

# Science Unit F

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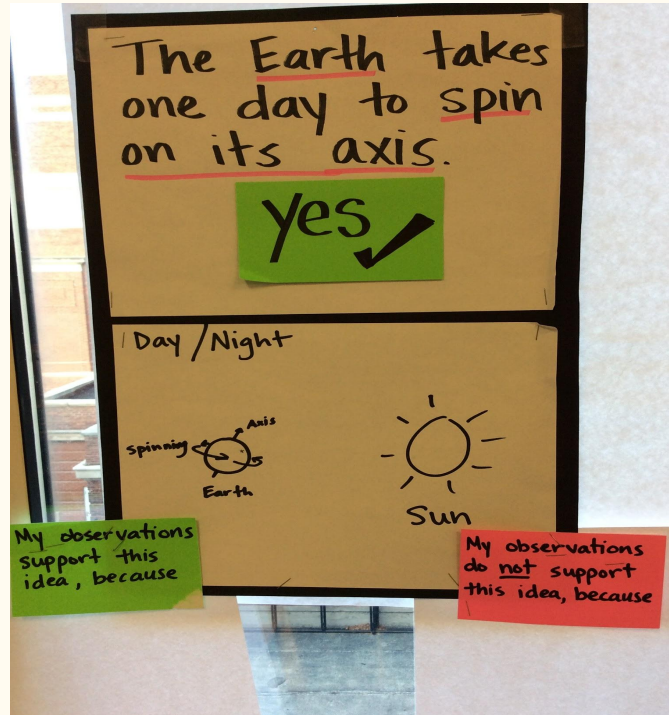
6:00  
Universal Time

# Day Night Cycle



# DAY-NIGHT CYCLE

The day-night cycle is caused by the rotation of Earth on its axis. Since the Earth is also tilted when it rotates most of the Northern Hemisphere is facing toward the sun which is the day and most of the Southern Hemisphere is facing away which means it's night. An average day on Earth has 12 hours of day and 12 hours of night. This picture shows the Earth spinning or rotating on its axis while facing the sun which causes the day night cycle.





# Seasons

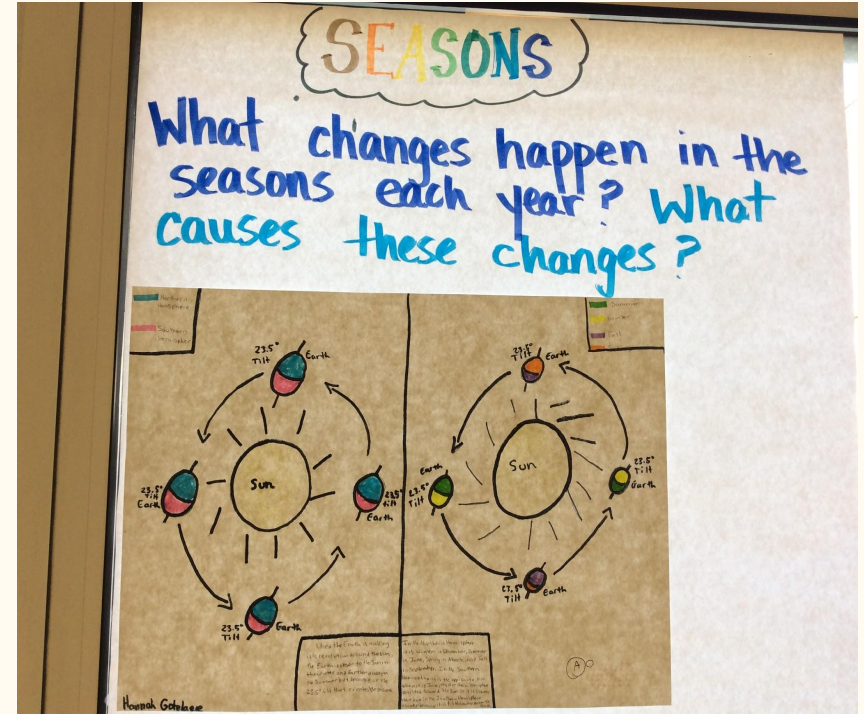


<http://irvinggfm.deviantart.com/>

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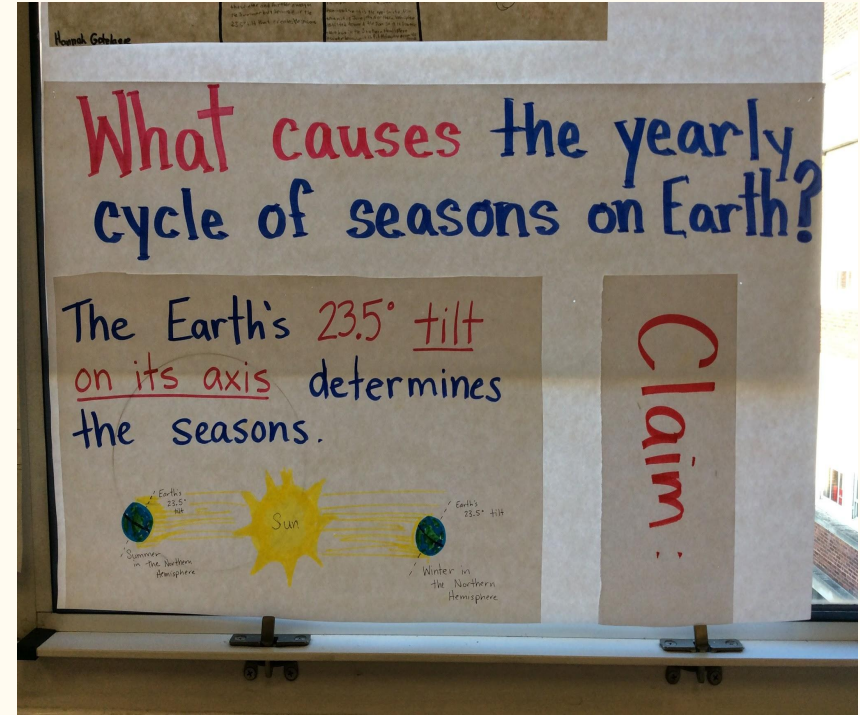
# SEASONS

The seasons are not caused by the distance between the Earth and the Sun because in the winter the Earth is closer to the Sun and in the Summer the Earth is farther away from the Sun. What causes it is the tilt of the Earth. Also the Northern and Southern Hemisphere have the opposite seasons, for example when it is winter in the Northern Hemisphere but at the same time it is summer in the Southern Hemisphere.



# SEASONS

What causes the seasons is when the Earth is on its 23.5 tilt on its axis. The distance does not determine the seasons because in winter the sun is actually CLOSER than it is in summer which doesn't make sense if we thought the distance determined it. The Earth is tilted most toward the sun in the Northern Hemisphere which means it is summer. The Southern Hemisphere is tilted most away when we have summer in the Northern Hemisphere.



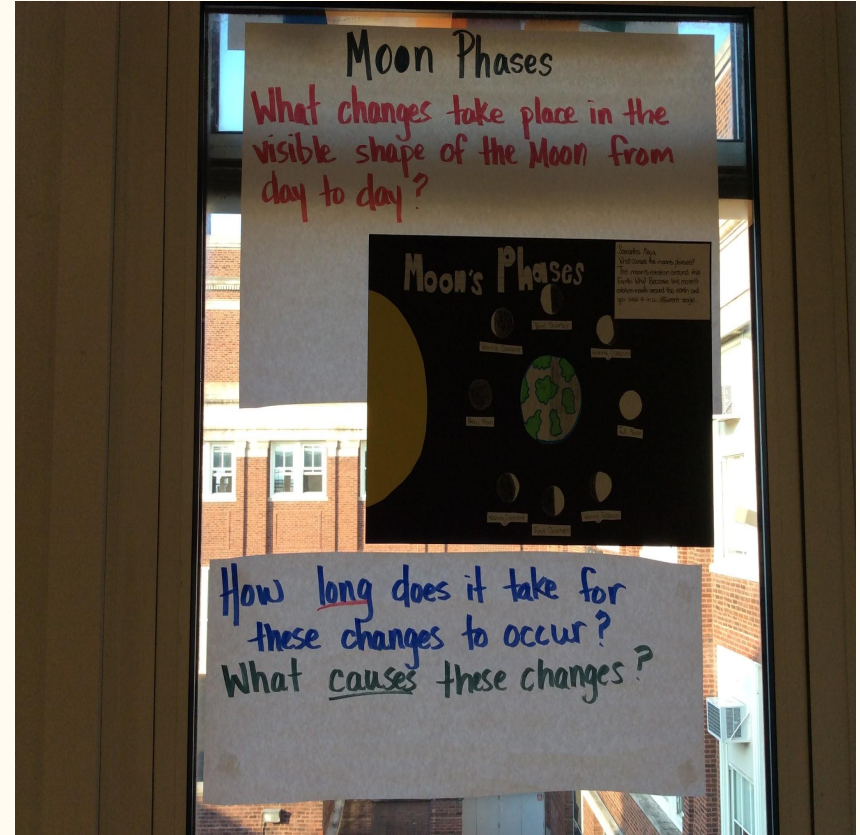


# Moon Phases



# MOON PHASES

The moon phases are caused by the moon rotating around the earth as the earth rotates around the sun. When the moon is facing the earth and sun the earth blocks some light so from our angle we see the phases of the moon. The moon is actually always half lit but from our perspective we see the different seasons.





# MOON PHASES

The moon phases in order are new moon, waxing crescent, first quarter, waxing gibbous, full moon, waning gibbous, third quarter, and waning crescent. Then it just keeps repeating. It also takes a month to complete a full cycle of the moon phases.

