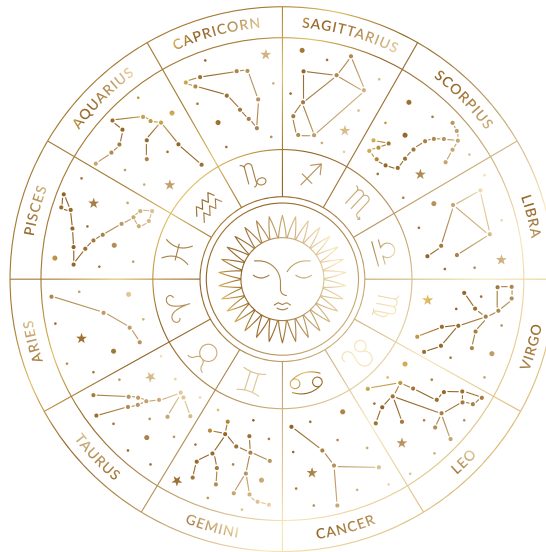


STAR WHEELS



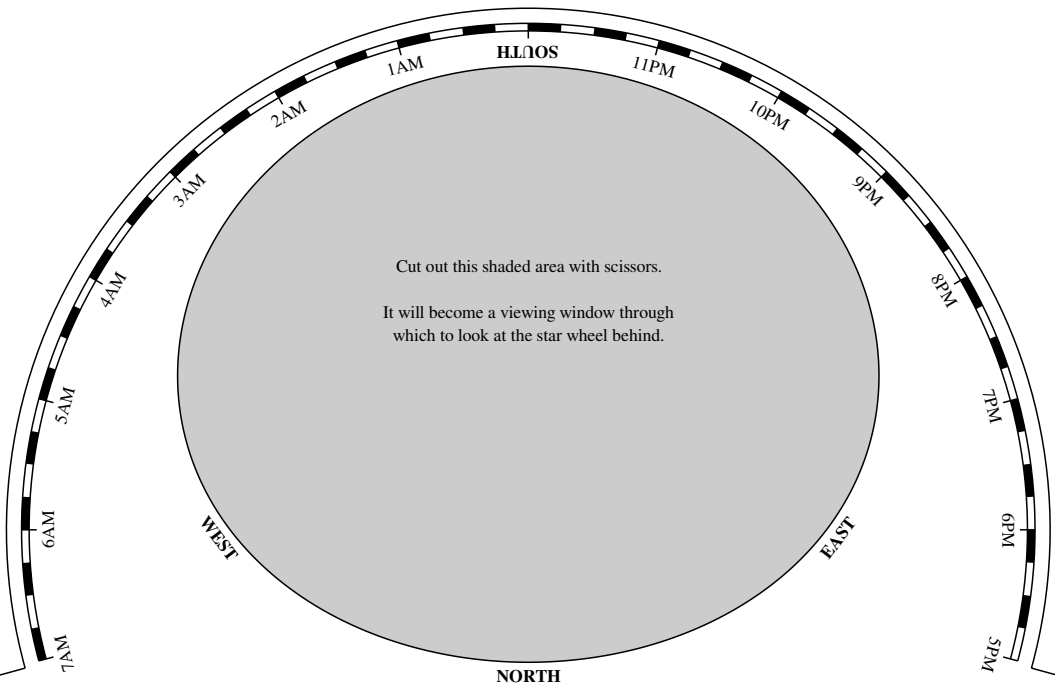
MATERIALS

- Scissors
- Glue/tape or a stapler
- Cardstock/thick paper
- Printed template

DIRECTIONS

1. Print out the template on thick paper (if you don't have thick paper, regular paper will do).
2. Cut out the planisphere holder around the dark, outer edges. Also cut out the grey oval in the middle of the holder. If printed on regular paper, past the cut-out template onto a manila folder or something similar to make it sturdier. Cut it out again.
3. Fold the holder in half, so the outside edges line up and the point of the bottom half is in the middle of the window of the upper half. Staple or tape the sides together to create a pocket with the template.
4. Cut out the constellation star wheel around the dark, outer edge.
5. Place the constellation star wheel in the pocket of the planisphere holder. Rotate the wheel so the current date on the edge of the star wheel lines up with the current time on the edge of the planisphere holder. The stars/constellations visible through the window are the ones you'll be able to see at that date and time, just be sure to line up the compass directions with the correct horizon.
6. Try taking your planisphere outside on a clear night to find the constellations in the sky! Orienting the planisphere is critical - be sure to line up the window correctly to the cardinal directions.

For more fun activities, follow us on social media or visit
<https://slco.org/clark-planetarium/clark-planetarium-classroom/>.



PLANISPHERE 40°N

1

Turn the starwheel until you find the point around its edge where today's date is marked, and line this point up with the current time. The viewing window now shows all of the constellations that are visible in the sky.

2

Go outside and face north. Holding the planisphere up to the sky, the stars marked at the bottom of the viewing window should match up with those that you see in the sky in front of you.

3

Turn to face east or west, and rotate the planisphere so that the word "East" or "West" is at the bottom of the window. Once again, the stars at the bottom of the viewing window should match up with those that you see in the sky in front of you.

For more information, see <https://in-the-sky.org/planisphere> © Dominic Ford 2020.

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A planisphere is a simple hand-held device which shows a map of which stars are visible in the night sky at any particular time. By rotating the star wheel, it shows how stars move across the sky through the night, and how different constellations are visible at different times of year.

The constellations of the night sky revolve around the celestial poles once every 23 hour and 56 minutes. The idea of representing the night sky as a flat map, which is turned to emulate the night sky's rotation, dated back to the ancient Greek astronomer Hipparchus (circa 150 BC). The fact that this rotation takes four minutes less than the length of a day means that stars rise four minutes earlier each day, or half-an-hour earlier each week. Through the year, new constellations become visible in the pre-dawn sky, and disappear into evening twilight.

