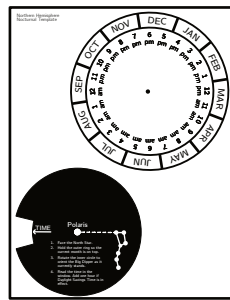


CREATING A STAR CLOCK

MATERIALS



Nocturnal Handout



Scissors



Earring, tie pin, or other pin with backing

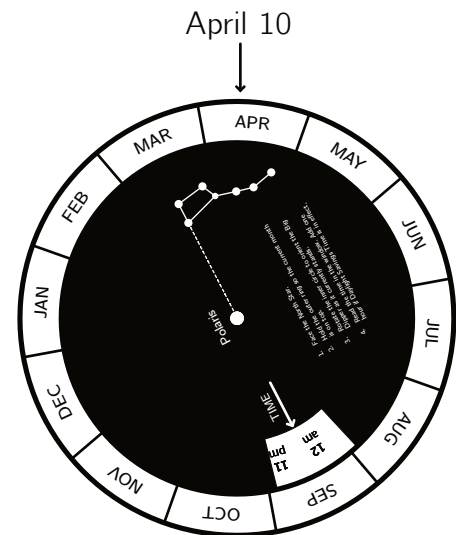
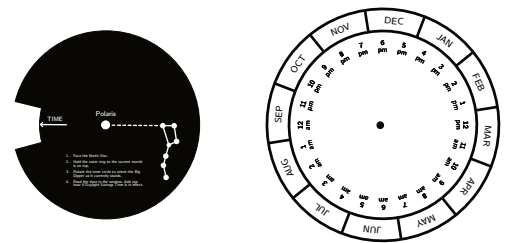
GOALS

- ★ Build a working star clock.
- ★ Use the star clock to tell time

TELL THE TIME WITH A NOCTURNAL

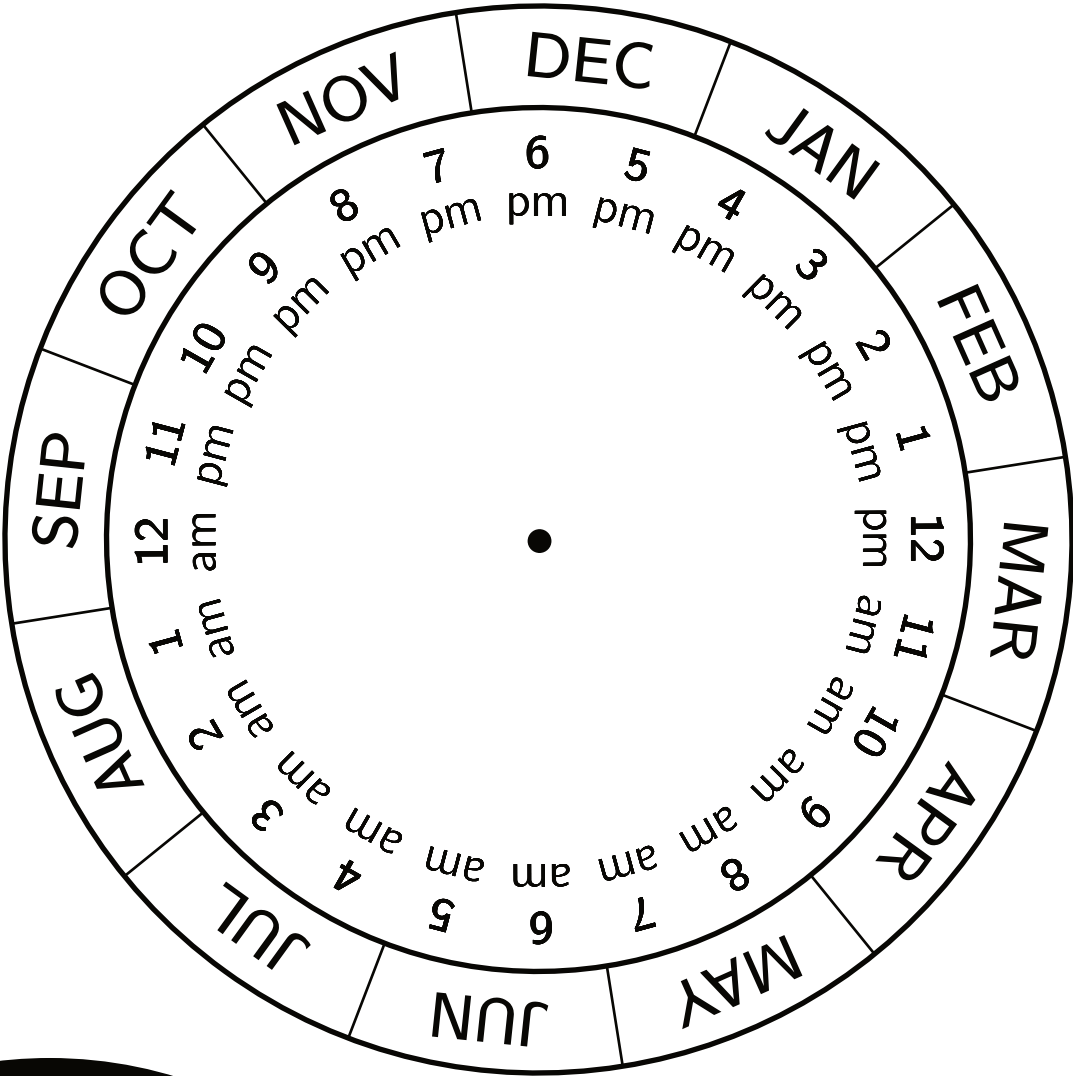
In this activity, you'll build a star clock called a nocturnal that will allow you to tell time by locating a constellation and orienting your nocturnal wheel to match the stars.

1. Cut out the two parts of the nocturnal from the template. Choose either the Northern Hemisphere template or the Southern Hemisphere template to match your location.
2. Poke a hole in the center of both discs separately, and then attach the black disc atop the white disc using the pin or earring to lock the discs together. You should be able to spin the discs separately.
3. Face straight north (or south).
4. Orient the white disc so that the current date is pointed straight up.
5. Locate the Big Dipper (or Crux) asterism.
6. Spin the black disc to match the asterism's location.
7. Read the time off the nocturnal. (Add one hour to the readout during daylight savings time.) In this example, the date is April 10 which is about a third of the way between March and May for the top of the white disc. The time indicated is between 11 pm and midnight, at about 11:45 pm. However, daylight savings time is in effect, so the time estimated by the nocturnal is 12:45 am.



If you happen to live in the far eastern edge of your timezone, you might want to subtract 30 minutes from the time reading on the nocturnal. If you live on the far western edge of your timezone, you might want to add 30 minutes to the time estimate of the nocturnal.

Northern Hemisphere
Nocturnal Template



TIME ←

Polaris

1. Face the North Star.
2. Hold the outer ring so the current month is on top.
3. Rotate the inner circle to orient the Big Dipper as it currently stands.
4. Read the time in the window. Add one hour if Daylight Savings Time is in effect.

Southern Hemisphere
Nocturnal Template

