

Mudlarks Gallery Support materials



Mudlarks is a hands-on interactive gallery, with a soft play zone. It is a bright and welcoming space and children are usually very excited when they visit the gallery.

These materials have been devised to help teachers structure a visit to the gallery and to maximise the learning at each of the interactives.

We suggest that the class is divided into small groups to rotate in turn around the interactives. Please photocopy the resources and give them to all adults in your party before the visit.

The Mudlarks Gallery - Introduction

Curriculum links

KS1 and 2 Science, History, Geography,

Themes

Materials, Archaeology, regeneration, The River Thames, Life and Work in the past, Forces and motion

Entrance to the gallery

From the Schools entrance, make your way to the first floor via the stairs or lifts. Mudlarks is ahead of you, slightly to your left. A Visitor Assistant will be waiting for you at the entrance to the gallery.

Toilet facilities

Toilets are located just outside of the Mudlarks gallery, in the main entrance hall. Smaller toilets are located in the basement.

Lunch facilities

If you have booked a lunch space, please take your group via the stairs or lifts back to the basement. The Lunch room is to your far left.

Important information

Shoes must be removed when children enter the soft play area, but must be worn at all other times.

Safety. This interactive gallery is an exciting place for children to explore and learn, but for safety reasons running is forbidden in the gallery. Many of the exhibits have moving parts and children should be encouraged to explore the displays carefully.

Maximising the learning outcomes

The gallery is divided into **Zones**. To maximise the learning outcomes it is advisable to;

- Allocate a small group to each zone and rotate the groups around the zones.
- Provide each adult with the guidance sheets to facilitate structured questioning in each of the zones.

All the elements in Mudlarks connect to objects and displays in the main museum. These gallery links are shown on the advisory sheets and a visit to some or all of these exhibits will help reinforce learning.

1. Foreshore Finds

Organise the children around the sand bowl but instruct them not to put their hands in the sand until they are told to do so.

ASK: Are they ready to be a Mudlark?

'Mudlark' is the name given to anybody who looks for objects along the foreshore of the River Thames.

Learning outcome

This section encourages children to use evidence to help them work out what objects are, and from what they are made. Children should also be encouraged to think about the way we dispose of our rubbish, and the types of materials that rot or survive when buried.

Activity 1

Choose one child to dig in the sand to find an object. As the object emerges you could ask the following questions of the whole group:

- What can you see? (Encourage them to be very literal e.g. a handle, a flower pattern)
- Is there any more of the object to uncover?
- What shapes can you see on the object?
- Is it broken or is it complete?
- Does it look like anything we see in our homes or shops?
- What do you think the object was used for?

Choose another child and repeat.

Depending upon your group, you can carry on working with one child and one object at a time or you could allow them to work in pairs, with one child asking the questions.

Activity 2

Look at the display case beside this area, all these objects were found in the river Thames or on its banks:

- What objects can they see?
- What materials are they made of?
- How old do you think the oldest is?
- Why can't we see much wood?
- What happens to wood when it stays wet for a long time?

Vocabulary

River, riverbank, foreshore, Thames, buried, rot, survive, evidence

2. Foreshore finds

Water damming activity

Stand the children around both sides of the water area.

Learning outcome

This activity is designed to develop investigational skills. Children should investigate the properties of water, damming and sand and the movement of liquids and its push and pull forces.

Questions

- Ask and try to answer questions - How? Why? What Happens if?
- Discuss what they are doing and encourage children to predict results.
- Explain what they have discovered.
- Consider new questions – can liquid push? Can it pull? Do water and sand behave in the same way? Can liquids be made to change direction or speed?

Children should be supported and encouraged to analyse their experiences of water and sand.

What have they learnt about water and sand, how do these materials differ?

Do they ever behave alike?

Does change occur to sand when mixed with water – how many changes can they identify?

Vocabulary

Sand, liquid, solid, hill, stream, river, flow, force, move, push, pull, dam, Bridge.

Gallery Link

This activity relates to the **London Bridge** model and story (Floor 3). Why did it fall down? Why do bridges have spaces underneath? Why aren't they built like dams?

3. Tip the Ship

Sit the group in front of the ship that has been cut through to show the different decks. The children are going to pretend to be Stevedores. Stevedores were skilled dockers whose job was to load and unload the ships safely.

Learning outcome

This interactive is designed to show that loading ships was labour intensive in the past, and required knowledge and skills.

Activity

Before you start, make sure that the cargo is stacked in the Perspex containers and that the cargo hold is empty.

Work as a team to load as much as possible into the ship without overbalancing it.

To do this, the heaviest cargos are best stacked at the bottom of the hold.

Questions

- Is this an easy job? How many people do you think it would take to load a real ship like this? How long would it take them?
- Which cargos are heaviest and which are lightest?
- What do you need to do to stop it tipping over? Did the stevedores need to have much knowledge?
- What could go wrong if the ship was loaded incorrectly?
- Why does the ship have different floors instead of one big hold?

Extension

The Stevedores would also have to make sure that the cargo arrived in a good state. Have the children made sure that the goods that could be spoiled by water are above the water line and under the deck?

The water line is demonstrated by the blue wavy shelves on either side of the ship.

Gallery Link

The cut-away ship model of the Falmouth in the Trade and Expansion Gallery near the legal quay. Ship models are displayed throughout the Museum.

Vocabulary

Load, cargoes, ship, hold, weight, balance, imbalance, tip over, sink, float, silk, china, tea, water, ballast.

4. The Dockwork Zone

Lift and Shift

Stand the children behind the 3 ropes attached to the floor, facing towards the sacks. **Beware of rope burns** It is very important that the children do not allow the ropes to run through their hands. They should always release the ropes by letting the rope down slowly using a hand-under-hand action.

Learning outcome

Blocks (also known as pulleys) make it easier to lift equally weighted sacks.

Activity

Ensure the children are aware that each of the sacks weigh exactly the same. Allow the children to have a go at lifting each of the sacks, it is best to start with the sack nearest the main entrance. When they have tried all three, ask them to identify which was the easiest sack to lift. Why was it easier? What do you notice that is different about the ropes above each of the sacks?

Explanation

The pulley is a simple machine that consists of a grooved wheel and a rope. Like a lever, it provides a mechanical advantage in lifting a heavy load. There is a direct relationship between the number of ropes that form the pulley and its resulting advantage.

Task

1. Ask for two volunteers from the class to help.
2. Tie one end of the rope to a broomstick. Wrap the other end once around the second broomstick.
3. While the two volunteers are trying to hold the broomsticks apart, attempt to pull them together using the free end of the rope.
4. To make it easier, wrap the free end of the rope around the first stick another time and pull.
5. Again, to make it easier, wrap the rope around the second stick another time and try to pull them together.
6. This system works similarly to a pulley--therefore, as the number of wraps increases, so does the mechanical advantage provided to you. Ask the class to explain this analogy.

Vocabulary; pulley, rope, weight, lighter, heavier, easier

Gallery Link; Warehouse of the World and the hydraulic crane, makers' workshops in the Thames Gallery and the chandlery in Sailortown.

5. Balance Pans and Dockers Hooks

Split your group into two. Place one group with the balance pans and the other in front of the dockers hooks.

Balance pans

Ask the group to make the pans (scales) balance using different combinations of weights.

Learning outcome

Different combinations of weight can be equal. Links to weighing scales displayed in warehouse sets around the Museum

Work with the remainder of the group on:

Dockers' Hooks

This area illustrates the different tools that were used for lifting different types of containers, that specialised clothing was worn (hats) and that Dockers came from many countries.

Learning outcomes

Dockers developed specialist tools and clothing to do their work.

Docklands people carried out many different types of work.

Dock work was hard, skilful and labour intensive.

Dockworkers in London came from all over the world.

Task

Ask children to match the hook to the object it was designed to lift.

Look at the photograph of a docker with a special hat and work out why he is wearing it. Suggest the countries of origin of the dockers in the pictures. Discuss whether they would like to do dock work. What work did the women do in the dock?

Questions

Ask the children to work out which hook matches which cargo.

- Why are they designed differently?
- What could happen if they used the wrong hook on a cargo?

Try to find a picture of a special hat dockers wore to protect themselves.

- Look at the picture and describe how the hat worked

SWAP OVER with the balance pans group

Vocabulary: docker, dock work, labour, strong, tiring, hard, easy, hook

Gallery Link: Dock Strike display in Port of Empire Gallery includes testimony about working conditions. A large range of dock hooks are displayed in Warehouse of the World.

Containerisation is dealt with in later gallery - New Port New City.

6. Diver's Helmet and Knot Another One

Divide your group between the two areas, work with the Diver's Helmet group

Diver's Helmet

Explain that it was essential for the ships to be maintained and that this work was carried out by the divers. The docks were extremely dirty and it was impossible to see, the divers had to use their hands to feel their way around their place of work.

Learning Outcome

Dock work was as much about what happened under the water as what happened above. The divers job was difficult and dangerous.

Task

With your head inside the divers helmet, and without looking, thread the rope through the loop and tie a knot. Now, with your head still inside the helmet, untie the knot and give the equipment to the next person.

Questions

- What do you think it would be like to work underwater?
- Would you like to do this work? Why?
- How did the divers survive underwater? (Use the boards nearby to help you answer this question)

Gallery Link

A real divers costume and air pump is displayed in the Thames Gallery.
SWAP OVER with the Knot another one group

Knot another one

Learning outcomes

Rope was a very important material for Dockers and all ship workers. Dockworkers had to do very skilled and efficient work.

Questions

- What was rope used for?
- Why did it have to be strong?
- Why were knots used?
- Which knot do you think is the strongest?

Activity

Can you match the speed of the man in the video?

Vocabulary

Knot, cargo, bowline, bend, hitch.

Gallery Link

The Thames Gallery for the makers workshops and the Chandlery in Sailortown.

7. Decorate docklands

Learning outcome

Architects made design choices for the Docklands environment based on a range of factors including aesthetics (how good something looks), cost and qualities of the materials.

Activity 1

Touch and explore the decorate docklands interactive and ask the children to press the buttons in turn.

Name and consider the properties of materials, including hardness, strength, colour and texture, and relate these properties to their everyday use.

Questions

- Which materials would be best for building a wall? Making a roof?
- Which materials do you prefer? Why?
- Materials had to be moved to Docklands from all over the world, how would they have reached here?
- What else do builders need to think about when choosing materials for a job? (Cost, durability, insulation, weight etc.)
- Have you visited any of the countries or places from where the materials came?

Vocabulary; Glass, metal, stone (limestone, marble, sandstone) slate, polished, smooth, shiny, slippery, dull, fossil

Activity 2 (Canary Wharf Tower and building blocks)

Encourage the children to match the blocks with the pictures on the wall, do they look exactly the same? Use the shapes to create their own designs using a mixture of elements.

Can you build the Canary Wharf Tower correctly? Have you made sure that all the pieces are in the correct place? (there are separate pieces for the bottom, middle and top).

Children playing in this area should be asked to:

- Explore shape, space and size e.g. could the mosque pieces fit the canary wharf tower model.
- Recognise when shapes are the same.

Vocabulary

Square, rectangle, triangles (equilateral, isosceles) pyramids, prisms, builder, design, designer, architect, cylinder, arch, tower, pillar, dome, window.

Gallery link

New port, New city incorporates large photographs of important Docklands buildings, building sites and architects models.