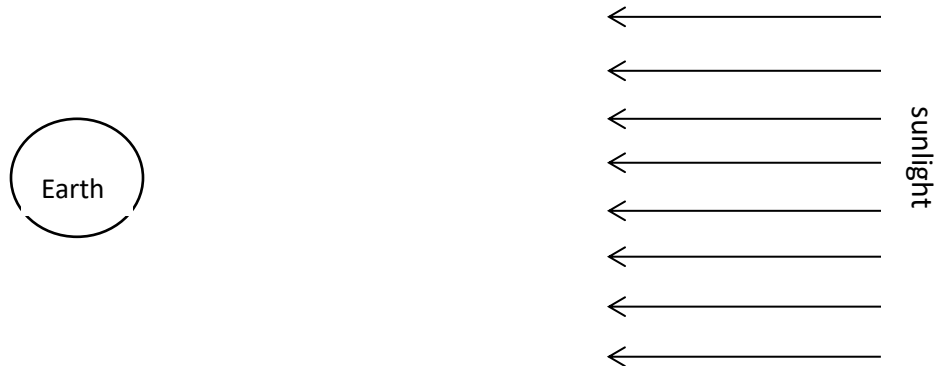


Worksheet 5: The Sun & Moon

1. The figure below shows Earth as seen from space. If sunlight is shining as shown, where would you place the moon in order to see First Quarter phase? Third Quarter? New Moon? Full Moon? Show the Moon as a circle for each of the mentioned phases, as seen from above. Shade the side of the Moon that will be dark.



2. Discuss and decide: are the **"dark side"** and the **"far side"** of the Moon synonyms? Explain your answer and illustrate with sketches.

3. Why do we always see the same side of the Moon from Earth?

4. Draw the arrangement of the Sun, Earth and Moon for a Total Lunar Eclipse

5. Draw the arrangement of the Sun, Earth and Moon for a Total Solar Eclipse

6. What causes the Aurora? Why are we able to see them in the sky? Why do we see different colors during an Aurora Display?

7. Define Space Weather. How can spaceweather affect satellites and humans on long duration space travel? How does space weather affect humans on Earth? Would you go into space or walk on the Moon or Mars knowing what you now do about space weather?