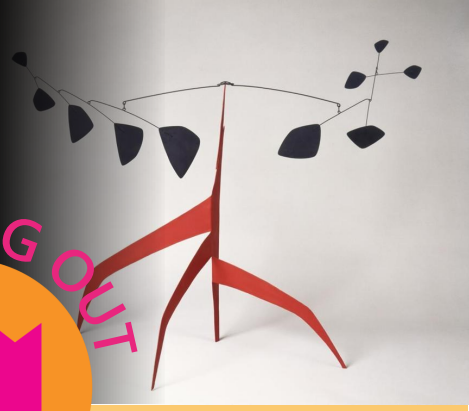
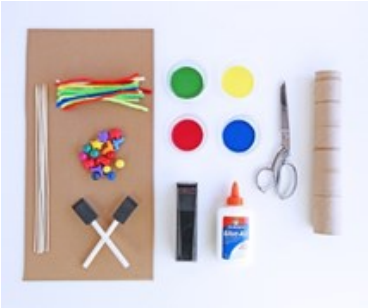
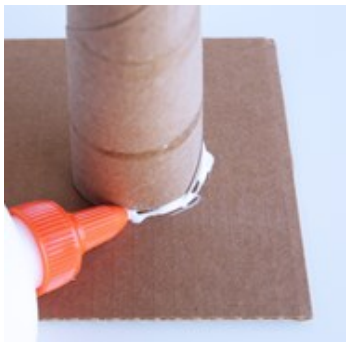
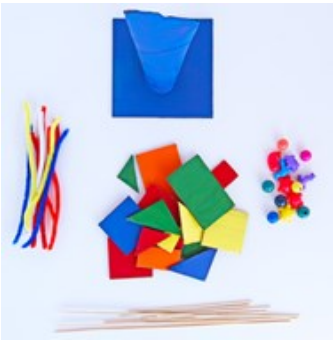


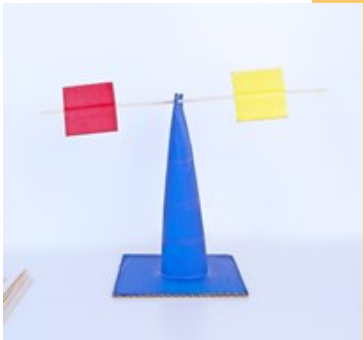
REACHING OUT

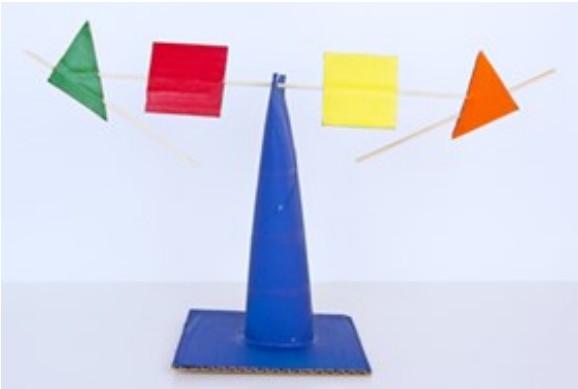
'Step by step' photographs showing you how to make your kinetic balance sculpture.

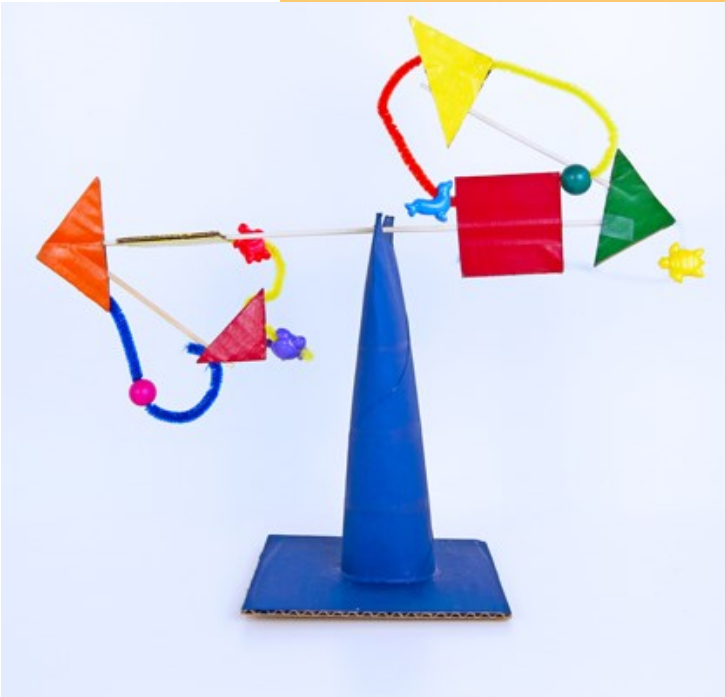












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KENETIC BALANCE SCULPTURE

REACHING OUT

Let's Talks STEAM

The Science

As you create your sculpture and balance the components, you are learning about the following physics concepts:
Balance: Balance is the even distribution of weight, allowing an object to remain upright.

Centre of gravity: Gravity is the force that pulls objects towards the earth's centre. It's the force that keeps us on the ground. The centre of gravity is the point in which the weight of an object or body is perfectly balanced so that the object will not fall over.

Lever: A lever is a simple machine that consists of a flat rod or plane balanced on a point. When you press on one end of a lever it pivots on the centre point (fulcrum) and lifts the opposite end.

Fulcrum: A fulcrum is the point at which a lever turns. In this sculpture the place where the skewer sit on the notched tube is the fulcrum. While we are not using our lever to do work, this sculpture illustrates what a fulcrum is and how a lever is constructed.

Art: Our balance sculptures also illustrate the following art concepts:
Balance: The arrangement of the components in an artwork to create a feeling of stability and equilibrium.
Symmetry: An artwork in which each side mirrors the other. If you drew a line down the centre of the artwork each side would be the same.

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KENETIC BALANCE SCULPTURE

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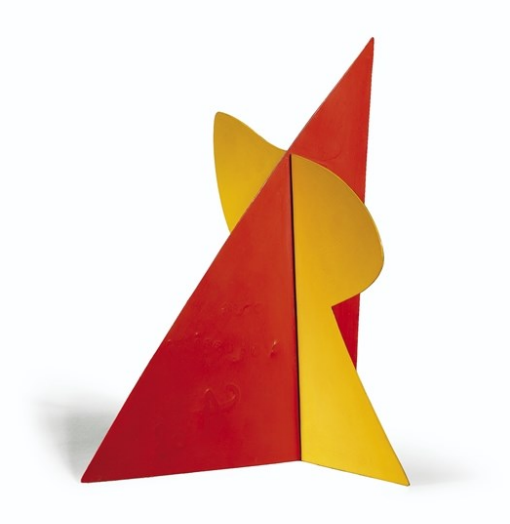
Alexander Calder:
Brief overview and examples of his work

Alexander Calder (July 22, 1898 – November 11, 1976) was an American sculptor who is best known for his innovative mobiles (kinetic sculptures powered by motors or air currents) that embrace chance in their aesthetic and his monumental public sculptures. Born into a family of artists, Calder's work first gained attention in Paris in the 1920s and was soon championed by the Museum of Modern Art in New York, resulting in a retrospective exhibition in 1943. Major retrospectives were also held at the Solomon R. Guggenheim Museum (1964) and the Museum of Contemporary Art, Chicago (1974).



Calder is noted as saying, “Out of different masses, tight, heavy, middling—indicated by variations of size or colour—directional line—vectors which represent speeds, velocities, accelerations, forces, etc. . . .these directions making between them meaningful angles, and senses, together defining one big conclusion or many.” From this, we can only glimpse at the magical vision he had of the world that surrounded him. The mobiles and stabiles he created to encapsulate that vision continues to inspire us to see the intertwining relationship of all the elements in the universe.