

Low level of
supervision
 See important
safety note



Can be done indoors
or outdoors



Internet and camera
access are *optional*

Preparation

- Consider the most appropriate time for students to view objects in the sky.

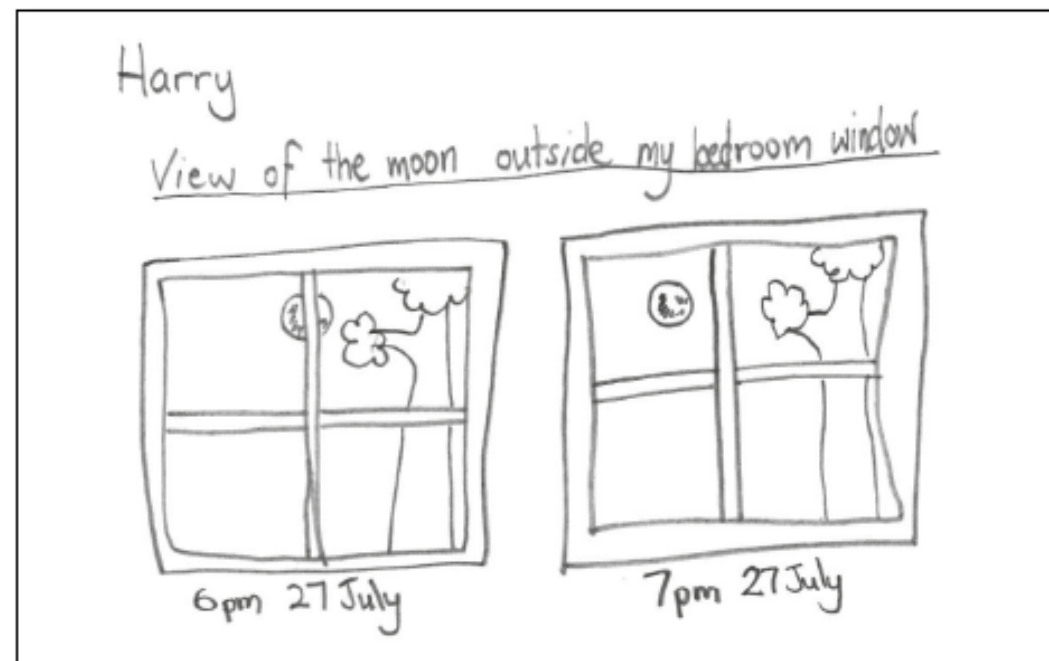
Purpose

- To use observations to describe how space objects move across the sky.

Description

1. Students observe an object in the sky, for example, the sun, moon or stars, from a specific location and make connections between the objects distance from another object using informal measurements. *For example, viewing the moon through their bedroom window.*
2. They record their observations, noting the time and location, drawing a picture to represent what they saw, and making notes about the distance between the object in the sky and another object. *For example, the moon appears to be one handspan away from the tree.*
3. Students return to the same location one hour later and observe the object in the sky again, relative to the same other object they compared it to in their previous observation. They record the same details for this second viewing as they did for the first.
4. Students may complete this task multiple times over days, or using multiple objects in the sky - such as the moon, or the stars.

IMPORTANT: Please remind students not to look directly at the sun, as this will damage their eyes.



EXAMPLE: A sample 'Sky viewing' task completed at home.

Before the task

- Ask students what they think about the positions of the sun, Earth and moon relative to each other, and how each of these objects move.
- Explain to students that they will be viewing an object in the sky and recording their observations.
- Discuss why it is important to note time, location and position details. (This will make the data collected by observation more accurate and reliable to draw comparisons from.)
- Discuss why it is important to return to the same location when making a second set of observation notes on the object at a later time.
- Discuss why it is important to not look directly at the sun, and other alternatives ways to determine the suns position without doing so (noting the intensity of the suns rays to determine how close your line of sight is coming to the sun, waiting until sunset to view the sun.)

After the task

- Discuss the observation records that students have created. You may like to use the following questions to guide you.
 - Did the position of the object in the sky change?
 - How do you know it changed?
 - Do you think the object in the sky will be in the same places at the same times tomorrow? Why or why not?
 - Why do you think the objects in the sky appear to be moving?
 - Are the movements of the sun, moon and stars similar or different? How?
 - What do your observations tell you about the position and movement of the sun, Earth and moon?
- You may wish to share your observation records with parents, carers, peers or teachers.

Explore some more

- Watch [this time lapse video](https://www.science.org.au/curious/video/askap-telescope-time-lapse) (<https://www.science.org.au/curious/video/askap-telescope-time-lapse>) taken by the ASKAP telescope in Western Australia. What do the images suggest about the movement of objects in the sky?
- Watch [this video showing a lunar eclipse](https://www.science.org.au/curious/video/lunar-eclipse-century). (<https://www.science.org.au/curious/video/lunar-eclipse-century>) the position of the sun, Earth and moon?
- [Subscribe to alerts from NASA](https://spotthestation.nasa.gov) (<https://spotthestation.nasa.gov>) that will let you know when you can observe the International Space Station fly above your location.
- Don't want to subscribe? No problem! [Enter any location into this site](https://in-the-sky.org/location.php), (<https://in-the-sky.org/location.php>) and a list of satellite observation opportunities will appear.
- Learn more about the Solar System at <https://www.nationalgeographic.com.au/search/?q=solar+system> or <https://education.abc.net.au/home#!/topic/496370/space-and-our-solar-system>



SAFETY

Discuss the risks and dangers of looking directly at the sun. Remind students that it is NEVER a good idea to look directly at the sun as this will cause eye damage.