

MUKTANGAN UK SCHOOL PARTNERSHIP PROGRAMME

Teacher's handbook

Years 3 & 4



Registered charity: 1155393

Dear Teacher,

Thank you for downloading this handbook as part of the Muktangan School Partnership Programme!

About Muktangan

This pack was developed by the Muktangan UK Trust, which was founded in 2011 to support the work of Muktangan, a charity providing high quality education to underprivileged children in Mumbai. Whilst education across India is characterised by high dropouts and poor learning, Muktangan provides children with a holistic, high quality education which allows them to thrive. Muktangan teachers are members of the local community and are trained in house, creating a truly sustainable educational model. The success of Muktangan's innovative approach is clearly shown as 100% of students passed their final grade examinations in 2014, 2015 and 2016!

About the Muktangan UK school partnership programme

We have developed this pack to raise awareness of Muktangan through learning here in the UK. We hope that it will support schools in their delivery of high quality global citizenship learning, enabling children here in the UK to learn more about life and culture in India.

We also hope that, whilst you use the resources in your teaching, your school will be inspired to support the pupils at Muktangan. We've developed an accompanying fundraising pack with ideas to get you started. Don't forget – this pack is for years three and four, but there are packs for other academic years on our website: www.muktanganeducationaltrust.co.uk

How to use this pack

This teacher's handbook will guide you through the resources and ideas that we have developed. They have been developed by teaching professionals in the UK and all of the activities link directly to the curriculum. At the centre of the activities is the Da Silva family, who you will meet on the next page. This pack includes:

- This teacher's handbook, which links together the curriculum and suggested activities
- Fundraising pack with ideas to get your school fundraising for underprivileged children in Mumbai

We hope you and your class enjoy learning more about life in Mumbai!

The Muktangan UK Trust

MEET THE DA SILVA FAMILY!



Dad, Joseph, 45

Joseph is a taxi driver. He works very long hours, but is managing to save some money so that one day he can buy his own car and become a driver for a wealthy family or businessman.

Mum, Ritu, 34

Ritu works as a secretary in one of the big offices in the business area of Mumbai.



Joseph and Ritu both grew up in Dharavi slum, but have recently been allocated a flat in one of the new SRA (Slum Rehabilitation Authority) buildings that are being built to re-house people from the slums in Mumbai.



About 1 million people live in Dharavi slum, and it's a close-knit community where everyone knows everyone else. People moving to the SRA buildings sometimes find it difficult to adapt to apartment living.

Both Joseph and Ritu completed their school education and passed the state exams aged 16. This enabled them to get better jobs than their parents had.

Joseph and Ritu are amongst the many Christians in Mumbai. They attend church regularly at one of the many Catholic churches in the city.



Samson is 9 years old. He loves living in Mumbai and he is very proud of where he is from. His favourite thing to do when he is not at school is to ride around with his Dad in his taxi. He also enjoys growing plants, which he keeps on the window ledge in his bedroom.

Maria is 8 years old. She spends lots of time daydreaming. She often imagines that she is a famous explorer and her favourite book is her Atlas, which she looks at and plans where she might one day go. She also loves chocolate!



MATHS ACTIVITIES

National Curriculum subject content

☑ Measurement

- measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
- compare durations of events [for example to calculate the time taken by particular events or tasks]

☑ Statistics

- interpret and present data using bar charts, pictograms and tables
- solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables

Activity: measuring water

How much water do you use?

When Joseph and Ritu lived in the Dharavi slum, they didn't have their own tap. Since she was a little girl, Ritu would walk to the communal tap early each morning and fill a bucket so they had water for the day. She always knew how much water would be needed for her family, who had to be very careful about how they used the water so they didn't run out before the end of the day. Now they live in the SRA building they have their own tap.

Ask your students how their lives would be different if they didn't have a tap in their house.

Ask your class to keep a water diary for a day. They should record every time they use water for any activity including drinking and washing their hands. Help them to estimate how much water this would be in buckets (one bucket = 5 litres).

Using Oxfam's Water Week resources, you can compare their water use with domestic water use in India.



See Oxfam's Water Diary activity for Water Week for a great slide show to accompany this activity. www.oxfam.org.uk/education/resources/water-week

SCIENCE ACTIVITIES

National Curriculum subject content

Year 3

☑ Plants

- explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant

Activity: Samson's garden

Help Samson decide which plants to grow!

Samson loves growing plants. He helps his Mum to grow lots of plants around the house, which they keep in pots on the window ledges. Samson dreams of one day owning a garden. He would like to know which plants are the best ones to grow in the Indian climate

Ask your class to research which plants are found in different environments in India, for example jungle, desert, mountains and the beach. Research the growing requirements of plants in different environments and record them in a table, for example temperature, soil type and required water.

Then ask your class to compare this with plants found in their garden or the local park.

How might the environments in each place affect plant growth?



LITERACY LINKS: Write a fact file of different plants and their environments.

National Curriculum subject content

Year 4

☒ Living things and their habitats

Pupils should be taught to:

- Recognise that living things can be grouped in a variety of ways
- Explore and use classification key to help group, identify and name a variety of living things in their local and wider environment
- Recognise that environments can change and that this can sometimes pose dangers to living things

Activity: the effect of the environment on living things

Mumbai's environmental impact

As Joseph is a taxi driver he spends all day driving around Mumbai and has watched it change over the years. He is often worried about the increasing amount of waste that he sees. There is so much building work and the sea really doesn't look clean.

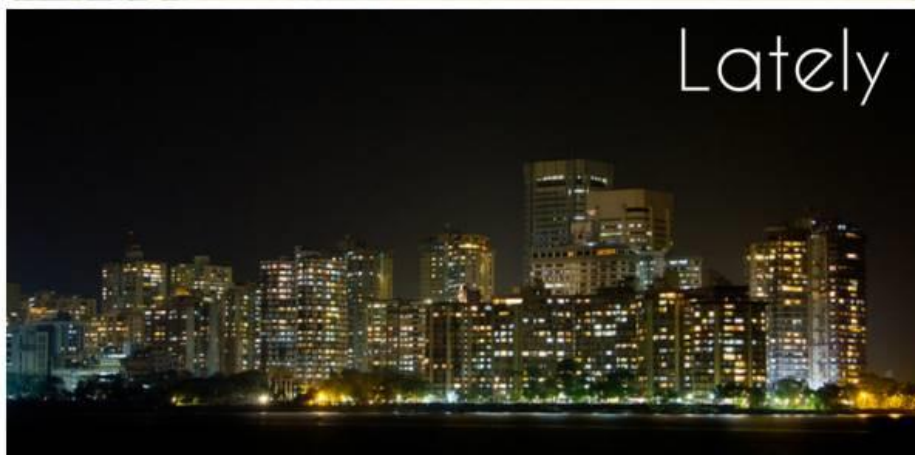
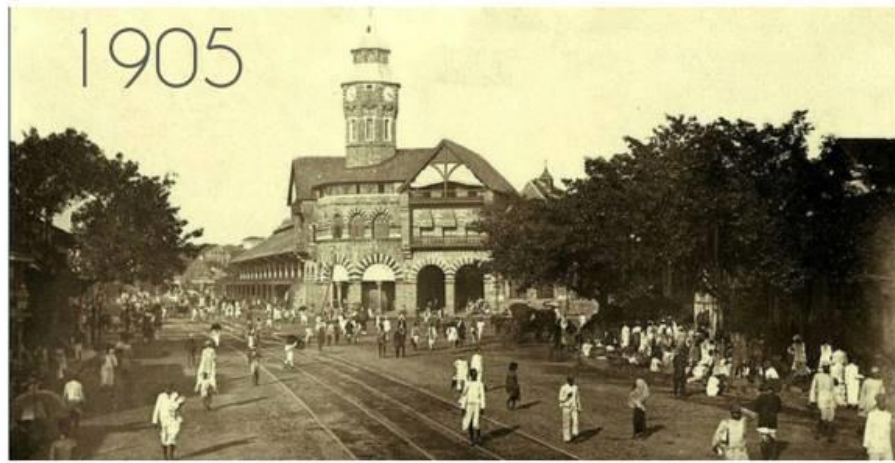
Look at the images on the next page with your class and discuss how Mumbai has changed as urbanisation has taken place. Discuss the positive and negative impact that the changes will have had on living things on land and in the sea.

Ask your class to think about the living things in their own environment. Explore and use classification keys to think about how these living things can be grouped.

You may like to walk around the local area to help your class identify the living things around them. Think about the impact their environment has on living things by looking at litter, traffic and open space.



LITERACY LINKS: Link this work with writing stories in familiar settings.



Activity: chocolate melting

National Curriculum subject content

Year 4

Pupils should be taught to:

☑ **States of matter**

- observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)

Help Maria keep her chocolate cool!

Maria loves chocolate. It's her favourite food but she's not allowed to eat it very often. It's hot in India and her chocolate often melts so she gets in trouble.

Conduct an experiment to find out the temperature at which chocolate melts. You might also experiment with methods for keeping chocolate cool in warm places.



The experiment:

1. Put one piece of chocolate on a paper plate and put it outside in the shade.
2. Record how long it took for the chocolate to melt or if it wasn't hot enough to melt then record how soft it was after 10 minutes.
3. Repeat the process with a piece of chocolate on a plate that you put outside in the sun. Record your results in the same way.
4. Find more interesting locations to test how long it takes for the chocolate pieces to melt. You could try your school bag, hot water or even your own mouth.
5. How might you stop the chocolate melting? Does wrapping it in certain materials keep it cooler?

If it's a particularly British weather day you could melt the chocolate over a flame or in a microwave and time how long it takes to melt at certain temperature.



LITERACY LINKS: You could make [delicious chocolate brownies](#) (links to numeracy too!) that includes melting the chocolate. Students write the recipe.

GEOGRAPHY ACTIVITES

National Curriculum subject content

☑ Geographical skills and fieldwork

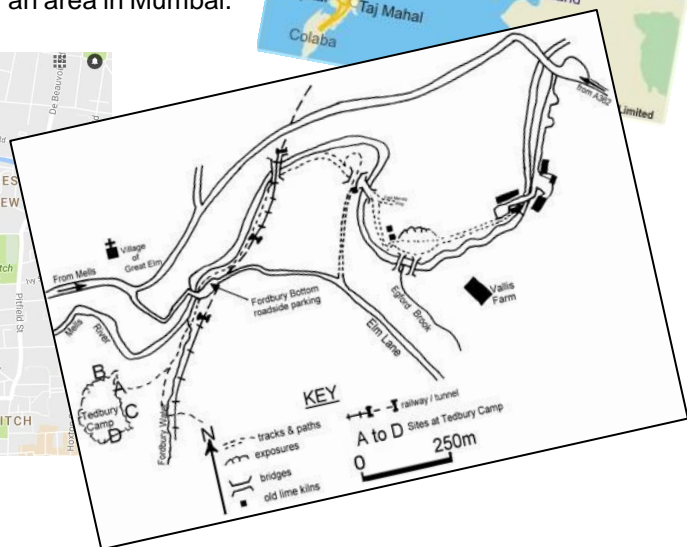
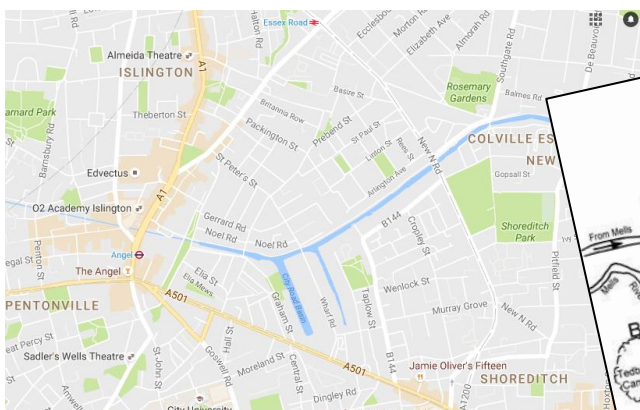
- Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied
- Use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies

Activity: Indian adventure

Help Samson with his homework

Samson is a Muktangan student and has been given some geography homework by his teacher. He needs to study a place outside India but he has never left Mumbai before. Perhaps where you live would be a good case study? Can you help him?

- Use a range of maps (paper and online), atlases and globes to compare the locations of England and India, and Mumbai with your local area. Compare the features of the surrounding area of both your town and Mumbai; e.g. hills, desert, sea etc.
- Create a map of your local area to help Samson. Take students on a walk around the area local to your school. Students should include a sketch map of the school and surrounding area including a key and classification of different land uses (e.g. shops, homes etc.). Add grid references and a key to the map. This can then be turned into a simple graph showing different local land use.
- As an extension activity, you might like to compare the land use of your local area with that of an area in Mumbai.



LITERACY LINKS: Write postcards to Samson describing your local area.

☑ Human and physical geography

Describe and understand key aspects of:

- Physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle
- Human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water

Activity: treasure hunting

Create a fact file for Maria to use in her hunt for treasure!

Maria loves treasure hunting. One day, she would love to go on an expedition all around India and really needs some help planning her adventure. She's heard about some key places where treasure is rumoured to be but she needs to do her research so that she is prepared!

Ask your class to research the following places and create a fact file for Maria to use in her hunt for treasure. Ask them to think about the human and physical aspects in the box above for each of the following areas:

- Dharamsala, Himalayan mountains
- New Delhi
- Kerala backwaters
- Thar desert
- Munnar tea plantations
- Pondicherry



LITERACY LINKS: Write a brochure or leaflet about one of the Indian locations, explaining why it is an attractive place for tourists to visit.

ART ACTIVITIES

National Curriculum subject content

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 create sketch books to record their observations and use them to review and revisit ideas
- 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.

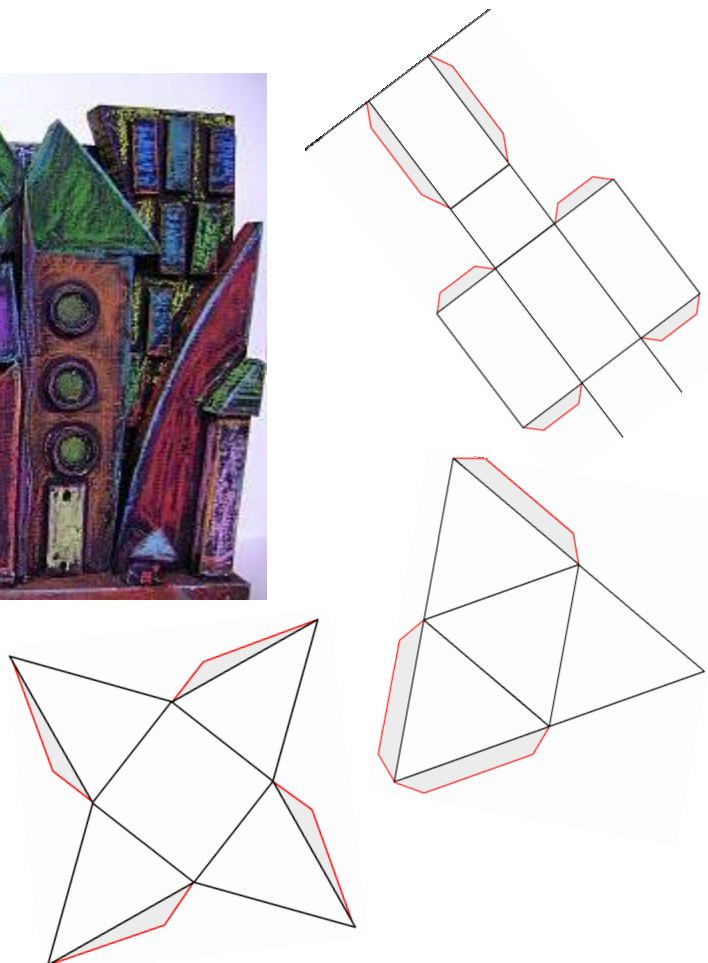
Sculpture: create a Mumbai city scape sculpture

Recreate Maria and Samson's home town

Spend some time looking at pictures of Mumbai buildings and landscapes. Use 3D nets to create shapes which you can combine to build a city scape. Once you have formed 3D shapes from the nets, glue them together to create structures. You can then add paper mache to strengthen the structure. It's also a good idea to use a base to glue the structures to. Once the paper mache is dry, get painting!



[Download 3D nets from senteacher.org](http://senteacher.org)



Collage & printing: Rangoli

Help Ritu get the house ready for Diwali!

There are lots of Diwali festivities in Mumbai and people of all faiths enjoy the celebrations. Ritu will be decorating her house with Rangoli. Rangoli are beautiful Indian patterns placed on the floor at the entrance to your home to welcome guests. At Diwali, Hindus draw Rangoli patterns to encourage the goddess Lakshmi to enter their homes.

Take inspiration from the 2D shapes and shades of colour in S.H.Raza's 'Bindu Vistaar'

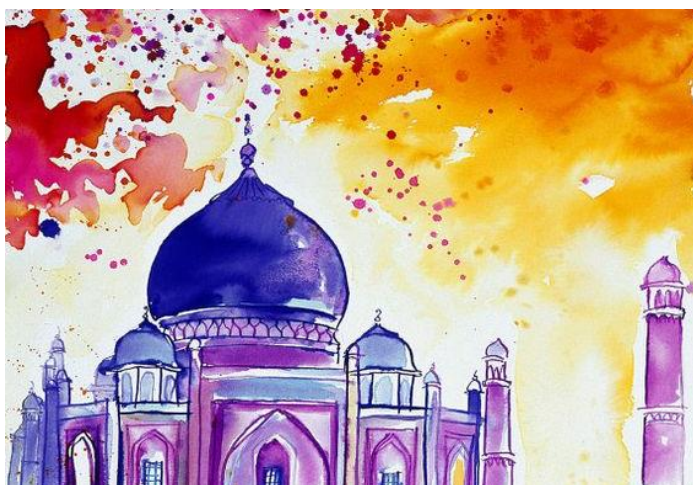
Create rangoli patterns using collage and print techniques. When using collage, focus on using shapes to create symmetry and tessellation. You can also create your own printing blocks using coiled string and glue where you can also create symmetrical patterns.



Painting: create Indian watercolours

The Da Silva family live in the Slum Rehabilitation Project buildings, which can be quite bland and plain. Help to liven up their home by creating some new artwork to hang in the Da Silva family's home.

Create watercolour backgrounds, taking inspiration from Indian scenery. Think about the beautiful deep reds of the deserts in Rajasthan, or the lush green jungles of Kerala. Look at photographs for inspiration. Once you have completed your watercolour background, develop drawings or paintings of famous Indian landmarks on top of your background.



LITERACY LINKS: Create descriptive sentences using adjectives, metaphors and similes to describe Indian scenery. Write descriptive poems.