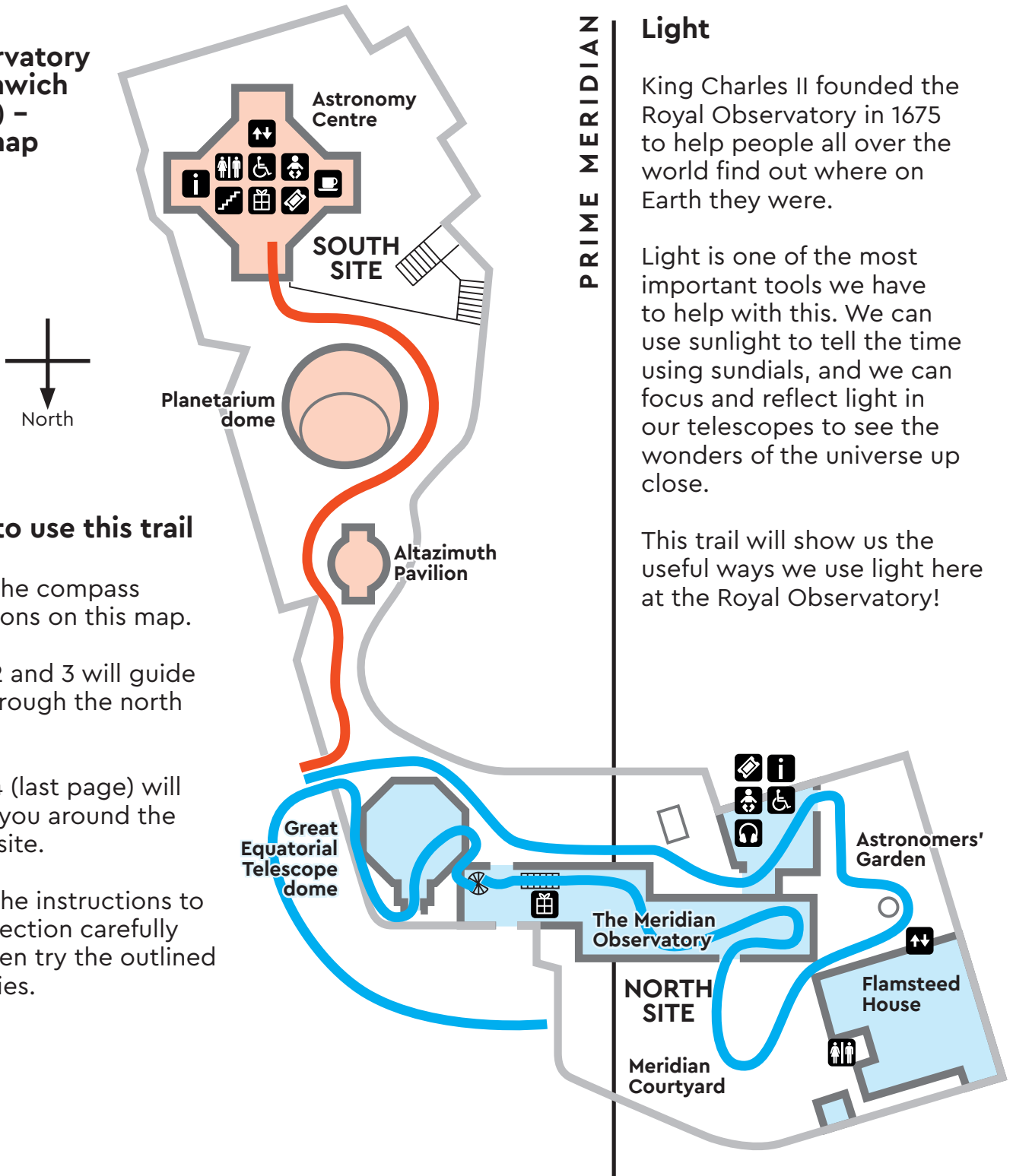


KS2 School Trail

Royal Observatory Greenwich (ROG) – site map



How to use this trail

Fill in the compass directions on this map.

Page 2 and 3 will guide you through the north site.

Page 4 (last page) will guide you around the south site.

Read the instructions to each section carefully and then try the outlined activities.

PRIME MERIDIAN

Light

King Charles II founded the Royal Observatory in 1675 to help people all over the world find out where on Earth they were.

Light is one of the most important tools we have to help with this. We can use sunlight to tell the time using sundials, and we can focus and reflect light in our telescopes to see the wonders of the universe up close.

This trail will show us the useful ways we use light here at the Royal Observatory!

KS2 School Trail – NORTH SITE

2

1 Greenwich Noon Dial
On a sunny day, this clever creation casts a sun-shaped shadow with a spot of light at its centre onto its dial plate.

Where the shadow falls at midday tells us what month it is, written in Roman Numerals. Can you fill in the missing numbers below?

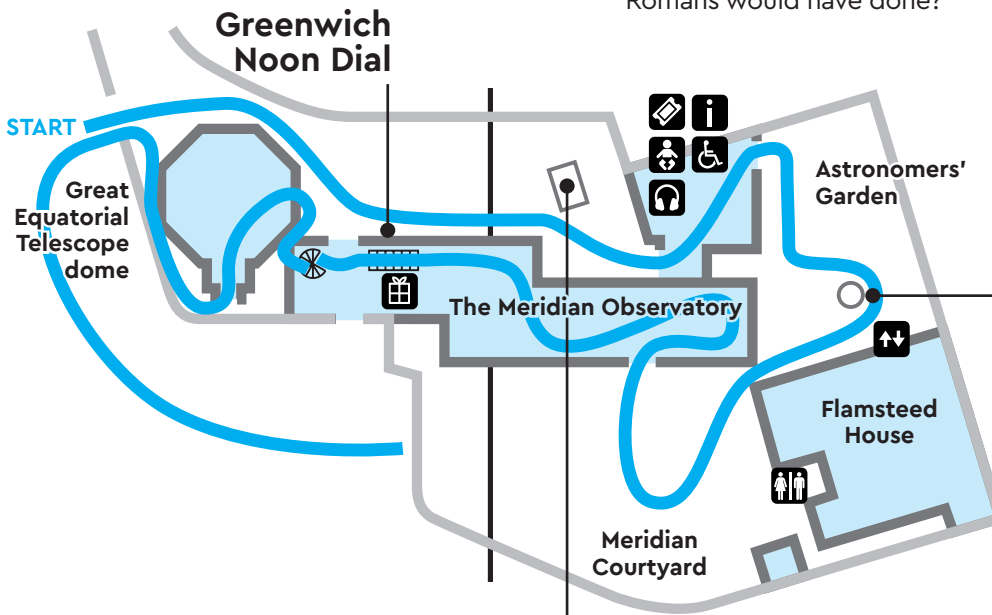
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
I		III	IV		VI	VII	VIII	IX	X		XII

If it's sunny and close to midday - what month does it show on the noon dial?

Roman numbers might look a bit odd but from the ones shown above, can you write 13 as the Romans would have done?



A dial for telling the month – not the time



3 Garden Sundial

There are many different types of sundial to be found. The Garden Sundial is special as it uses animals to indicate the time.



This sundial will tell you the time AND date because it has been constructed in a special way. It is very accurate.

2 Herschel's telescope
This is actually only part of it. The rest was crushed when a tree fell on it. The full length of the telescope was 40 feet - four times longer than what you see here.



The telescope used a mirror made of metal!

The telescope was used to look at the light from

If it is sunny, look at where the gap in the shadow of the tails falls on the curved plate. What time and month does it show?

Time

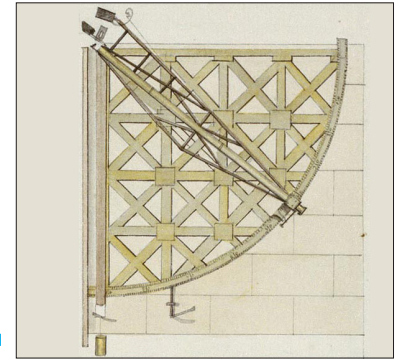
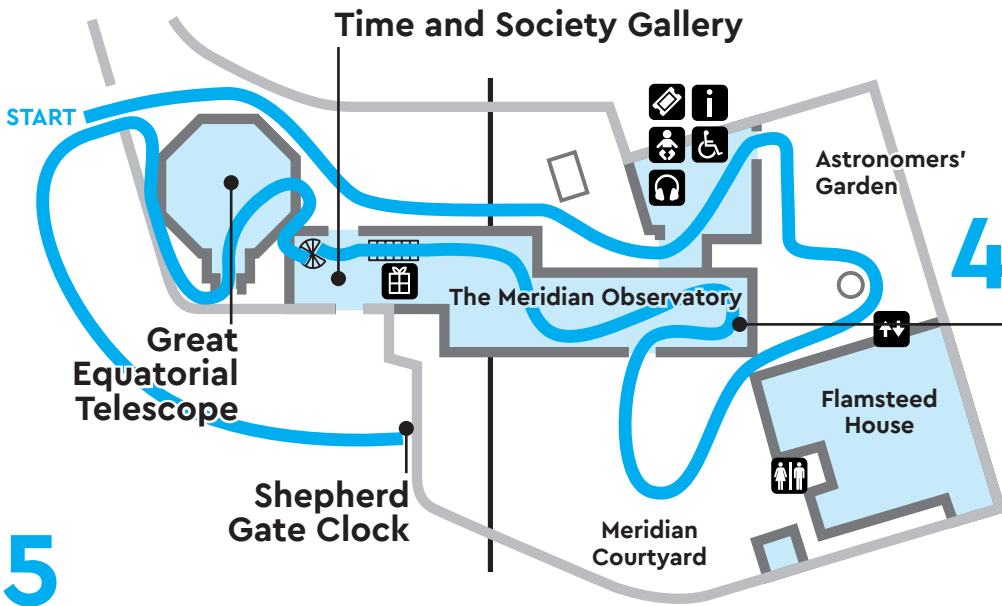
Month

Fun Fact

The Garden Sundial used to be located outside the National Maritime Museum, that's why it has a water-based theme.

What are the 2 animals shown?

3 KS2 School Trail – NORTH SITE



4 Halley's Transit Room

Here, there is a telescope that looks straight up and down. Our eyes are like mini-telescopes – they collect light to allow us to see things.

One similarity between our eyes and a telescope is...

One difference between our eyes and a telescope is...

5 Time and Society Gallery

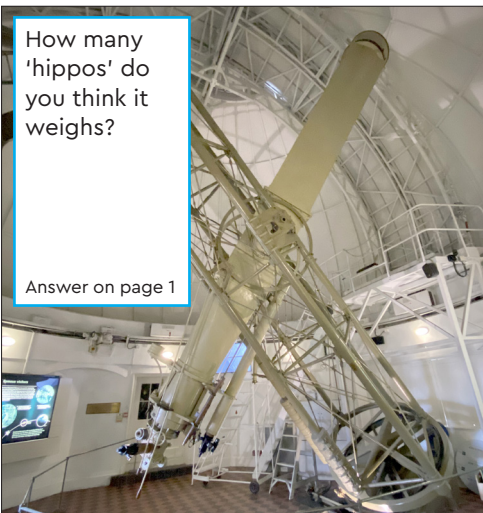
This gallery has many clocks and also quite a few sundials. Find a sundial you like and draw it in the space.

Can you use a sundial at night?

Your favourite sundial

6 The Great Equatorial Telescope

It is the biggest telescope of its kind in the country! It was built in the late 1800s and has a 28-inch glass lens at the top. The telescope is over 28 feet long!



How many 'hippos' do you think it weighs?

Answer on page 1

7 Shepherd Gate Clock

Find the Shepherd Gate Clock outside the main observatory gates. It is a bit different to a normal clock.



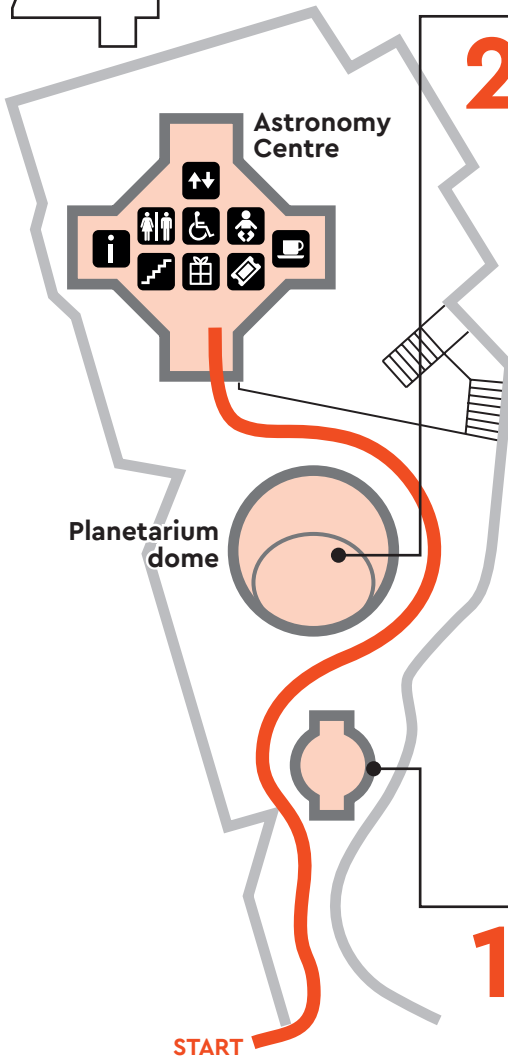
What is different about this clock?



This photograph of the Shepherd Gate Clock is from 1870. See if you can recreate it! (Maybe your teacher has a camera or mobile phone).

4

KS2 School Trail – SOUTH SITE



2 Peter Harrison Planetarium

Under this 45-ton bronze-clad cone is the Peter Harrison Planetarium. If you look up at the sky along the line at the back of the cone, it will show you where the North Star is – if it was night time!

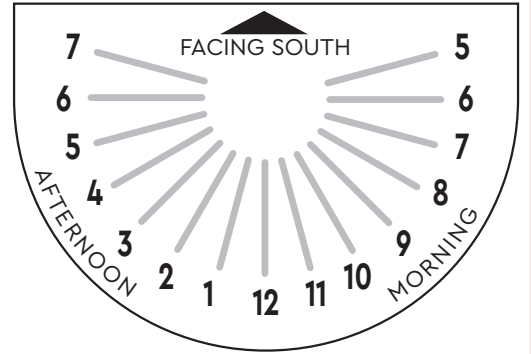
When the Sun shines, the cone acts as a sundial by casting a shadow – it's how people told the time before clocks were invented!



What time is it right now? (use a watch)

..... Hours Minutes

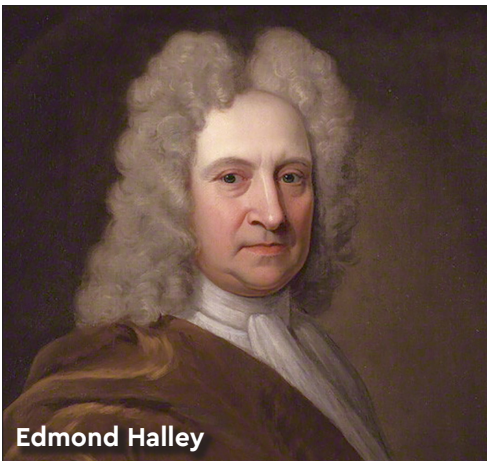
...and where would the Sun's shadow be on this sundial?



1 Altazimuth Pavilion

The Altazimuth Pavilion is now home to a telescope called **AMAT** (Annie Maunder Astrographic Telescope) – it's actually 4 telescopes in 1!

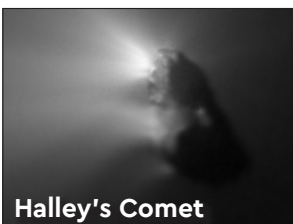
On top of its dome is a weathervane shaped like Halley's comet. The comet was first identified to be orbiting the Sun by Astronomer Royal Edmond Halley in 1705. The bright light it produced made it visible to the naked eye.



Edmond Halley

Fun Fact

Halley saw his famous comet in 1682 (along with John Flamsteed). He used Isaac Newton's laws of gravity to figure out that it returned every 76 years, but didn't live long enough to see if he was correct.



Halley's Comet

Draw your own weathervane (It should be a space-related object).