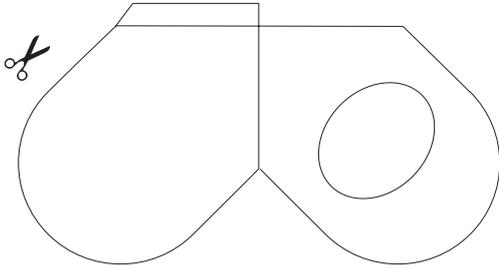


USING YOUR PLANISPHERE

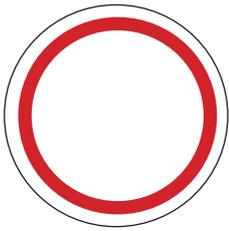
Planisphere cover



Split pin



Western star wheel



WHAT YOU NEED:

1. A4 and A3 sheets of paper
2. Printer
3. Split pin
4. Scissors
5. Tape
6. Planisphere cover
7. Western star wheel

WHAT YOU NEED TO DO:

Follow these simple instructions to make and use your planisphere.

THE PLANISPHERE COVER

- Print out your planisphere cover on an A3 sheet.
- Cut around the edge of the cover.
- Cut the white oval from the cover.
- Fold the cover in half along the black line. Make sure it is a sharp fold so the planisphere sits flat.

THE WESTERN STAR WHEEL

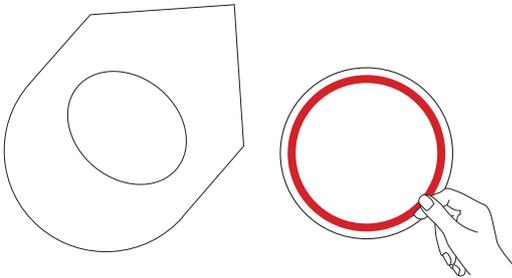
- Print your star wheel on an A4 sheet.
- Cut around the edge of the star wheel.
- Put the western star wheel into the planisphere cover so that you can only see part of it through the oval window. The edge of the star wheel should also be visible outside the edge of the cover.
- The centre of the star wheel marked with a + should be aligned with a similar + on the back cover.
- Insert the split pin, pointy end first, from the front side of the star wheel.
- Carefully separate the two arms of the split pin and spread them so they hold the two parts together.
- Check the star wheel rotates freely.
- Your western planisphere is now ready to use!

SEAL THE PLANISPHERE

- When you have finished making the planisphere you can seal it by using sticky tape to close the edge.

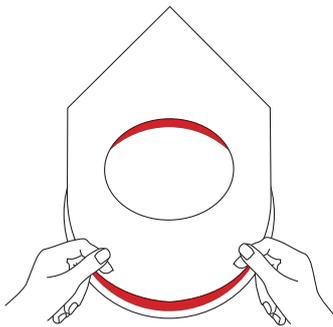
USING YOUR PLANISPHERE

1



Put the star wheel into the planisphere cover so that you can only see part of it through the oval window.

2



Hold the planisphere with south at the bottom and looking south.

HOW TO USE YOUR PLANISPHERE

The edge of the oval window represents the horizon for Sydney, or any other location, at a latitude of 35° south. The centre of the oval represents directly overhead or zenith. The central pin represents the south celestial pole which is the point of rotation in the sky directly above south as shown with a compass. On the edge of the moveable disc are marked months and days. The time is indicated on the edge of the planisphere cover.

To find what stars and constellations are visible at the time you are looking, match the date and time on the planisphere to the date and time you are observing. The stars that are then shown in the oval are those visible at that time and date.

In order to match the stars on the planisphere with those in the sky, hold the planisphere over your head, face down, and have the south direction on the planisphere pointing south. It is now possible to find your way around the sky by comparing the stars on the planisphere with those in the sky.

If you find looking straight up a little tiring, try this method. Hold the planisphere so that the direction you are facing (north, south, east or west) is shown at the bottom of the oval window. The centre of the chart represents the point directly above your head, called the zenith, and the outer circular edge represents the horizon. This is more comfortable but much of the text may appear upside down.

Challenge:

1. Move the star wheel to midnight on 1 January. What two bright stars (big block dots) are high in the sky at this time?
2. At what time of year does the Milky Way stretch from the east to the west around 7pm?
3. What is the worst time of year to see the Southern Cross at around midnight?

Planisphere cover

Print on an A4 sheet

Sydney Observatory

How to use the planisphere

The oval opening is a map showing the stars and constellations in the night for a latitude of 35 degrees south. The centre of the map is the point directly above your head, called zenith. The outer oval edge is the local horizon and the central pin is the south celestial pole. Stars with a brightness of magnitude of 4.5 or more are shown on the map (see brightness scale below). On the edge of the movable disc are marked months and days, with standard local time indicated on the edge of the outer cover.

For example to see what stars are visible on the night sky for 8.00pm on June 18 turn the movable disc to line up 8.00pm on June 18. To use the star map, rotate the map so that the direction you are facing (north, south, east or west) is shown at the bottom. e.g. if facing south hold the planisphere with the south horizon on the bottom. It is now possible to find your way around the sky by comparing the stars on the planisphere with those in the sky.

Classic Star Map Legend

Examples of object labels; LMC, SMC, M7, Teapot, MGC 3372, Sinistra, M8.

Examples of constellation labels; CRUX, VELA, OCTANS, LEO, ORION, VIRGO

-  Orion's Belt or Teapot
-  Connects constellations
-  False of Diamond Cross
-  Constellation line

-  Nebula
-  Galaxy
-  Double star
-  Variable star
-  Open star cluster
-  Globular star cluster
-  Star with exoplanet
-  Large open star cluster
-  SMC or Small magallemic cloud
-  LMC or Large magallemic cloud
-  Centre of the Milky Way Galaxy



- Star Brightness**
-  -1 Brightest stars
 -  0
 -  1
 -  2 (Magnitude)
 -  3
 -  4
 -  4.5 Faintest stars

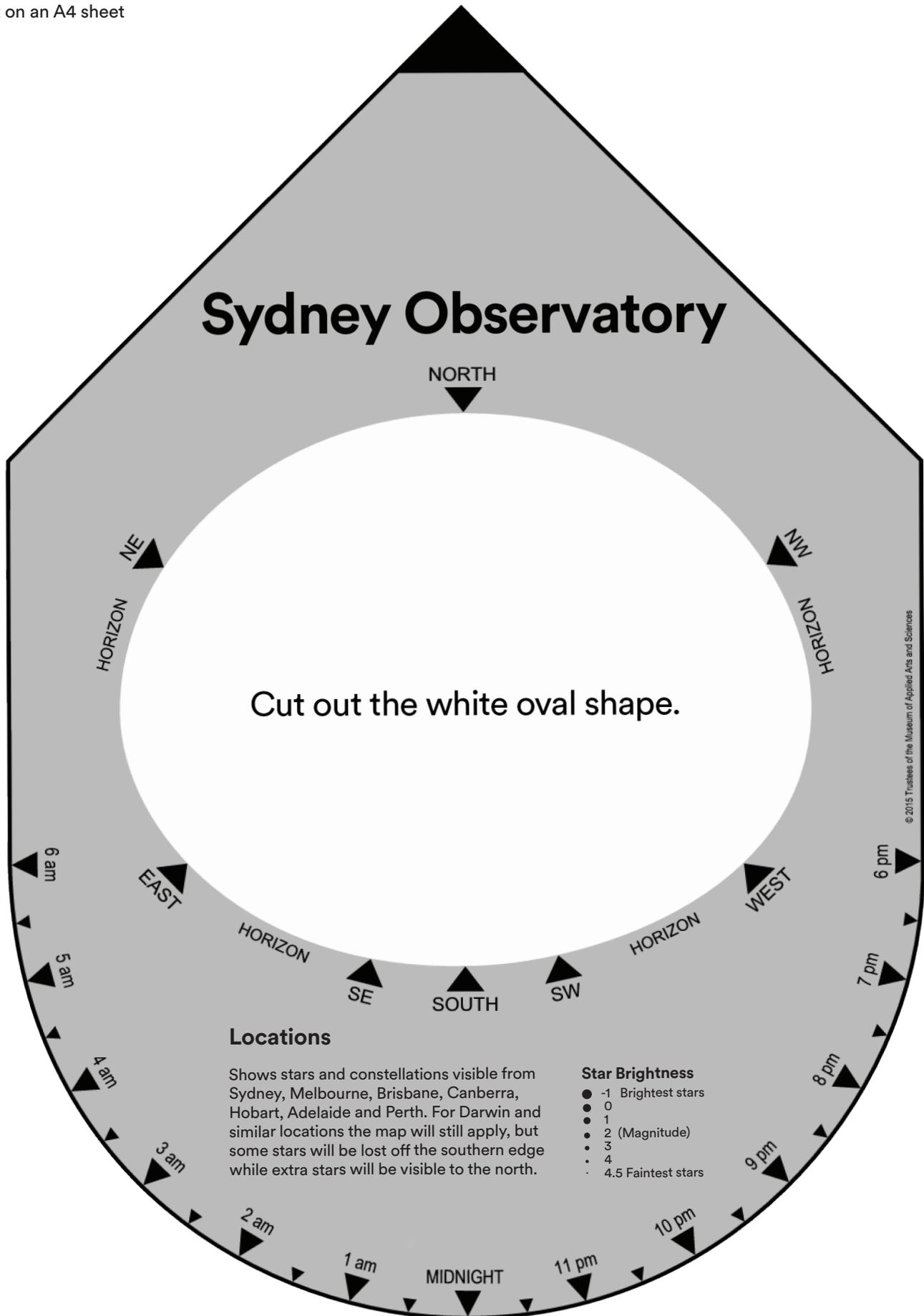


This planisphere was created by Sydney Observatory
Astronomer Dr. Martin Anderson,

Funded by the NSW Government
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of Applied Arts and Sciences.

Planisphere cover

Print on an A4 sheet



Western star wheel

You will need to print on an A4 sheet

