Chapter 20 DRW

Lesson 1 Earth's Motion

Name _____

Skim *Lesson 1 in your book. Read the headings and look at the photos and illustrations. Write three things you want to learn more about as you read the lesson. Write your ideas in your Science Journal.*

Main Idea

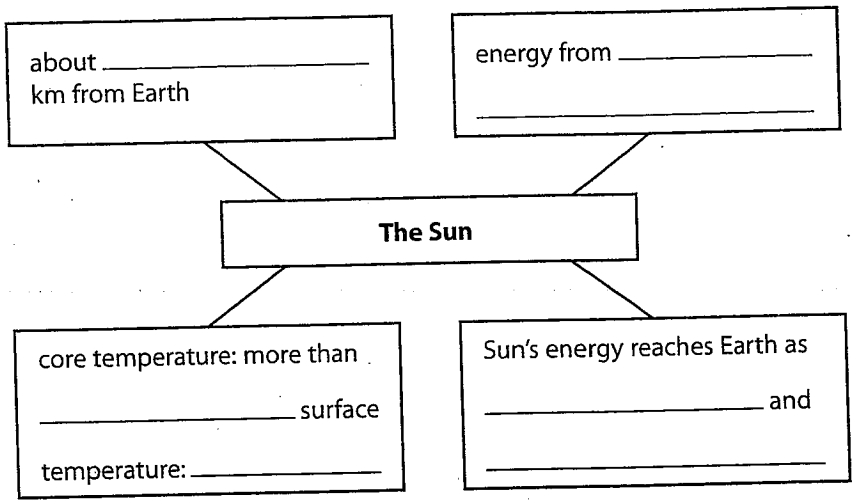
Earth and the Sun

I found this on page _____.

I found this on page _____.

Details

Organize *information about the Sun.*



Complete *information about Earth's* revolution *around the Sun.*

Earth Revolves Around the Sun	
Definition of revolution	
How long it takes Earth to make one revolution around the Sun	
Definition of orbit	
Force that keeps Earth in its orbit around the Sun	

Main Idea

I found this on page _____.

Details

Arrange *facts about Earth's* rotation.

Earth's Rotation

Rotation is a _____ motion.

A rotation axis is

_____

_____

_____.

One complete Earth rotation is called a

_____ and

takes _____ hours.

Earth's rotation axis is always

_____ in the same direction by the same amount.

Earth's rotation makes objects in the sky appear to _____

_____.

Temperature and Latitude

I found this on page _____.

Analyze *the interaction of sunlight with Earth's surface.*

Cause →	Effect
Curved surface of Earth	The energy in a beam of sunlight is spread out more at _____ than at _____. This makes Earth _____ at the poles and _____ at the equator.

Seasons

I found this on page _____.

Identify *the direction of the north end of Earth's* rotation axis *for each of the four seasons. Put a check mark in the appropriate column.*

Direction in which Earth's rotation axis is leaning			
Season	**Toward the Sun**	**Away from the Sun**	**Neither toward nor away**
Winter			
Spring			
Summer			
Fall			

Main Idea

I found this on page _____.

I found this on page _____.

I found this on page _____.

Details

Define solstice *and* equinox.

Solstice: _____

_____

Equinox: _____

_____

Identify *which season is beginning in the northern hemisphere for each point in Earth's* orbit. *Then indicate whether the amount of solar energy received by the northern hemisphere is increasing or decreasing throughout each season.*

Point in Orbit	Season Beginning in the Northern Hemisphere	Change in Solar Energy Received
December solstice		
March equinox		
June solstice		
September equinox		

Describe *the height of the apparent path of the Sun through the sky in the northern hemisphere at each* solstice.

December solstice: _____

June solstice: _____

Synthesize It Suppose that Earth's axis were tilted 90 degrees instead of 23.5 degrees. What might the seasons be like?

_____

_____

_____

_____

_____

_____

_____

Lesson 2 Earth's Moon

Scan *Lesson 2 in your book. In your Science Journal, write three questions you have about the Moon. Try to answer your questions as you read.*

Main Idea

Seeing the Moon

I found this on page _____.

The Moon's Formation

I found this on page _____.

I found this on page _____.

The Moon's Motion

I found this on page _____.

Details

Explain *why you can see the Moon.*

_____

_____

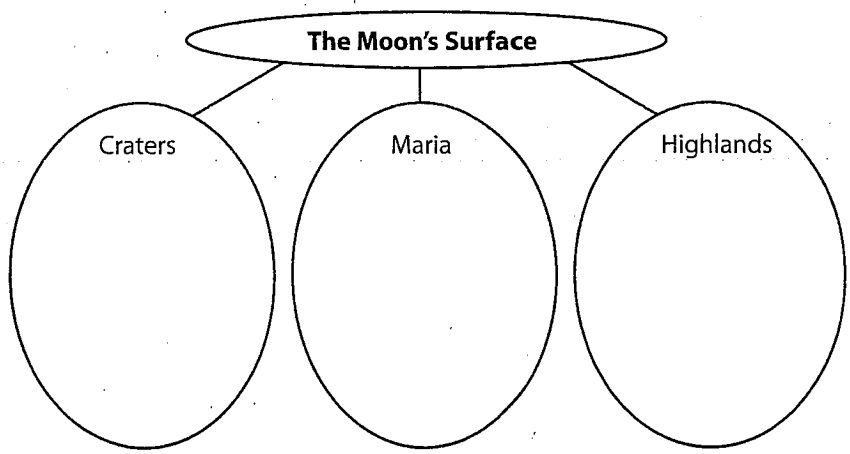
Sequence *events in the Moon's formation.*

1. A collision between _____ _____ occurred.

2. _____ was ejected into space, and a ring formed _____.

3. Material in the ring _____ _____ and formed _____.

Describe *three features of the Moon's surface.*



Identify *details about the 2 motions of the Moon.*

	Revolution	Rotation
Period in days		
Description of motion		

Main Idea

I found this on page _____.

Phases of the Moon

I found this on page _____.

I found this on page _____.

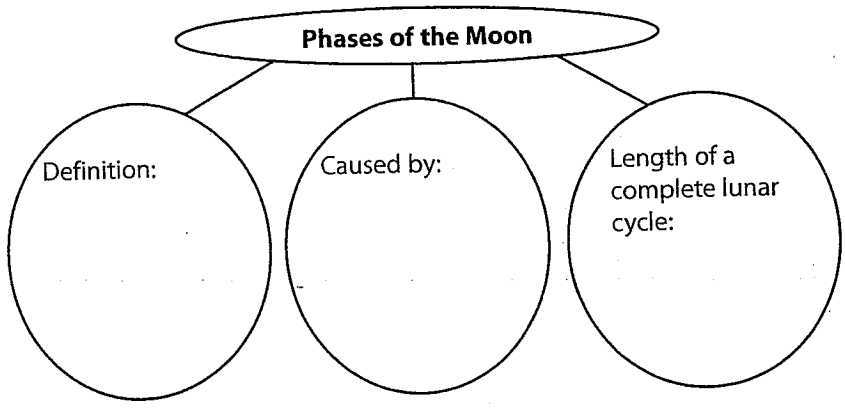
Details

Explain *why the same side of the Moon always faces Earth.*

_____

_____

Organize *information about the Moon's* phases.



Categorize *information about the* phases *of the Moon.*

Phase	Name	Description
Waxing phases	Week 1: First Quarter	
	Week 2:	
Waning phases	Week 3:	
	Week 4:	

Analyze It If you could live on the Moon through one lunar cycle, how would you experience the phases of the Moon? Would you see Earth going through phases? Explain.

_____

_____

_____

_____

_____

Lesson 3 Eclipses and Tides

Predict *three things you will learn about in Lesson 3. Look at the illustrations in the lesson to give you some clues. Write your predictions in your Science Journal.*

Main Idea

Shadows—the Umbra and the Penumbra

I found this on page _____.

Details

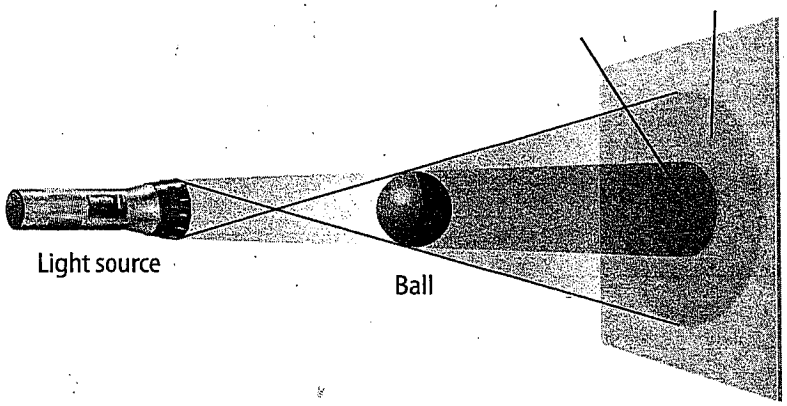
Define umbra *and* penumbra. *Then label the* umbra *and the* penumbra *on the diagram below.*

Umbra: _____

_____

Penumbra: _____

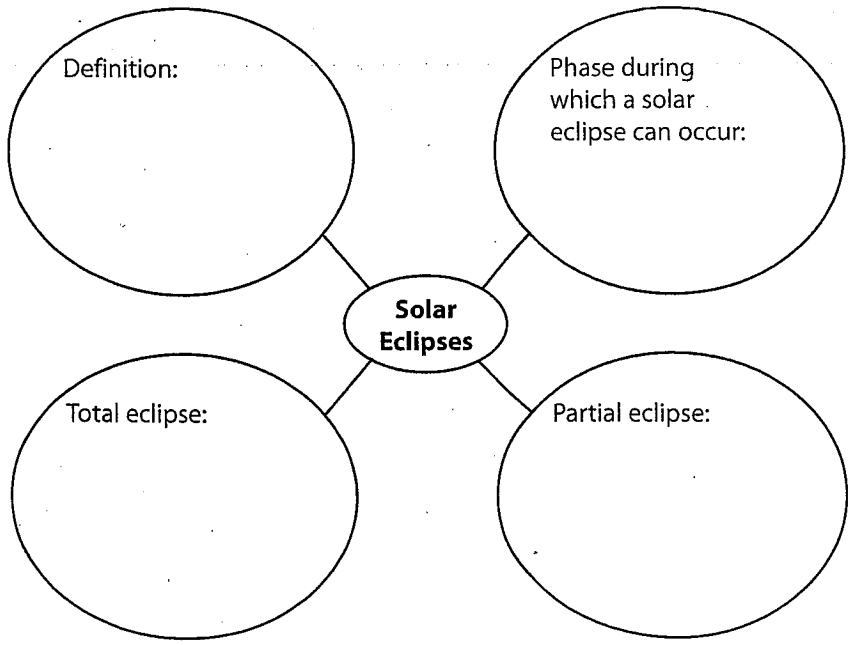
_____



Solar Eclipses

I found this on page _____.

Compare *information about* solar eclipses.



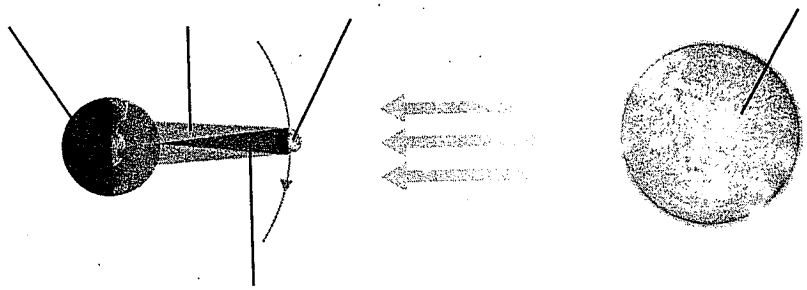
Main Idea

I found this on page _____.

Details

Label *the diagram of a* solar eclipse. *Use these terms:*

- Sun
- Moon
- penumbra
- partial solar eclipse
- Earth
- umbra
- total solar eclipse



I found this on page _____.

Explain *why* solar eclipses *do not occur every month.*

_____

_____

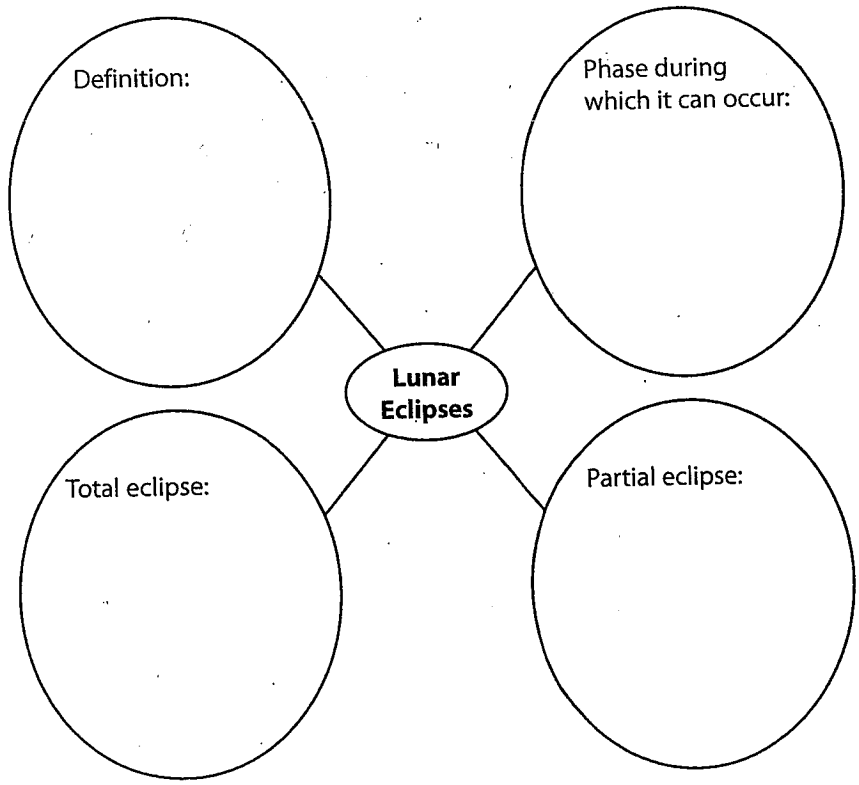
_____

_____

Lunar Eclipses

I found this on page _____.

Organize *information about* lunar eclipses.



Main Idea

I found this on page _____.

Details

Explain *why you can still see the Moon during a total* lunar eclipse.

_____

_____

Tides

I found this on page _____.

Organize *information about* tides.

Tides	
Definition	
Force that causes tides	
Where low tide occurs	
Where high tide occurs	
How often high tide occurs	

I found this on page _____.

Compare *spring* tides *and neap* tides. *Draw the position of the Moon, the Sun, and Earth during a spring* tide *and a neap* tide.

Types of Tides	
Spring	**Neap**
Moon phases during which they occur:	Moon phases during which they occur:

Analyze It Suppose that the Moon were smaller in size but greater in mass than it is now. How would that affect solar eclipses and tides?

_____

_____

_____

_____