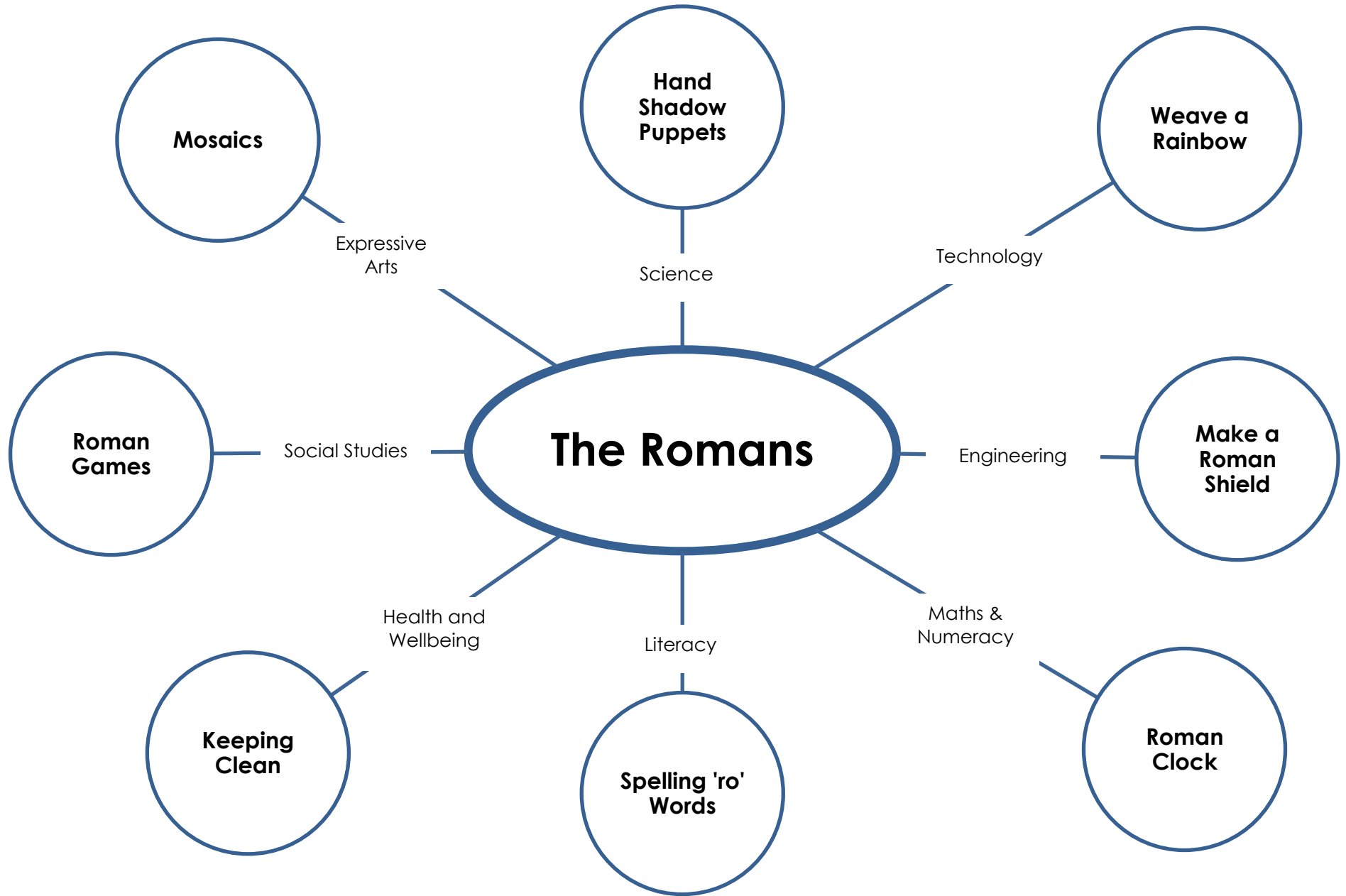


# Learning from Home



# Science Challenge



## Hand Shadow Puppets

The Romans were able to tell the time by looking at the length of shadow that objects (including people) made at different times of day. But what are shadows and how are they formed?

To investigate we are going to be creating some shadow puppets.

### You Will Need:

A partner (an adult or brother or sister), a torch, a flat plain light coloured surface like a wall or propped up sheet of white card, and your hands.



### Method:

Take turns to shine a bright torch at the flat surface while the other person makes shadows with their hands. Notice how the shape of the shadow changes as you move your hand into different shapes. Why not have a go at making some of the shadows in the picture.

### The Science:

Materials can be **opaque**, **translucent**, or **transparent**. If an object is opaque, no light can pass through it. A translucent object allows some light through but not all. The light is scattered meaning you cannot see clearly through it. A transparent object allows all the light through meaning that you can see right through it. Your shadows were made because your hand blocked the light. Your hand is opaque!

Click here to watch some videos explaining more about 1. Transparent, translucent and opaque materials <https://www.youtube.com/watch?v=8rrnMOjlGjI> and 2. Shadows and shadow puppets: <https://www.youtube.com/watch?v=2zfrbCdV8sl>

Activity and image from [www.stem.org.uk/](http://www.stem.org.uk/)

# Technology Challenge



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## Weave a Rainbow

The Romans believed in more than one God/Goddess and the Goddess of Rainbows was known as Iris. She was also believed to be the messenger of the gods, carrying messages between the heavens and earth. Rainbows were thought to be messages.

### You will need:

- A paper plate (non-shiny is best)
- Coloured crayons / pencils / pens/ paint
- Pencil
- Ruler
- Scissors
- Something circular to draw around (like the inside of a large roll of tape)
- Wool in a variety of colours



**Adult Support Required!**

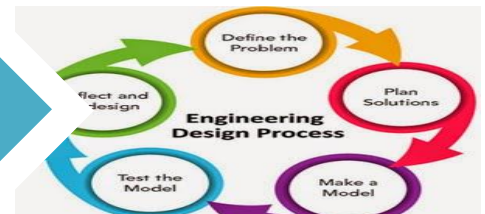
### Instructions:

1. Using your pencil and ruler, draw a line across the middle of your paper plate. Then cut the paper plate in half with your scissors
2. Colour in the front of your plate half.
3. On the back of your plate, draw a semi-circle in the middle using the roll of tape (or similar object) as a guide. With the ruler, draw lines from the semi-circle to the edge, to make wedges. We have used 6 – you don't want to make the wedges too thin. Use the scissors to cut the lines of the wedges from the outside to the semi-circle.
4. Choose your first colour of wool. Tie wool around a wedge, keeping the knot to the back,
5. Weave your wool under and over the wedges. When you get to the end, bring your wool back in the opposite direction, this time going over the wedges you previously went under, and under the wedges you previously went over. Repeat until the strip of your first colour is as wide as you want it.
6. When your strip of colour is finished, weave to the end of a row, and tie your wool in a knot behind. Start the process with a new colour.
7. When you have finished your rows of colour, tidy up and loose ends and admire your rainbow. You could add a hanging loop to display on your wall or in your window. Perhaps you could add cotton wool clouds too?



Activity and images from TES

# Engineering Challenge



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## Make a Roman Shield

### Adult Support Required

If you were a soldier in the Roman army, your shield would be very important to you. When you were fighting enemies armed with swords and spears, your shield helped to protect you.

**Your Task:** Use materials around your house to make your own Roman shield.



### Materials You Could Use:

- An old cardboard box flattened out,
- A paper or plastic cup, large lid from a tub, paper or foil plate or pie tray.
- Tin foil or shiny sweet wrappers.
- Scissors, glue and tape
- Pens, paint, crayons, coloured paper, old comics / magazines (To decorate)

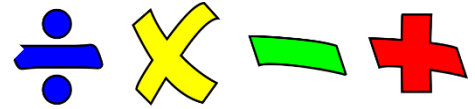


### Instructions:

1. **Plan it** – Draw a picture of your shield and write down the materials you plan to use.
2. **Build it** - Draw a long oval (egg) shape onto your cardboard, then cut it out with scissors. You can make your shield as big or small as you like. (**Ask an adult for help!**)
3. Find something to make the '**boss**' (the bit that sticks out in the centre of your shield). You could use a cup, yogurt pot, lid or paper plate. If you are using a pot or cup, you will only need the bottom part.
4. Cut a cross shape in the middle of your shield. (**Ask an adult for help with this part**)
5. Place your **boss** in the middle of the shield and secure it in place.
6. Cover your boss with tin foil or shiny paper, then have fun decorating your shield. You could use cut up comics, paper or magazines to add shapes and colour.
7. When you've finished decorating, turn your shield over and attach a strip of card to the back to make a handle.
8. **Test it** – Can you hold it up by using the handle only? Would it give you any protection in battle?
9. Are there any ways you could **improve** your design? For example, what could make it stronger?

Images from [www.clipart-library.com](http://www.clipart-library.com)

# Maths & Numeracy Challenge



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## Roman Clock

### Adult Support Required

In our number system there are ten different digits, (0, 1, 2, 3, 4, 5, 6, 7, 8, 9) and the place of these digits in a number determines its value.



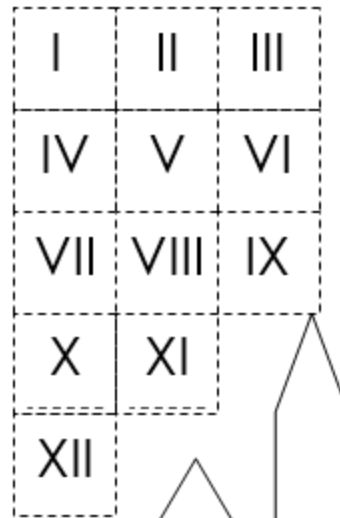
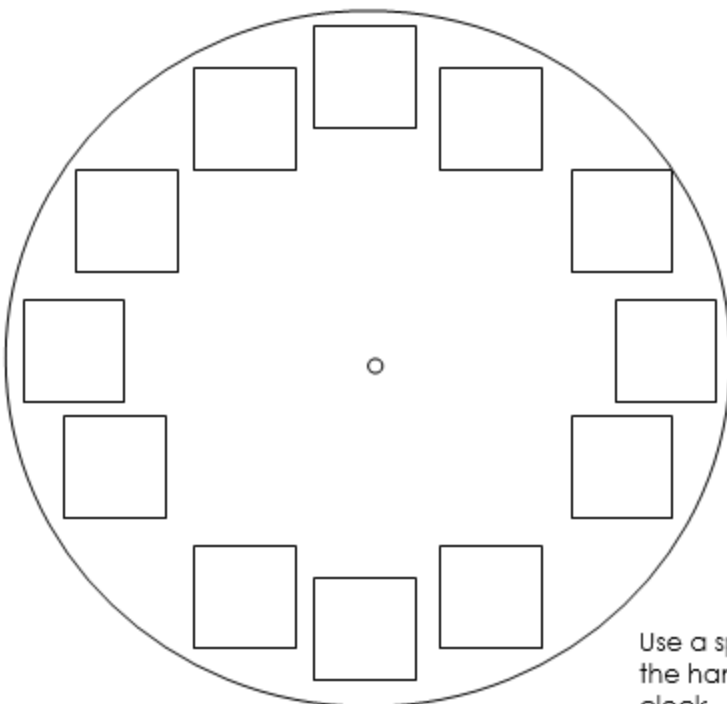
The Romans used different symbols, and these are the building blocks of Roman numerals: **I, V, X, L, C, D** and **M**.

The numerals from 1 -12 are below:

**I** = 1   **II** = 2   **III** = 3   **IV** = 4   **V** = 5   **VI** = 6   **VII** = 7   **VIII** = 8   **IX** = 9   **X** = 10   **XI** = 11   **XII** = 12

We use clocks to tell the time and **your task** today, is to cut out the clock face, Roman numerals and clock hands below and make your own Roman Numeral clock. You must stick the numerals in the correct space on the clock then you can practise telling the time with a grown up at home. (You may want to stick the clock face and hands onto card to make them a bit stronger)

**You will need:** Images from below, split pin, card + glue stick (optional)



Use a split pin to put the hands on the clock.



Images from [www.clipart-library.com](https://www.clipart-library.com)

Activity from TES. Images from [www.clipart-library.com](https://www.clipart-library.com)

# Literacy Challenge



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## Spelling 'ro' Words




The 'Romans' starts with the letters **r** and **o** making the 'ro' sound, say it out loud. Practise the 'ro' words on this list using **look**, **say**, **cover**, **write** and **check**.



Ask an adult for help if you need to.

Word	1 <sup>st</sup> Try	2 <sup>nd</sup> Try	3 <sup>rd</sup> Try
rob			
rot			
brow			
frog			
prom			
road			
apron			
rope			
zero			
brown			
roads			
across			

Here are some pictures of some other 'ro' words. Can you guess what they are? Write the word underneath the picture.

		
<input type="text"/>	<input type="text"/>	<input type="text"/>

Now write 4 sentences using a different 'ro' word in each one.

Images from [www.clipart-library.com](https://www.clipart-library.com)



# Health & Wellbeing Challenge

## Keeping Clean

It is very important for us to keep ourselves clean. If we didn't wash, we could get poorly, we would start to look dirty and we would also start to smell. Yuk!



Most of us have running water and a bath or shower at home, some people have both. This makes it easier for us to stay clean.

**Click here to find out what might happen if we didn't wash:**

<https://www.bbc.co.uk/bitesize/topics/zbdcy9q/articles/z7dxjhv>

In Ancient Roman times, water was expensive, and people didn't have it delivered to their houses like we do. They didn't have baths and showers at home, so how did they keep clean?

The Romans were very clever, and they actually invented baths. But they didn't have little baths, they had really big ones, like the size of swimming pools where lots of people would bathe at the same time!

The Romans saw bathing as a social activity as well as a way of keeping clean. They built communal bath houses, where they could relax, meet up and have a chat. Business deals were also often struck in bath houses!

We use soap or shower gel to wash ourselves with, but the Romans didn't. They would rub themselves down with olive oil or have a slave do it for them and then a tool called a **strigil** (see photo below), would be used to scrape the oil and dirt off their skin.

**Task:** Have a think about all the different things you use to keep you clean and smelling fresh, write them down in a list if you can. Talk to a grown up about why it is important that we keep clean.



Image of a strigil from <https://en.wikipedia.org/>  
Clipart from [www.clipart-library.com](http://www.clipart-library.com)

# Social Studies Challenge



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## Roman Games

Games were a very important part of Ancient Roman life and children and adults all enjoyed playing them. Sometimes, the games were very intense such as gladiator games, where people would often battle to the death against other people and sometimes against animals such as tigers, bears and crocodiles.



There were other games that children loved to play, including board games. Ancient Roman children would also play games that were similar to badminton, hockey, basketball and baseball that we play today.

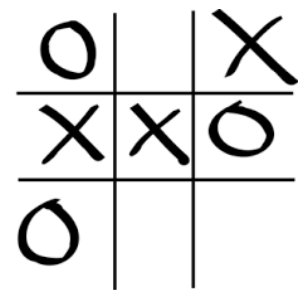
One of the most popular games was a dice game called **Knucklebones**. Children and adults both loved to play it.



Knucklebones was a game that used five or ten small bones and players would throw them and get points depending on how the bones landed on the ground.

**Did you know:** The Romans loved to play with marbles, and they even played Tic-Tac-Toe, otherwise known as noughts and crosses.

Click here to play a choice of interactive Roman themed games:  
<https://rome.mrdonn.org/games.html>



**Your Task** is to make a list of all the board games you can think of. Which is your favourite / least favourite? Can you explain why?

**Challenge** an adult, or brother or sister, to a game of Noughts and Crosses or marbles. Explain to them that the Romans used to play too.

Information adapted from [www.historyforkids.net/](http://www.historyforkids.net/)



# Expressive Arts Challenge



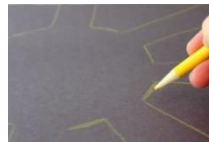
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## Mosaics

Ancient Romans created beautiful mosaic artworks. According to the BBC, the mosaics used in Rome were home decorations and ranged from store-bought common designs to custom made designs. Today, you can make your own mosaic artwork with just some coloured paper and glue.

### You Will Need:

- Black construction paper or template (optional) *Click here for some free downloadable templates:* <http://www.supercoloring.com/coloring-pages/arts-culture/mosaic>
- Pencil and coloured pencils / pens
- Various colours of paper
- Scissors
- Glue stick



### Instructions:

1. Decide on a mosaic design. Roman mosaics depicted many things - gods and goddesses, gladiators, animals, birds etc.
2. Draw your design in pencil on the black paper. (Or use a template)
3. Cut the coloured paper into small square pieces. (1–2 cm across) Cut strips of paper and then cut the strips down into squares.
4. Glue the pieces of paper to the black construction paper or template. Use a glue stick and put the paper on the background first. Start from the outside, outlining the drawing and then work inwards.
5. Allow the glue to dry and then your mosaic is complete.

Activity idea and photos from [www.ehow.com/](http://www.ehow.com/)

To learn more about the Romans and mosaics, click here: <https://www.youtube.com/watch?v=dop7A0WCKgg>

**Note:** If using the template, you might want to colour some sections and stick coloured paper on others. Leaving a tiny border of black on each square adds to the effect.

**\* You can also practise if you want to by colouring the template online.**



Images from [www.clipart-library.com](http://www.clipart-library.com)