

Name: \_\_\_\_\_

# Science at the Roman Baths

## Chemical and *physical* changes

Welcome to the Roman Baths! This activity takes you round one of the most historic sites in the whole of Britain, whilst also recognising some important examples of Science which you will learn about in school.



We will start the tour off at the Great Bath, this is the largest area on the site (how do you work out an area?! \_\_\_\_\_ X \_\_\_\_\_). It was where Romans came to bathe in the warm water.

Now it is time for you to investigate the water.....

Task 1 – Use data loggers to record the temperature at 4 different points in the Great Bath.

Location	Temperature °C
1	
2	
3	
4	



Task 2 – Still using your data loggers take just one light reading from the Great Bath and record this value here \_\_\_\_\_. You will need to use this figure later.....

What number is the water warmest in the Great Bath?

What number is the water coolest?

Mark on the diagram of the Great Bath an arrow to show the direction of heat loss through the Great Bath.

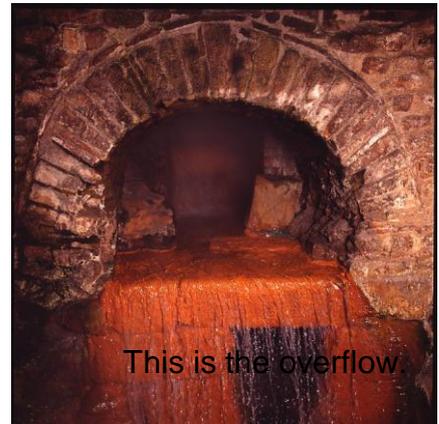
Now look at the Great Bath again: What visual clues can you see which explains the loss of heat? \_\_\_\_\_. Draw what you see and add labels to your drawing:





Label a gas and label a liquid.

Water in the Great Bath turning into steam is an example of a physical change. Think of another example of a physical change?



Have a look at the water in the Sacred Spring. Water from here goes to the Great Bath. In Roman times, they were unable to explain why the water was so hot and so believed it was the work of the Gods. A group from your school will now be able to explain what makes the water so hot.

Now go inside the museum and locate the Spring overflow. Estimate the temperature of the water here. Will it be warmer or colder than the Great Bath?



Task 1 – Describe the appearance of the water

Location	Colour of the water
Great Bath	
Overflow	

What might this tell you about what is in the water?

Why might we see different things in different locations?

Task 2 – Use your data loggers to record the light readings.

Location	Light meter reading
The Great Bath	
Sacred Spring	
Spring overflow	

Where is there more natural light?

What process is taking place in the Great Bath and Sacred Spring?