



Teacher's Pet

Astronomical Phenomena

Exploring the most stellar phenomena in the sky above!

Activity 1: Moon Adventure

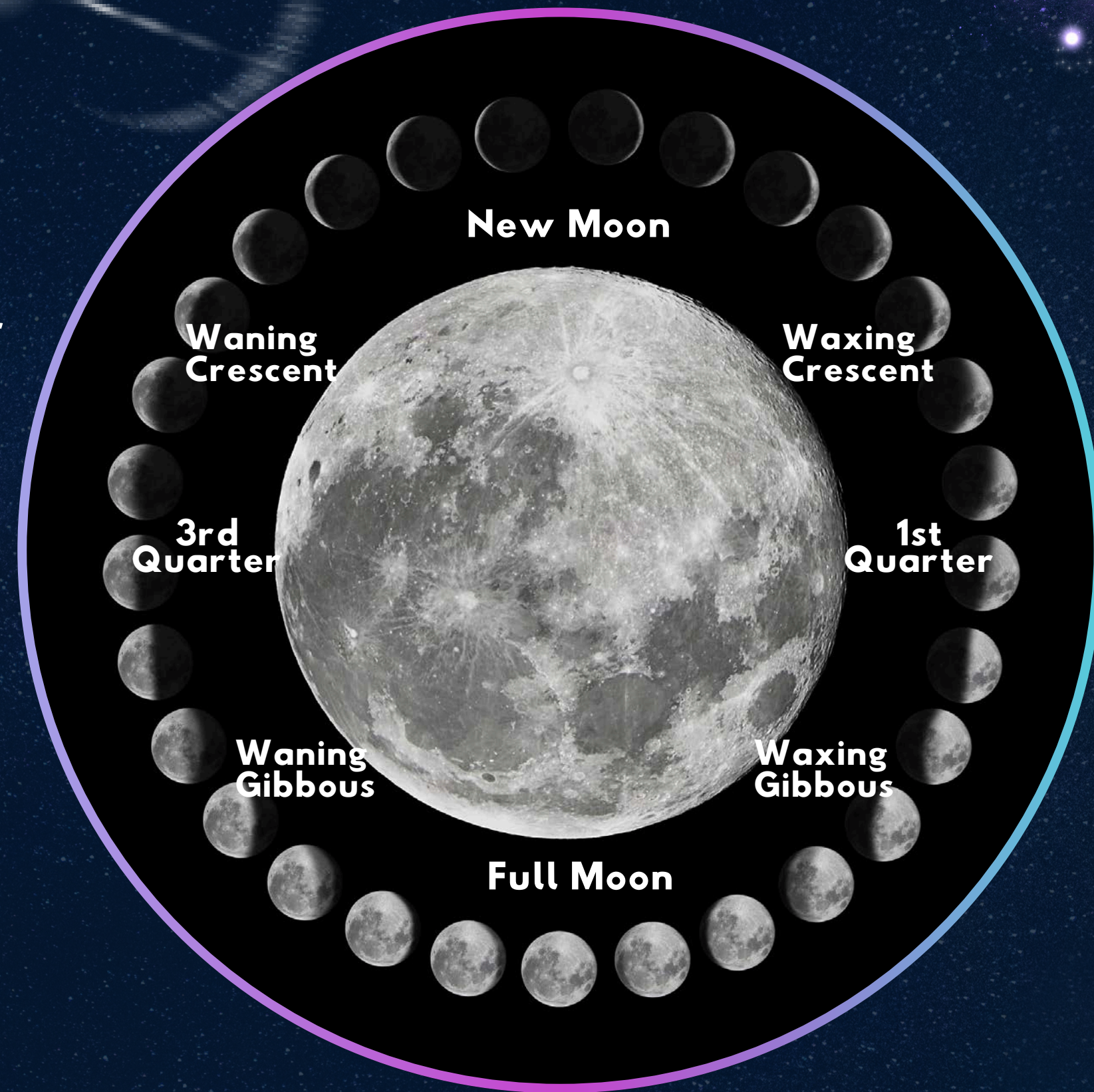


Moon/Luna

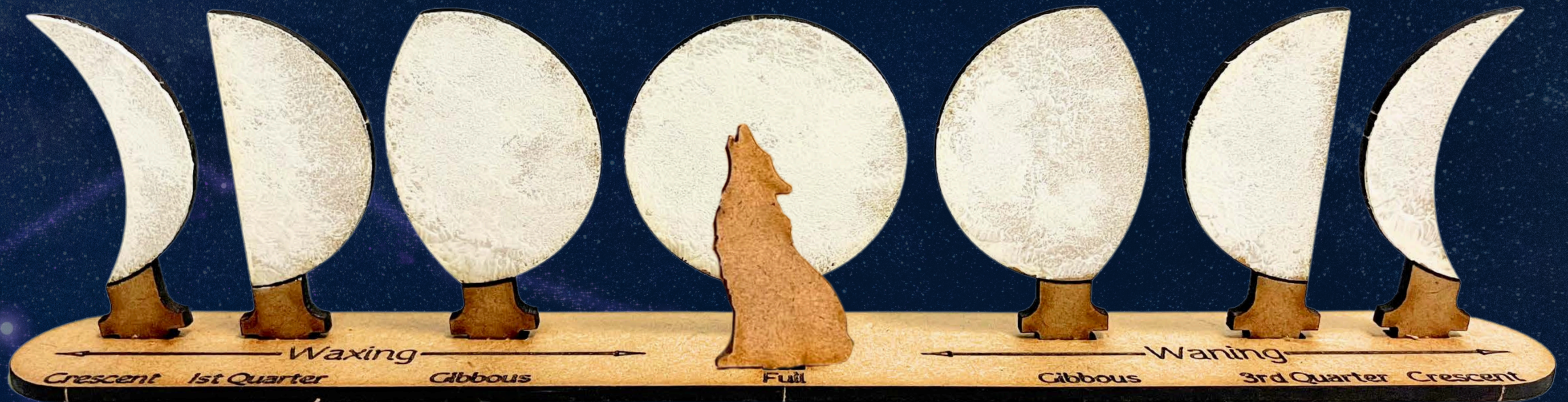
The Lunar Phases!

- New Moon - we can't see it
- Waxing - moon looks like it's getting bigger
- Full Moon - whole moon is visible
- Waning - moon looks like it's getting smaller
- Gibbous - moon is between Half and Full
- Crescent - moon is between Half and New

Many cultures use the lunar cycle to mark time over the year and even relate the cycles to the different seasons!



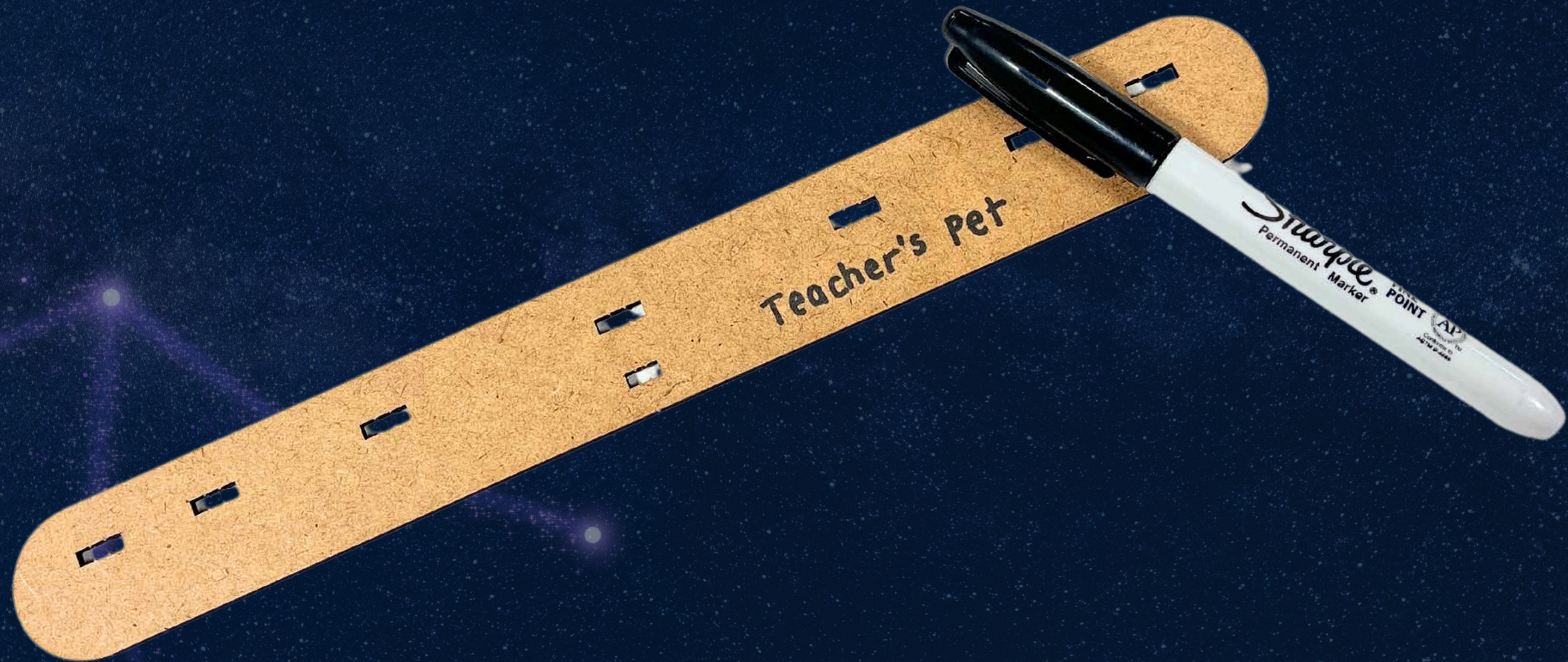
Project Time: Lunar Cycle Model



Step 1: Gently pop out each piece of the model.



Step 2: Write your name on the bottom of the base.



Step 3: Organize your pieces in order.



Waxing
crescent



First
quarter



Waxing
gibbous



Full moon



Waning
gibbous

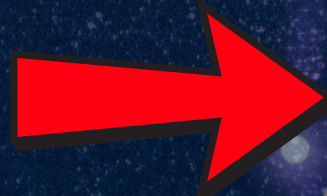


Third
quarter



Waning
crescent

Look for
the line
at the
bottom



Step 4: Using a cotton ball and white paint, dab a thin layer of paint on each moon piece.



paint the front side
above the line

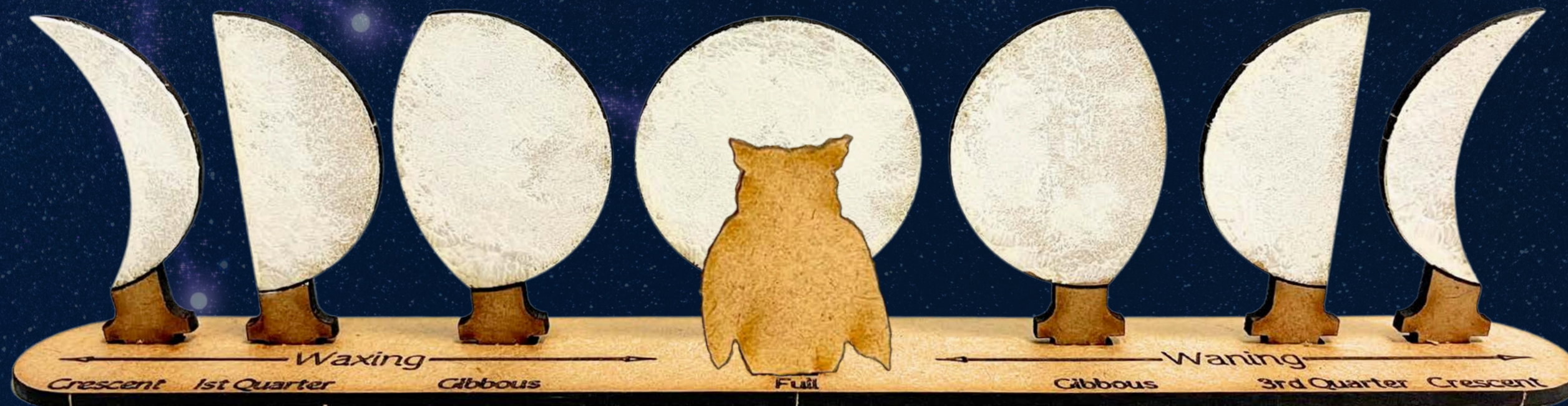
Lunar Phase Game

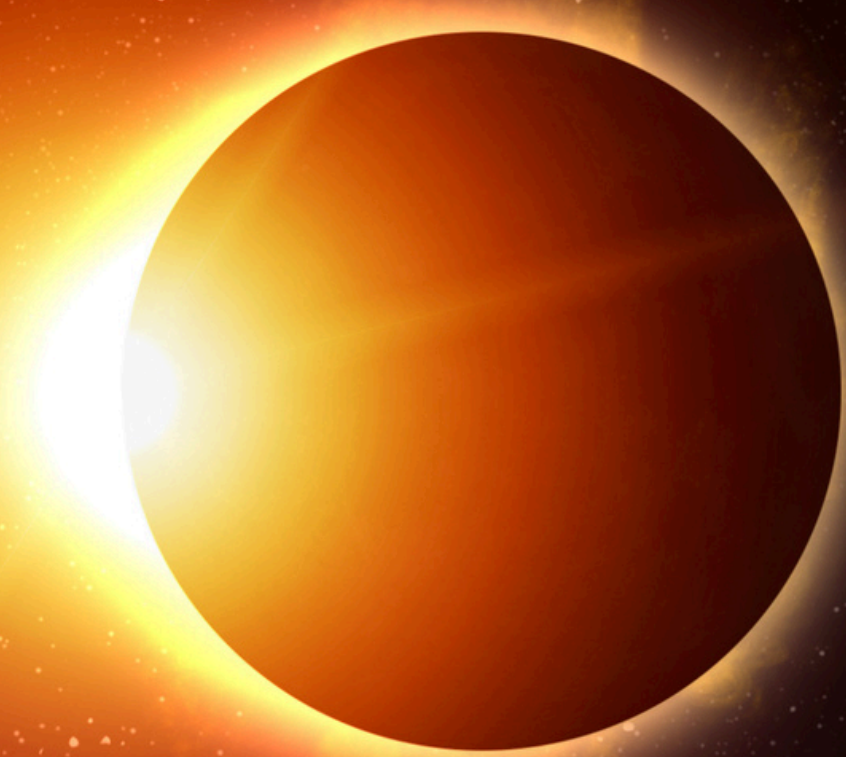


Step 5: Once the pieces are completely dry, gently wiggle them into the base in order.

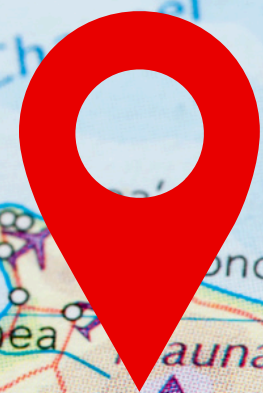


Step 6: Choose the wolf or owl and insert it into the centre slot to complete your model.





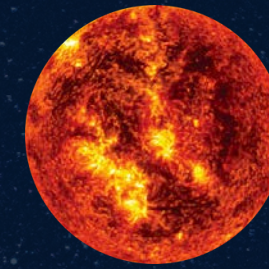
**W.M. Keck Observatory
Waimea, Hawaii**



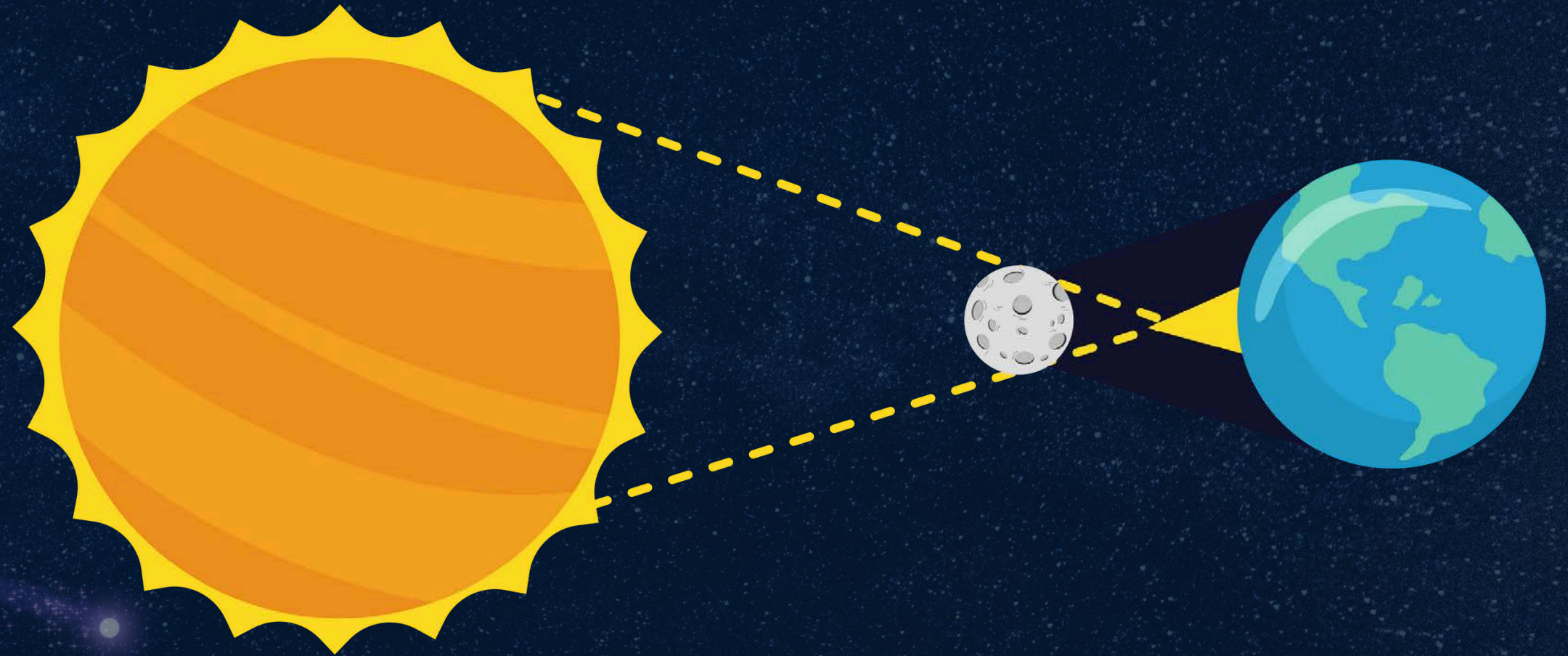
Activity 2: Eclipse Adventure



Solar Eclipse



Solar Eclipse Video

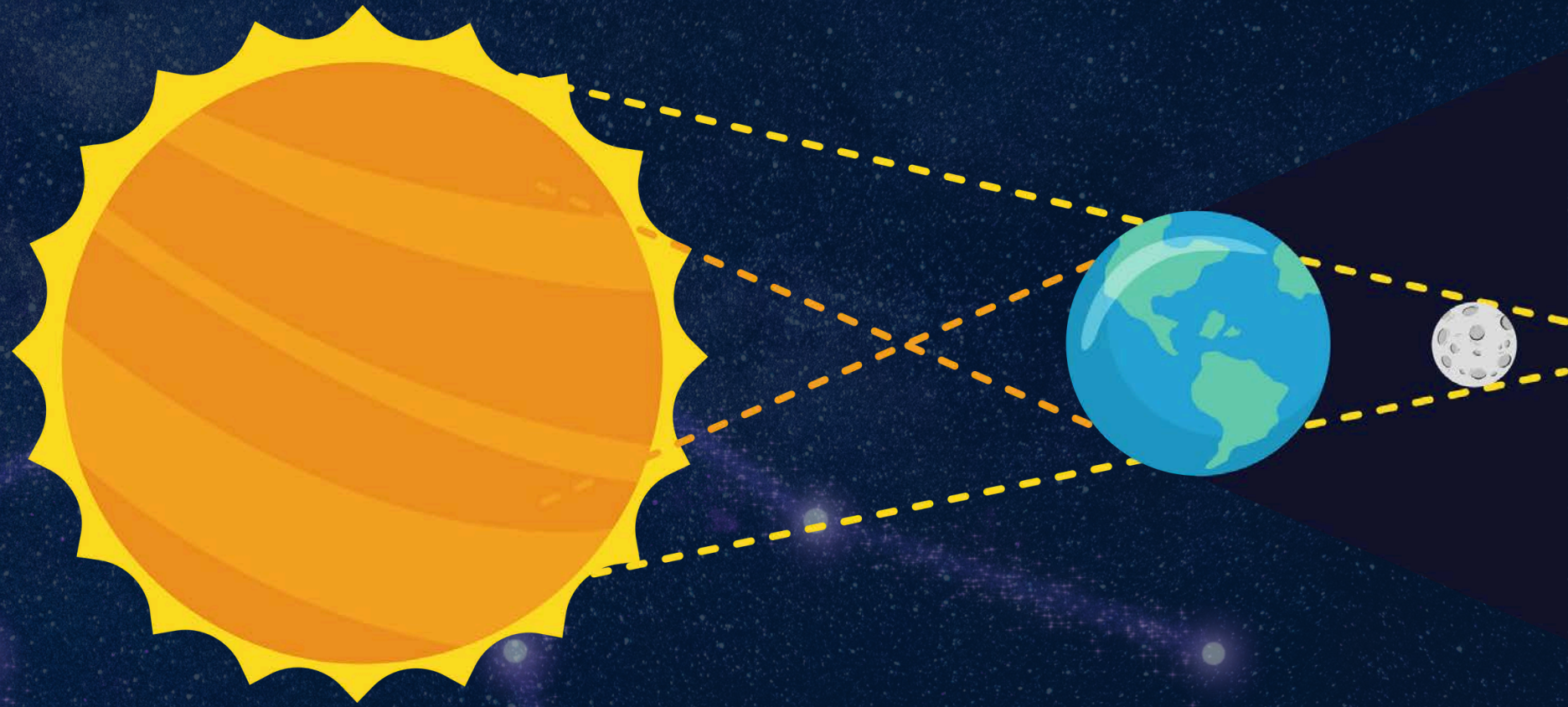


These phenomena are caused when the moon passes in front of the Sun, casting a Moon shadow on Earth.

Lunar Eclipse

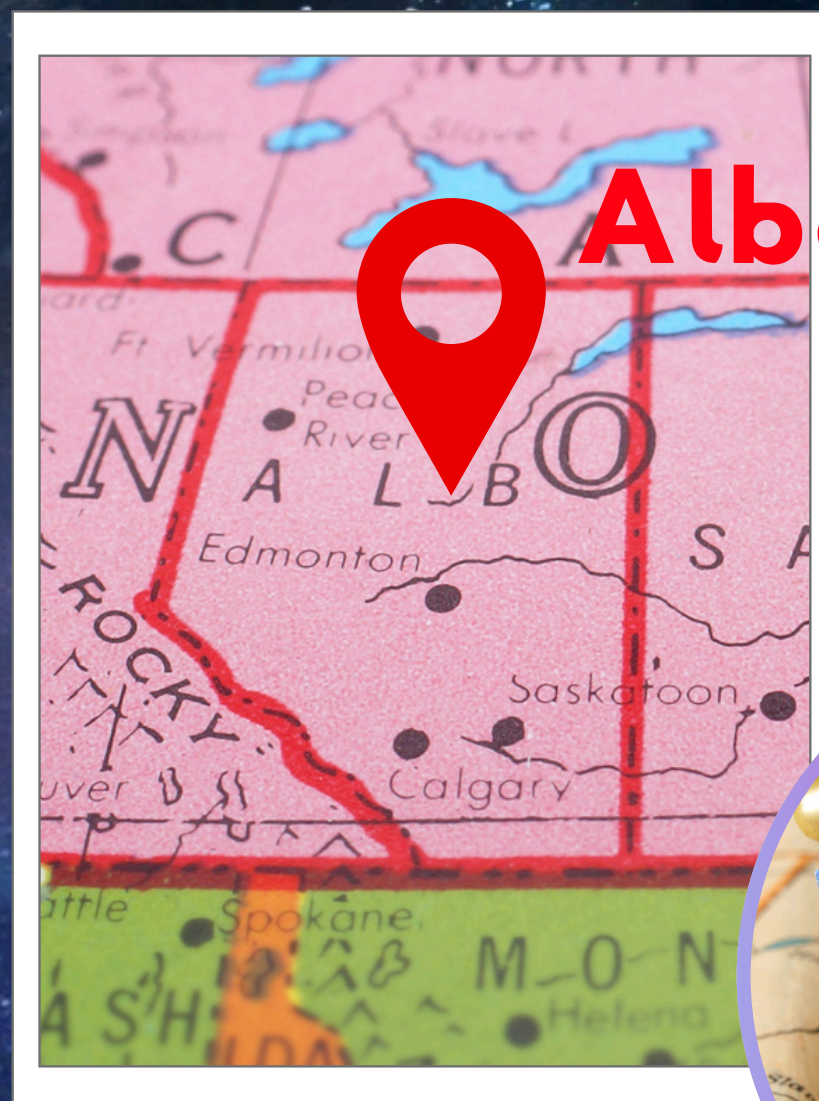


Lunar Eclipse Video

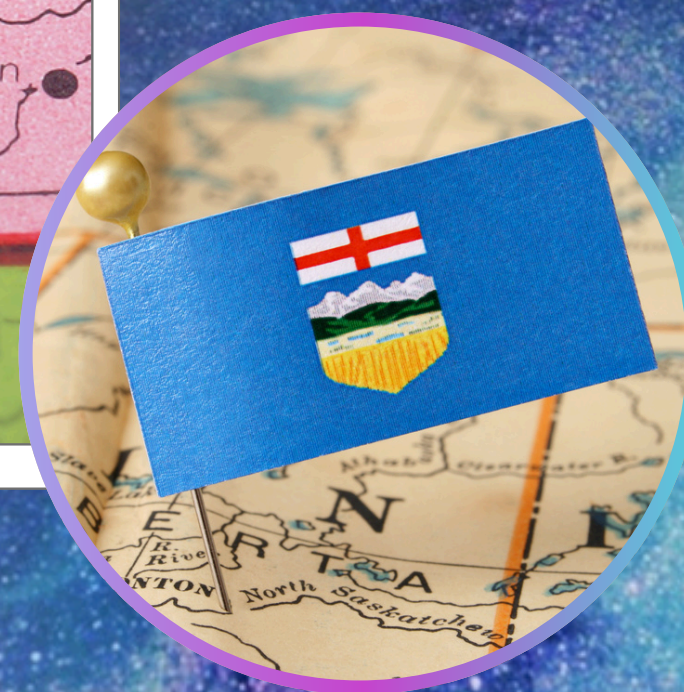


These phenomena are caused when the Earth passes right between the Sun and the moon, casting a shadow of Earth on the Moon.

Activity 3: Equinox and the 4 Seasons Adventure



Alberta, Canada



How Earth Keeps Time



How Earth Keeps Time Video

Seasons are an example of astronomical phenomena caused by Earth's 23.5° tilt.

If you imagine Earth's orbit as a flat surface, Earth would look like a tilted spinning top—but it stays steady thanks to the Moon's gravity.



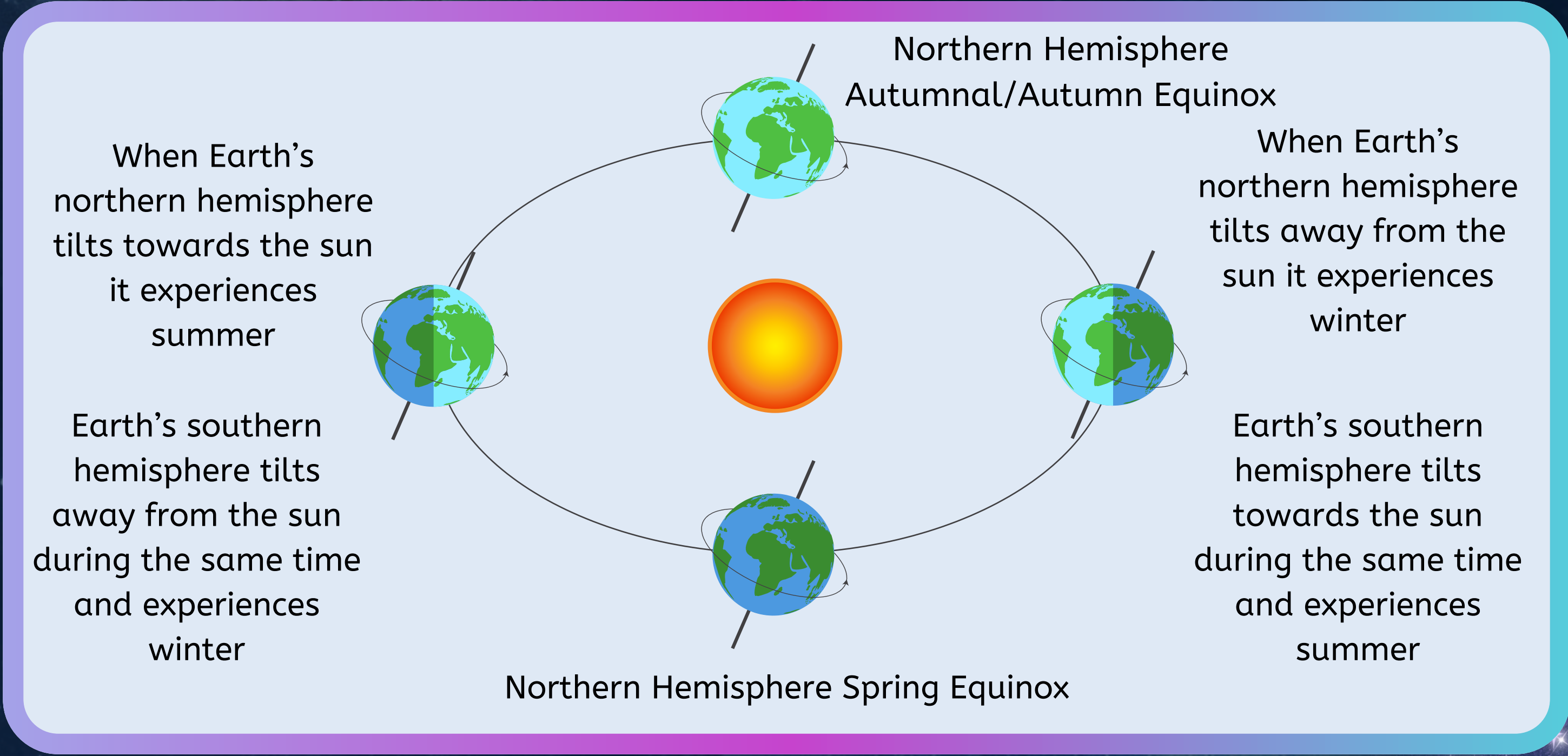
Hemispheres

- northern & southern
- opposite seasons

Our Four Seasons

Equinox

- day & night are the same length



Solstice

- Longest or shortest day of the year



Polar Night

- sun doesn't rise fully above the horizon
- no sun during daylight hours
- last more than 30 days in Canadian north



Midnight Sun

- sun doesn't fully set below the horizon
- sunlight 24 hours
- lasts more than 56 days in Canadian north

Activity 4: Aurora Adventure



Aurora Borealis



Aurora Borealis Video

The Aurora Borealis, or Northern Lights, is a colorful light show in the night sky. It happens when bursts from the sun bump into Earth's magnetosphere. This creates beautiful colours like green, pink, and purple in the sky.



Thank You

Thanks for joining me
on this astronomical
adventure today!

