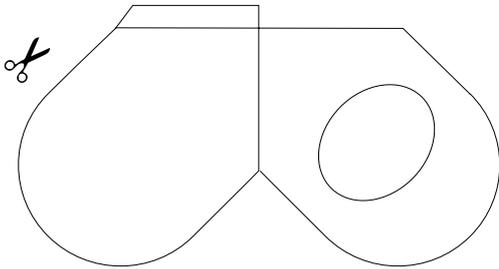


LEARNING RESOURCE

MAKING YOUR PLANISPHERE

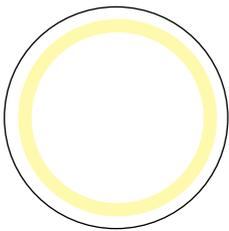
Planisphere cover



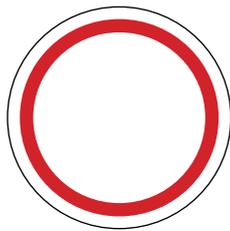
Split pin



Western star wheel



Indigenous 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 (plain yellow edge)
8. Indigenous star wheel (red edge)

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!

THE INDIGENOUS STAR WHEEL

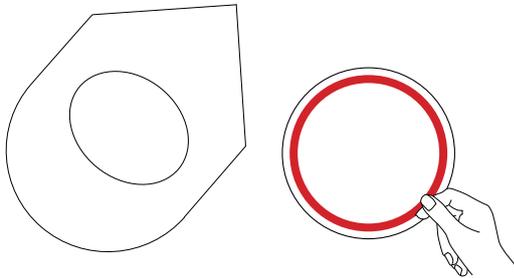
- Print your star wheel on an A4 sheet.
- Cut around the edge of the star wheel.
- Remove the split pin that is holding the western star wheel in place.
- You can either remove the western star wheel or simply put the Indigenous one inside the cover on top of the western wheel. (You won't lose the western one this way)
- Check that now you can see the Indigenous wheel through the oval cut-out.
- Replace the split pin as before and secure by spreading the arms.

SEAL THE PLANISPHERE

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

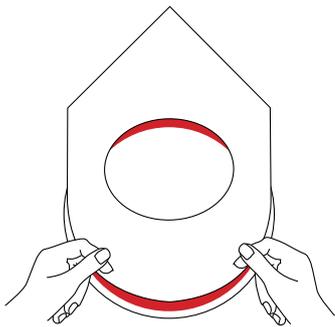
LEARNING RESOURCE USING YOUR PLANISPHERE

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.

Western wheel 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?