

## Natural Cycles Lesson Plan – Day 1

Name of Lesson Plan Preparer: Christine Ammirati

<b>Title:</b> Shadows and Day and Night: Rotation		<b>Content Area:</b> Science	
<b>Grade level:</b> 3 <sup>rd</sup>		<b>Time Frame:</b> 45 min. 9:30-10:15	
<b>Date:</b> Mon. April 11, 2011			
SOL: Science Standard 3.8 3.8 The student will investigate and understand basic patterns and cycles occurring in nature. Key concepts include a) patterns of natural events (day and night, seasonal changes, phases of the moon, and tides)			
<b>Lesson Objectives:</b> Given the viewing of a video and whole class discussion, the student will define rotation and describe the natural cycle that causes day and night on Earth.	<b>Resources</b> (Text & Technology): Video: “Discovery Education: What’s in a Shadow?” parts 1 &2 <a href="http://player.discoveryeducation.com/index.cfm?guidAssetId=A6070600-9833-4D11-AFB3-3616E00812A9&amp;blnFromSearch=1&amp;productcode=US">http://player.discoveryeducation.com/index.cfm?guidAssetId=A6070600-9833-4D11-AFB3-3616E00812A9&amp;blnFromSearch=1&amp;productcode=US</a> Video: “Discovery Education: Rotation and Revolution”(5:00) <a href="http://player.discoveryeducation.com/index.cfm?guidAssetId=D621326A-36AB-47BF-9CC7-77BE8EB7589A&amp;blnFromSearch=1&amp;productcode=DSCE">http://player.discoveryeducation.com/index.cfm?guidAssetId=D621326A-36AB-47BF-9CC7-77BE8EB7589A&amp;blnFromSearch=1&amp;productcode=DSCE</a> Natural Cycle SOL packet ( <i>see attached</i> ) Natural Cycle Study Guide ( <i>see attached</i> ) Natural Cycle Folder ( <i>see attached</i> ) Natural Cycle Vocab Cards and ziplocs ( <i>see attached</i> ) Rotation and Revolution signs ( <i>see attached</i> )		
<b>Instructional Procedures</b> (Include Introduction, Focus, and Closing): <ol style="list-style-type: none"> <li>1. Prior to student arrival, prepare each student’s desk with a Natural Cycles folder prepacked with study guide, vocabulary cards, SOL packet, and Rotation and Revolution signs (<i>see attached</i>). Upon their arrival, direct students to label, number, and date both items. (2 minutes).</li> <li>2. Introduce concept of SHADOWS: View “Discovery Education: What’s in a Shadow?” parts 1 &amp;2 <a href="http://player.discoveryeducation.com/index.cfm?guidAssetId=A6070600-9833-4D11-AFB3-3616E00812A9&amp;blnFromSearch=1&amp;productcode=US">http://player.discoveryeducation.com/index.cfm?guidAssetId=A6070600-9833-4D11-AFB3-3616E00812A9&amp;blnFromSearch=1&amp;productcode=US</a> (10 minutes).</li> <li>3. Use flashlight and student volunteer to demonstrate shadow creation. Ask students to state where light source is located. State shadow location and ask students to predict location of light source. Repeat. (5 minutes)</li> <li>4. Introduce “Rotation” sign and activity for the week. Select one student per table to participate in activity for the day (<i>see attached</i>). (5 minutes)</li> <li>5. Remind students that they have studied other cycles (water and life cycles) and ask them to define “a cycle.” Explain that students will be learning about 4 natural cycles: day and night, seasonal changes, phases of the moon, and tides. (3 minutes)</li> <li>6. View video: “Discovery Education: Real World Science: “Rotation and Revolution.” Students fill out brief <b>viewing guide</b> as they watch. Direct students to put pencils in desk and to use pen to add information to video guide as they share information with their table. Review video guide as a whole class. (13 minutes)</li> <li>7. Lead whole class discussion to complete first section of SOL packet. Check for completion and ask students to place papers and folders in desk. (5 minutes)</li> <li>8. Closure: When selecting student tables to line-up for the transition to centers, lead a lightning review of rotation and what causes day and night. (2 minutes)</li> </ol>			
<b>Assessment/s</b> (Formative/brief; Summative): Observe student participation in group discussions and in closing summation. Assess the completion and accuracy of SOL packet and video guide.	<b>Extension Activities:</b> Ask students to compare and contrast the day and night cycles of other planets and moons in our solar system. <b>Differentiation:</b> Video guide may be simplified for students challenged by writing in these answers while simultaneously listening to the video.		
<b>Observations/Reflection for Future Use:</b>			

# Phases of the Moon

New Moon

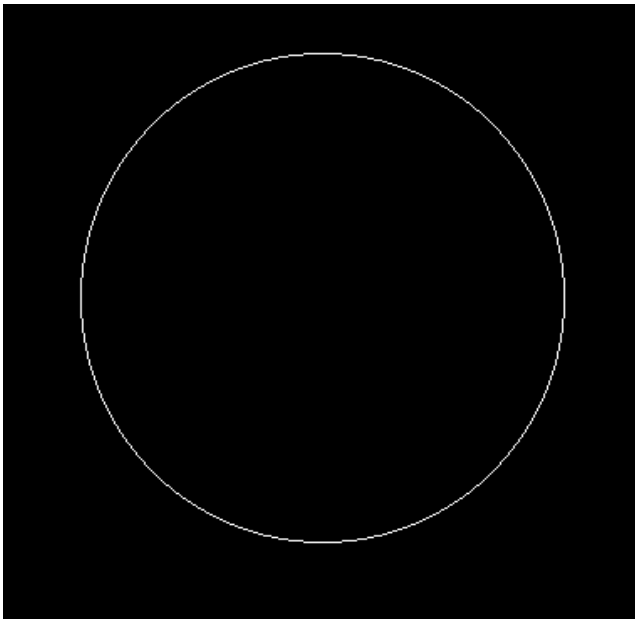
Waning Crescent    Waxing Crescent

Last Quarter

First Quarter

Waning Gibbous    Waxing Gibbous

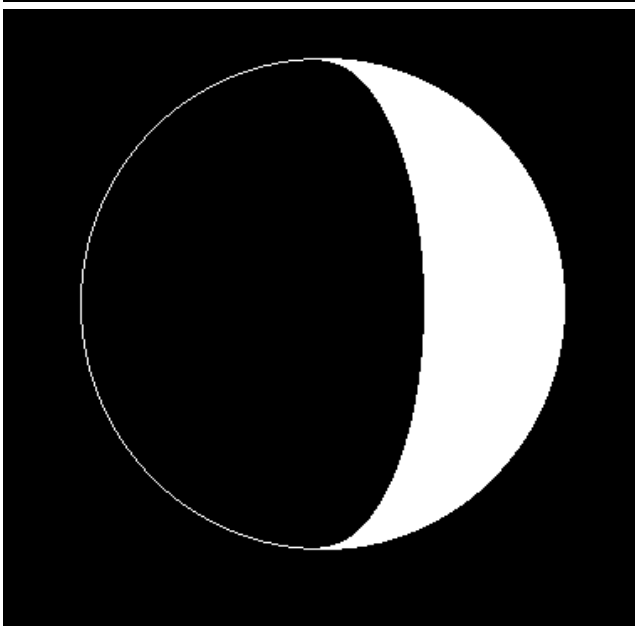
Full Moon



## **New Moon:**

The Moon's unlit side is facing the Earth.

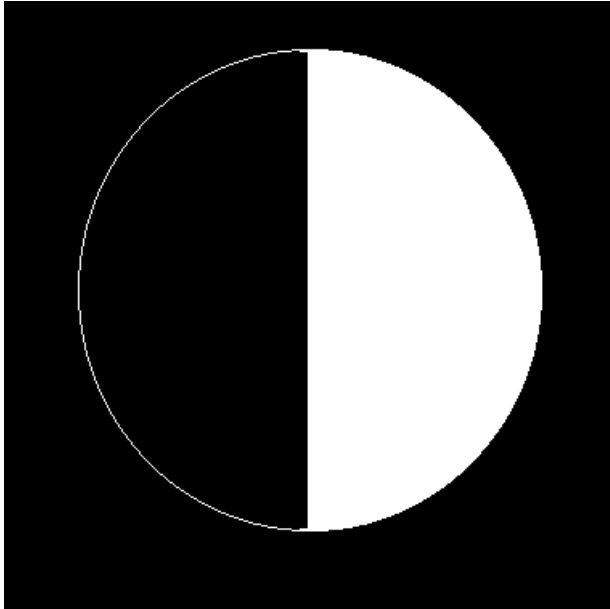
The Moon is not visible (except during a solar eclipse).



## **Waxing Crescent:**

The Moon appears to be partly but less than one-half lit by direct sunlight.

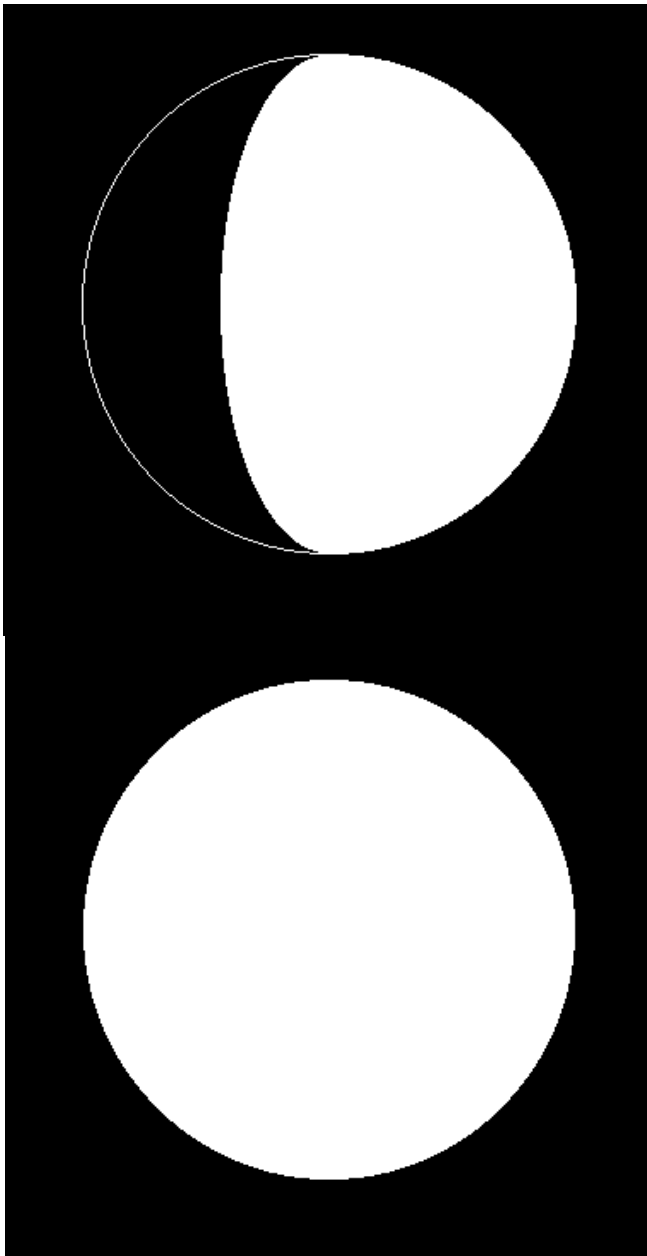
The fraction of the Moon's disk that is lit is increasing.



## **First Quarter:**

One-half of the Moon appears to be lit by direct sunlight.

The fraction of the Moon's disk that is lit is increasing.



## **Waxing Gibbous:**

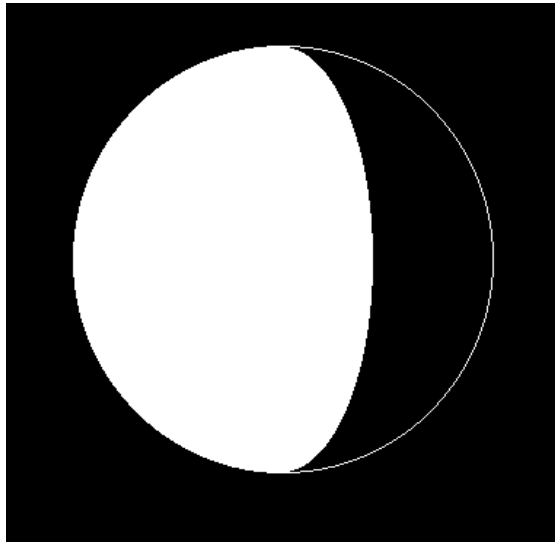
The Moon appears to be more than one-half but not fully lit by direct sunlight.

The fraction of the Moon's disk that is lit is increasing.

## **Full Moon:**

The Moon's lit side is facing the Earth.

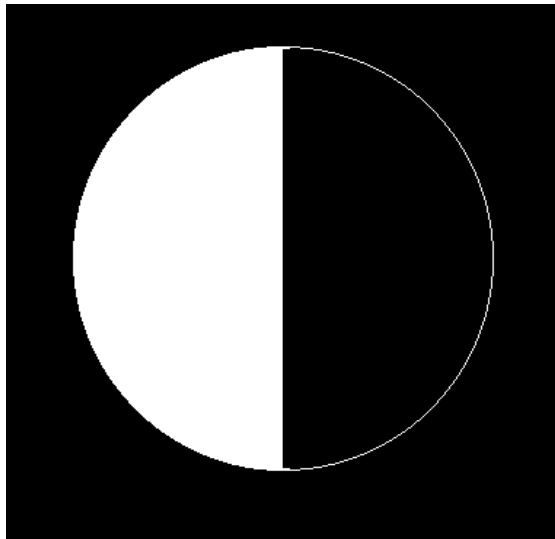
The Moon appears to be completely lit by direct sunlight.



## **Waning Gibbous:**

The Moon appears to be more than one-half but not fully lit by direct sunlight.

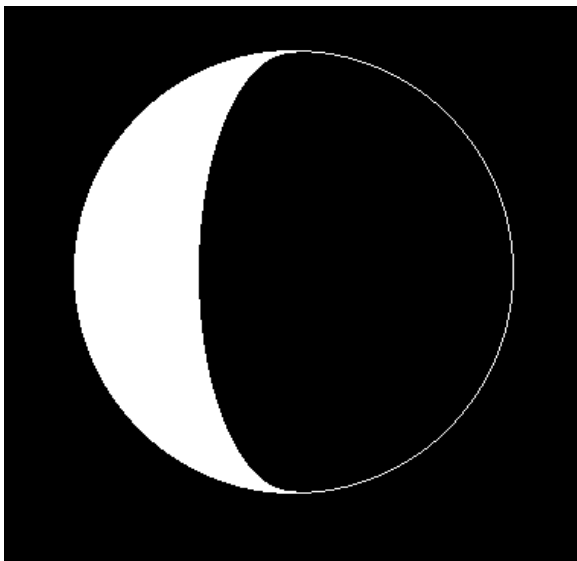
The fraction of the Moon's disk that is lit is decreasing.



## **Last Quarter:**

One-half of the Moon appears to be lit by direct sunlight.

The fraction of the Moon's disk that is lit is decreasing.



## **Waning Crescent:**

The Moon appears to be partly but less than one-half lit by direct sunlight.

The fraction of the Moon's disk that is lit is decreasing.

**Natural Cycles Lesson Plan – Day 2 \*\* NOTE split and changed time period**

Name of Lesson Plan Preparer: Christine Ammirati

<b>Title:</b> Rotation v. Revolution		<b>Content Area/s:</b> Science	
<b>Grade level:</b> 3 <sup>rd</sup>	<b>Time Frame:</b> 15 min. 9:30-9:45 and 30 min. 11:15-11:45	<b>Date:</b> Tues. April 12, 2011	
<p>SOL: Science Standard 3.8          3.8 The student will investigate and understand basic patterns and cycles occurring in nature. Key concepts include a) patterns of natural events (day and night, seasonal changes, phases of the moon, and tides)</p>			
<p><b>Lesson Objectives:</b>          Given the demonstration of a solar system model and whole class discussion, the student will define revolution and compare and contrast the Earth’s revolution with its rotation.</p>		<p><b>Resources</b> (Text &amp; Technology):          Video: “Discovery Education: The Movement of the Earth”<a href="http://player.discoveryeducation.com/index.cfm?guidAssetId=0304d77c-109c-4d4b-b80b-a84cce27eb9f&amp;blnFromSearch=1&amp;productcode=HUB">http://player.discoveryeducation.com/index.cfm?guidAssetId=0304d77c-109c-4d4b-b80b-a84cce27eb9f&amp;blnFromSearch=1&amp;productcode=HUB</a> (4:18)  <a href="http://player.discoveryeducation.com/index.cfm?guidAssetId=D621326A-36AB-47BF-9CC7-77BE8EB7589A">http://player.discoveryeducation.com/index.cfm?guidAssetId=D621326A-36AB-47BF-9CC7-77BE8EB7589A</a> (5:00)          Revolution Posters (<i>see attached</i>)          Solar system model          “Interpret Illustrations: What Causes Day and Night?”</p>	
<p><b>Instructional Procedures</b> (Include Introduction, Focus, and Closing):</p> <ol style="list-style-type: none"> <li>1. Introduce “Revolution” sign and activity for the week. Select one student at three tables to participate in Revolution activity for the day and one student at the other three tables to participate in the Rotation activity. (5 minutes)</li> <li>2. View first two minutes of “Discovery Education: The Movement of the Earth.” (2 minutes)</li> <li>3. Lead movement activity with all students participating in rotating and revolving when they hear the correct definitions. (3 minutes)</li> <li>4. Closure: When selecting student tables to line-up for the transition to centers, lead a lightning review of rotation versus revolution.</li> <li>5. <b>AFTER CENTERS:</b> During snack, show “Rotation and Revolution”  <a href="http://player.discoveryeducation.com/index.cfm?guidAssetId=D621326A-36AB-47BF-9CC7-77BE8EB7589A">http://player.discoveryeducation.com/index.cfm?guidAssetId=D621326A-36AB-47BF-9CC7-77BE8EB7589A</a> (5:00)</li> <li>6. Gather students at back table to demonstrate rotation and revolution with solar system model. (5 minutes)</li> <li>7. Hints: Explain that “rotation” is short word for a short cycle (1 day). In addition, the middle vowel sound of "rotation" has the same vowel sound as "day" and it takes the earth one day to rotate.</li> <li>8. Distribute “Interpret Illustrations: What Causes Day and Night?” and direct students to work independently to complete all seven questions. Direct students to discuss their answers with shoulder partner. Review answers in whole class discussion and display on document camera.</li> </ol>			
<p><b>Assessment/s</b> (<u>Formative/brief</u>; Summative):          Observe student participation in group discussions and in closing summation.</p>		<p><b>Extension Activities:</b>          Ask students to compare and contrast the orbits of other planets and moons in our solar system.</p> <p><b>Differentiation:</b>          Select students to participate in solar system model based on those who might be challenged by the concept and who therefore might benefit most from direct manipulation of the model.</p>	
<p><b>Observations/Reflection for Future Use:</b></p>			

## Natural Cycles Lesson Plan – Day 3

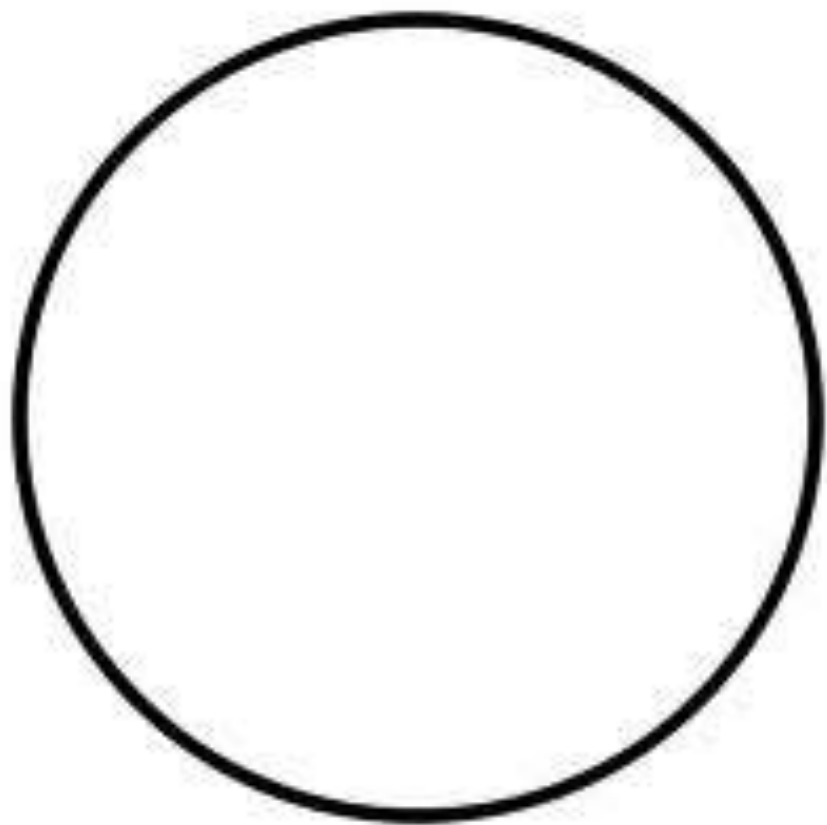
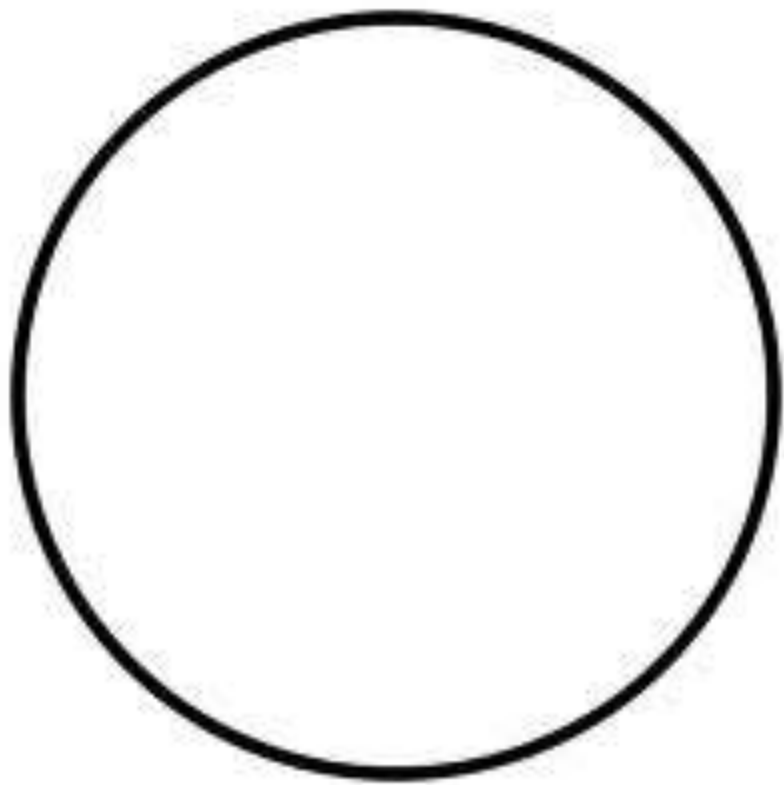
Name of Lesson Plan Preparer: Christine Ammirati

<b>Title:</b> Seasons		<b>Content Area/s:</b> Science	
<b>Grade level:</b> 3 <sup>rd</sup>	<b>Time Frame:</b> 45 min. 9:30-10:15	<b>Date:</b> Wed. April 13, 2011	
<p>SOL: Science Standard 3.8            3.8 <u>The student will investigate and understand basic patterns and cycles occurring in nature. Key concepts include a) patterns of natural events (day and night, seasonal changes, phases of the moon, and tides)</u></p>			
<p><b>Lesson Objectives:</b>            Given the viewing of a video and whole class discussion, the student will describe how the earth's tilt on its axis creates the season..</p>		<p><b>Resources (Text &amp; Technology):</b>            Document camera            Video segments from: "Discovery Education: The Earth's Tilt on its Axis and the Sun's Rays." Seasons in the Northern and Southern Hemispheres [2 minutes] + Seasons and the Cycles of Life (4:47 min)  <a href="http://player.discoveryeducation.com/index.cfm?guidAssetId=48E066E2-9007-4ABD-96D8-C5149B2E69AC&amp;blnFromSearch=1&amp;productcode=DSCCE">http://player.discoveryeducation.com/index.cfm?guidAssetId=48E066E2-9007-4ABD-96D8-C5149B2E69AC&amp;blnFromSearch=1&amp;productcode=DSCCE</a>            "When the Earth Moves" mini-book</p>	
<p><b>Instructional Procedures (Include Introduction, Focus, and Closing):</b></p> <ol style="list-style-type: none"> <li>1. Warm-up Comprehension Check: SOL questions on document camera for independent work. Discuss answers in whole group before moving onto lesson. (5 minutes).</li> <li>2. Select one student at three tables to participate in Revolution activity for the day and one student at the other three tables to participate in the Rotation activity. (2 minutes)</li> <li>3. Engagement: Show globe and draw attention to tilt. Explain axis and that students will learn how the tilt creates our seasons on Earth. (3 minutes)</li> <li>4. View 7 minutes of video segments on Earth's tilt and the seasons. (7 minutes)</li> <li>5. Lead whole class discussion to complete the Seasons section of SOL packet. Check for completion and ask students to place papers in desk. (8 minutes)</li> <li>6. Emphasize: Earth is SAME distance from sun during both winter and summer. Earth's tilt on its axis means that the sun's rays hit the earth harder in different places on the Earth and cause the seasons.</li> <li>7. Direct students to cut and staple their "When the Earth Moves" mini-book and to answer the questions.</li> <li>8. Closure: When selecting student tables to line-up for the transition to centers, lead a lightning review: call on each of the six tables and ask students to identify causes of day and night and the seasons and to define rotation and revolution.</li> </ol>			
<p><b>Assessment/s (Formative/brief; Summative):</b>            Observe student participation in group discussions and in closing summation.            Assess the completion and accuracy of SOL packet.</p>		<p><b>Extension Activities:</b>            Ask students to examine the revolution and tilt of other planets in the solar system and to hypothesize about seasons on these planets.</p> <p><b>Differentiation:</b>            Pre-assemble mini-books for students with fine motor challenges and/or attention challenges.</p>	
<p><b>Observations/Reflection for Future Use:</b></p>			

## Natural Cycles Lesson Plan – Day 4

Name of Lesson Plan Preparer: Christine Ammirati

<b>Title:</b> Sunrise / Sunset and Review		<b>Content Area/s:</b> Science	
<b>Grade level:</b> 3 <sup>rd</sup>	<b>Time Frame:</b> 45 min. 9:30-10:15	<b>Date:</b> Thurs. April 14, 2011	
SOL: Science Standard 3.8 3.8 <u>The student will investigate and understand basic patterns and cycles occurring in nature. Key concepts include a) patterns of natural events (day and night, seasonal changes, phases of the moon, and tides)</u>			
<b>Lesson Objectives:</b> Given the viewing of a video, an activity and whole class discussion, the student will define key vocabulary terms in phases of the moon and describe why the appearance of the moon changes during the month.		<b>Resources (Text &amp; Technology):</b> Document camera <a href="http://www.brainpopjr.com/science/space/moon/">http://www.brainpopjr.com/science/space/moon/</a> (6:00) Natural Cycle SOL packet (attached) Paper with circle pre-printed and pencil	
<b>Instructional Procedures (Include Introduction, Focus, and Closing):</b>			
<ol style="list-style-type: none"> <li>1. Warm-up: SOL review: Instruct students to answer questions from previous SOL science tests displayed on document camera. Review answers in whole group (5 minutes).</li> <li>2. Quick review: Ask students to define “a cycle” and explain what other cycles they have learned about in science (2 minutes).</li> <li>3. Select one student at three tables to participate in Revolution activity for the day and one student at the other three tables to participate in the Rotation activity. (3 minutes)</li> <li>4. Activity: In darkened room, arrange students in circle around a sphere located in center of classroom. Shine a bright light on the sphere and direct students to draw the shape of the sphere as they observe it from their position. Next, direct students to show their illustration. Next, direct students to move one-quarter around the room and repeat the exercise. (10 minutes)</li> <li>5. View 6 minute BrainPop video: “The Moon” and do Hard Quiz as a whole class. (10 minutes)</li> <li>6. Direct students to remove “Phases of the Moon” cards from SOL folder and to work with shoulder partner to assemble the individual cards in the correct cycle. Review these cards and moon phases as a whole class. Provide hints about how to recognize if crescent moon is waxing or waning. (8 minutes)</li> <li>7. Lead whole class discussion to complete Phases of Moon section of SOL packet. Check for completion and ask students to place papers in desk. (7 minutes)</li> <li>8. Closure: When selecting student tables to line-up for the transition to centers, lead a lightning review of phases of moon, rotation, revolution, and seasons.</li> </ol>			
<b>Assessment/s (Formative/brief; Summative):</b> Observe student participation in group discussions, activity, BrainPOP quiz, and in closing summation. Assess the completion and accuracy of SOL packet.		<b>Extension Activities:</b> Provide images of “Phases of the Earth” as seen from the moon and space and ask students to compare and contrast with images of the moon.	
		<b>Differentiation:</b> Pair students for card activity in combinations that will offer support for students who may be challenged by the concept.	
<b>Observations/Reflection for Future Use:</b>			





## Natural Cycles Lesson Plan – Day 5

Name of Lesson Plan Preparer: Christine Ammirati

<b>Title:</b> Phases of the Moon		<b>Content Area/s:</b> Science	
<b>Grade level:</b> 3 <sup>rd</sup>	<b>Time Frame:</b> 45 min. 9:30-10:15	<b>Date:</b> Fri. April 15, 2011	
<p>SOL: Science Standard 3.8            3.8 <u>The student will investigate and understand basic patterns and cycles occurring in nature. Key concepts include a) patterns of natural events (day and night, seasonal changes, phases of the moon, and tides)</u></p>			
<p><b>Lesson Objectives:</b>            Given the viewing of a video and whole class discussion, the student will define key vocabulary terms in the life cycle of animals in general and a frog in particular.</p>		<p><b>Resources (Text &amp; Technology):</b>            Document camera            Video: “Discovery Education: Phases of the Moon:  <a href="http://player.discoveryeducation.com/index.cfm?guidAssetId=0F901E9D-BAF8-4DBF-9DD6-F9A5304B4D20">http://player.discoveryeducation.com/index.cfm?guidAssetId=0F901E9D-BAF8-4DBF-9DD6-F9A5304B4D20</a>(2:30)            Illustration: <a href="http://www.harcourtschool.com/activity/moon_phases/">http://www.harcourtschool.com/activity/moon_phases/</a>            White boards</p>	
<p><b>Instructional Procedures (Include Introduction, Focus, and Closing):</b></p> <ol style="list-style-type: none"> <li>1. Warm-up: SOL review: Instruct students to answer questions from previous SOL science tests displayed on document camera. Review answers in whole group (5 minutes).</li> <li>2. Select one student at three tables to participate in Revolution activity for the day and one student at the other three tables to participate in the Rotation activity. (3 minutes)</li> <li>3. Review video: “Discovery Education: Phases of the Moon” (3 minutes)</li> <li>4. Powerpoint review: Phases of the Moon (9 minutes)</li> <li>5. Pass It On Review Game (25 minutes)</li> <li>6. Closure: When selecting student tables to line-up for the transition to centers, lead a lightning review of phases of moon, rotation, revolution, and seasons.</li> </ol>			
<p><b>Assessment/s (Formative/brief):</b>            Observe student participation in group review and in closing summation.</p>		<p><b>Extension Activities:</b>            Ask students to write their own review questions</p> <p><b>Differentiation:</b>            .</p>	
<p><b>Observations/Reflection for Future Use:</b></p>			

Name \_\_\_\_\_ Date \_\_\_\_\_ # \_\_\_\_\_.

## Natural Cycles “Pass It On”

1. A series of events that is regularly repeated in the same order is called **WHAT**?
2. An imaginary line goes through the center of the earth. The earth rotates around this tilted line. This imaginary line is called **WHAT**?
3. The movement of one object in an orbit around another object is called **WHAT**?
4. The earth’s orbit around the sun takes one year and is called a **WHAT**?
5. One year equals **HOW MANY** days?
6. The earth’s rotation on its axis causes **WHAT** natural cycle?
7. One rotation of the earth takes **HOW MANY DAYS** or **HOW MANY HOURS**?
8. The *waxing* of the moon describes **WHAT KIND** of phase of the moon?
9. When the moon is not visible, it is called **WHAT PHASE** of the moon?
10. The Earth has different seasons because the Earth is **WHAT** on its axis?
11. When a part of the Earth is tilted towards the sun, **WHAT SEASON** is it?
12. A shadow is created when light is \_\_\_\_\_ **WHAT** by an object?
13. List the four seasons **IN ORDER**.
14. Each season lasts **HOW MANY MONTHS**?

## KEY: Natural Cycles “Pass It On”

1. A series of events that is regularly repeated in the same order is called **a CYCLE.**
2. An imaginary line goes through the center of the earth. The earth rotates around this tilted line. This imaginary line is called **the AXIS.**
3. The movement of one object in an orbit around another object is called **a REVOLUTION.**
4. The earth’s orbit around the sun takes one year and is called a **REVOLUTION.**
5. One year equals **365 days?**
6. The earth’s rotation on its axis causes **DAY and NIGHT?**
7. One rotation of the earth takes **ONE DAY or 24 HOURS?**
8. The *waxing* of the moon describes **THE GROWING** of phase of the moon?
9. When the moon is not visible, it is called the **NEW MOON.**
10. The Earth has different seasons because the Earth is **TILTED** on its axis.
11. When a part of the Earth is tilted towards the sun, it is the **SUMMER.**
12. A shadow is created when light is **BLOCKED** by an object?
13. List the four seasons **WINTER, SPRING, SUMMER, FALL (autumn)**
14. Each season lasts **THREE MONTHS.**

## Natural Cycles “Pass It On”

Write your best answer after the number.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

11. \_\_\_\_\_

12. \_\_\_\_\_

13. \_\_\_\_\_

14. \_\_\_\_\_

## Natural Cycles Lesson Plan – Day 6

Name of Lesson Plan Preparer: Christine Ammirati

<b>Title:</b> Tides		<b>Content Area/s:</b> Science	
<b>Grade level:</b> 3 <sup>rd</sup>	<b>Time Frame:</b> 35 min. 9:40-10:15	<b>Date:</b> Mon. April 18, 2011	
SOL: Science Standard 3.8 3.8 <u>The student will investigate and understand basic patterns and cycles occurring in nature. Key concepts include a) patterns of natural events (day and night, seasonal changes, phases of the moon, and tides)</u>			
<b>Lesson Objectives:</b> Given the viewing of a video and whole class discussion, the student will define key vocabulary terms and concepts about tides.	<b>Resources (Text &amp; Technology):</b> Document camera Video: “Discovery Education: The Moon and Tides” <a href="http://player.discoveryeducation.com/index.cfm?guidAssetId=35C7EA9E-56A2-4E0E-8DC0-7EE75D18CE81&amp;blnFromSearch=1&amp;productcode=US">http://player.discoveryeducation.com/index.cfm?guidAssetId=35C7EA9E-56A2-4E0E-8DC0-7EE75D18CE81&amp;blnFromSearch=1&amp;productcode=US</a> (4:00) <a href="http://www.saltwatertides.com/dynamic.dir/virginiasites.html#james">http://www.saltwatertides.com/dynamic.dir/virginiasites.html#james</a> Natural Cycles SOL packet (attached)		
<b>Instructional Procedures (Include Introduction, Focus, and Closing):</b>  LESSON PRECEDED BY: Warm-up: Weekend Sharing: Sum-it-Up Sheet Challenge (10 minutes)			
<ol style="list-style-type: none"> <li>1. Ask students to imagine they are at Virginia Beach or the Outer Banks and that they have built an amazing sand castle near the water. As the day continues, the waves come closer until the water breaks through the sand castle and it is destroyed. What has happened? What causes the water in the ocean to rise and fall? Explain that tides are a result of the gravitational pull between the moon and the Earth. (4 minutes)</li> <li>2. View 4 minute video: “Discovery Education: Real World Science: The Moon and Tides” and review key concepts: (6 minutes) <ol style="list-style-type: none"> <li>a. 2 high tides / 2 low tides every day</li> <li>b. approximately 6 hour time interval between low and high tides (change by about 50 minutes each day)</li> <li>c. tide charts are examples of <u>functional texts</u> and are published online and in newspapers</li> </ol> </li> <li>3. Examine tide chart from Jamestown Island <a href="http://www.saltwatertides.com/cgi-local/virginia.cgi">http://www.saltwatertides.com/cgi-local/virginia.cgi</a> Instruct students to use tide chart to answer questions about tides at Jamestown Island (<i>see attached</i>) (10 minutes)</li> <li>4. Lead whole class discussion to complete the Tides section of SOL packet. Check for completion and ask students to place papers in desk. (5 minutes)</li> <li>5. Exit Card Assessment: Prior to dismissal for Centers, display on document camera the Jamestown Island Tide chart for Thursday April 21 and ask students to list the times for the high and low tides. (5 minutes)</li> </ol>			
<b>Assessment/s (Formative/brief; Summative):</b> Observe student participation in group discussions and in closing summation. Assess the completion and accuracy of Tide Chart activity and SOL packet.		<b>Extension Activities:</b> Ask students to calculate the time between tides. <b>Differentiation:</b> Tide charts may be simplified by eliminating height/feet and sunrise / sunset information.	
<b>Observations/Reflection for Future Use:</b>			

# My Weekend Sharing "Sum It Up"

1. Think of your weekend and write down a few words to describe what you want to share with the class.
2. At the bottom of this sheet, write a one-sentence summary of your weekend.
3. Imagine you only have \$2.00, and each word you use will cost you 10 cents. See if you can "sum it up" in twenty words!

Brainstorming:

*"Sum It Up" for \$2.00* \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Tides for Jamestown Island starting with April 18, 2011

Day	High / Low	Tide Time	Height in Feet	Moon Rise	Moon Set	% Moon Visible
Monday April 18	High	12:29 AM	2.8	8:52 PM	6:26 AM	99
18	Low	7:26 AM	-0.3			
18	High	12:55 PM	2.3			
18	Low	7:32 PM	-0.3			
Tuesday April 19	High	1:21 AM	2.8	10:04 PM	7:11 AM	99
19	Low	8:18 AM	-0.2			
19	High	1:45 PM	2.3			
19	Low	8:21 PM	-0.2			
Wednesday April 20	High	2:12 AM	2.8	11:11 PM	8:01 AM	95
20	Low	9:09 AM	-0.2			
20	High	2:35 PM	2.2			
20	Low	9:12 PM	-0.2			

1. When is the first low tide on Monday April 18?
  - a. 12:29 AM
  - b. 7:26 AM
  - c. 12:55 PM
  - d. 7:32 PM
2. When is the second high tide on Tuesday April 19?
  - a. 1:21 AM
  - b. 8:18 AM
  - c. 1:45 PM
  - d. 8:21 PM
3. When will the tide rise 2.2 feet?
  - a. Monday April 18 at 12:55 PM
  - b. Monday April 18 at 7:32 PM
  - c. Tuesday April 19 at 1:45 PM
  - d. Wednesday April 20 at 2:35 PM

Name: \_\_\_\_\_ Date: \_\_\_\_\_ # \_\_\_\_\_

### Tides for Jamestown Island for April 21, 2011

Day	High / Low	Tide Time	Height in Feet	Moon Rise	Moon Set	% Moon Visible
Thursday April 21	High	3:04 AM	2.6		8:58 AM	89
21	Low	10:00 AM	-0.1			
21	High	3:26 PM	2.1			
21	Low	10:04 PM	-0.1			

How many high tides happen every day? \_\_\_\_\_

What times are the low tides at Jamestown Island? \_\_\_\_\_

What times are the high tides at Jamestown Island? \_\_\_\_\_

Name: \_\_\_\_\_ Date: \_\_\_\_\_ # \_\_\_\_\_

### Tides for Jamestown Island for April 21, 2011

Day	High / Low	Tide Time	Height in Feet	Moon Rise	Moon Set	% Moon Visible
Thursday April 21	High	3:04 AM	2.6		8:58 AM	89
21	Low	10:00 AM	-0.1			
21	High	3:26 PM	2.1			
21	Low	10:04 PM	-0.1			

How many high tides happen every day? \_\_\_\_\_

What times are the low tides at Jamestown Island? \_\_\_\_\_

What times are the high tides at Jamestown Island? \_\_\_\_\_



## Natural Cycles Lesson Plan – Day 7 \* NOTE change in time

Name of Lesson Plan Preparer: Christine Ammirati

<b>Title:</b> Review		<b>Content Area/s:</b> Science	
<b>Grade level:</b> 3 <sup>rd</sup>	<b>Time Frame:</b> 45 min. 11:15-noon	<b>Date:</b> Tues. April 19, 2011	
<p>SOL: Science Standard 3.8</p> <p>3.8 <u>The student will investigate and understand basic patterns and cycles occurring in nature. Key concepts include a) patterns of natural events (day and night, seasonal changes, phases of the moon, and tides)</u></p>			
<b>Lesson Objectives:</b>		<b>Resources (Text &amp; Technology):</b>	
<p>Given whole class discussion and review, the student will define and identify natural cycles and vocabulary terms day and night, seasonal changes, phases of the moon, and tides.</p>		<p>Qwizdom Response Kit</p>	
<b>Instructional Procedures (Include Introduction, Focus, and Closing):</b>			
<ol style="list-style-type: none"> <li>1. Warm-up Comprehension Check: SOL questions on document camera for independent work. Discuss answers in whole group before moving onto lesson. (5 minutes).</li> <li>2. Select one student at three tables to participate in Revolution activity for the day and one student at the other three tables to participate in the Rotation activity. (2 minutes)</li> <li>3. Ask students to take Natural Cycles folder from desk and open to show that both the SOL packet and the study guide are present. EXPLAIN that students must return the folder and the study guide on WEDNESDAY to receive 5 points on their unit exam. After confirming that both resources are present, direct students individually to place folder in backpack and then to pick up a Quizdom keypad on their way back to desks. (5 minutes)</li> <li>4. Use Qwizdom review questions to clarify student understanding and highlight subjects where the students must study before the next day's test. (30 minutes).</li> <li>5. Closure: When selecting student tables to line-up for the transition to centers, lead a lightning review of phases of moon, rotation, revolution, seasons, and tides. (3 minutes)</li> </ol>			
<b>Assessment/s (Formative/brief; Summative):</b>		<b>Extension Activities:</b>	
<p>Observe student participation in Qwizdom discussions and in closing summation.</p> <p>Evaluate the Qwizdom report.</p>		<p>Ask students to write their own review questions</p>	
		<b>Differentiation:</b>	
<b>Observations/Reflection for Future Use:</b>			

## Natural Cycles Lesson Plan – Day 8 + MAGNETS

Name of Lesson Plan Preparer: Christine Ammirati

<b>Title:</b> Review		<b>Content Area/s:</b> Science	
<b>Grade level:</b> 3 <sup>rd</sup>	<b>Time Frame:</b> 45 min. 9:25-10:15	<b>Date:</b> Wed. April 20, 2011	
<p>SOL: Science Standard 3.8            3.8 <u>The student will investigate and understand basic patterns and cycles occurring in nature. Key concepts include a) patterns of natural events (day and night, seasonal changes, phases of the moon, and tides)</u></p>			
<p><b>Lesson Objectives:</b>            Given summative assessment, the student will identify four patterns of natural cycles (day and night, seasonal changes, phases of the moon, and tides).</p>		<p><b>Resources</b> (Text &amp; Technology):            Common 3<sup>rd</sup>-grade Natural Cycles Test            BrainPOPJr video:  <a href="http://www.brainpopjr.com/science/forces/magnets/">http://www.brainpopjr.com/science/forces/magnets/</a></p>	
<p><b>Instructional Procedures</b> (Include Introduction, Focus, and Closing):</p> <ol style="list-style-type: none"> <li>1. At 9:25: Administer unit test on Natural Cycles (<i>see attached</i>).</li> <li>2. Instruct students to read independently at desk when finished with assessment.</li> <li>3. When all students are finished Natural Cycles quiz, explain that magnets will be focus of study for rest of the week. This material is a review from second grade.</li> </ol> <p><b>HOMEWORK:</b> MAGNET STUDY GUIDE with questions to be answered</p>			
<p><b>Assessment/s</b> (<u>Formative/brief</u>; Summative):</p> <p>Grade 25-question test. Each question is weighted equally and grade is expressed as a percentage.</p>		<p><b>Extension Activities:</b></p> <p><b>Differentiation:</b>            No students in the class have an IEP or 504 or receive ELL instruction. All students will be assessed using this single exam.</p>	
<p><b>Observations/Reflection for Future Use:</b></p>			

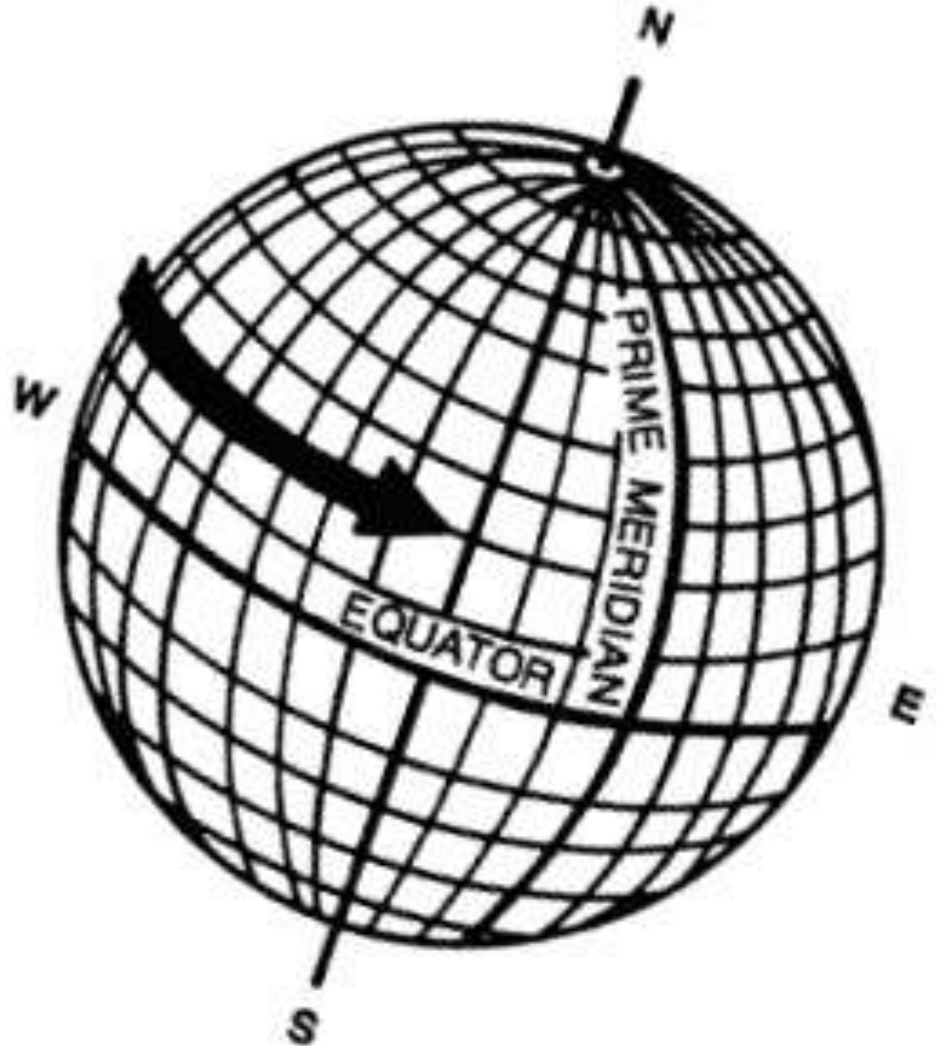


# Rotation

=

# One

# Day



# **Rotation**

**Earth**

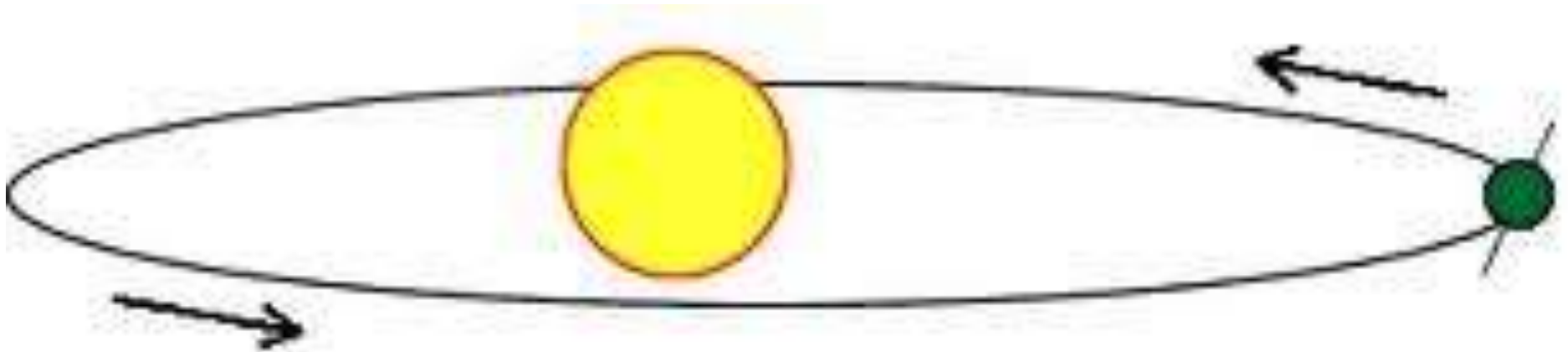
***spins* on its axis**

**once every**

**24 hours = 1 day**

# Revolution

## = One Year



# **Revolution**

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**Earth**

***orbits* around Sun**

**once every**

**365 days = 1 year**