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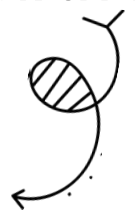
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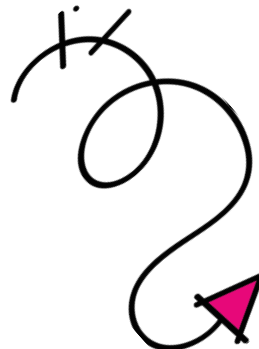


Want these three astronomy lessons in your inbox . . . FREE?



I'd love to share these **THREE differentiated lessons** of the planets in our solar system with you right now!

Complete with worksheets, Boom Cards and task cards!



MONEY HONEY!

LEAVING FEEDBACK EARNS CASH CREDIT! CHA-CHING!

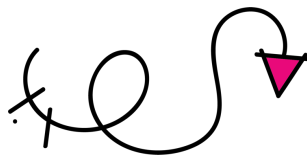
1

CLICK ME



2

Click "Leave a review."



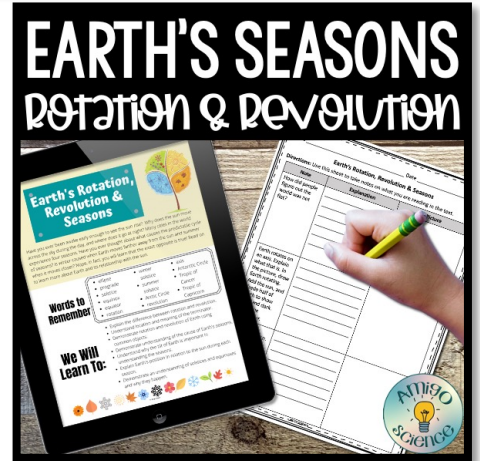
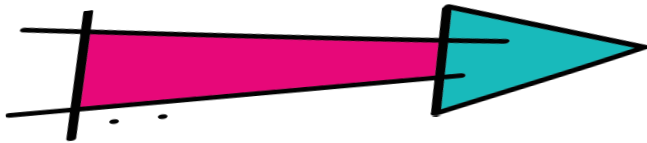
Earth's Seasons Differentiated Activity

[Leave a Review](#)

THANK YOU!

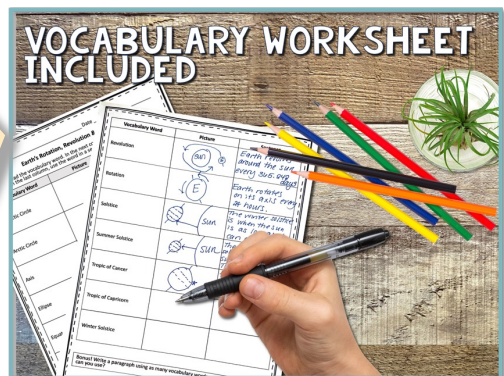
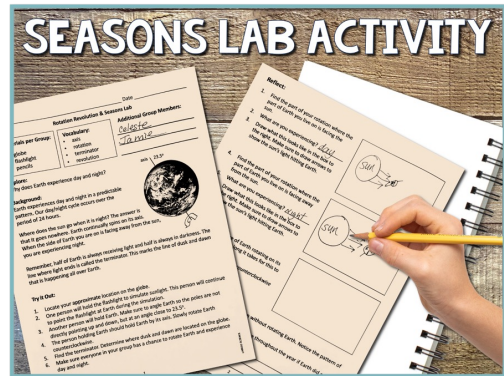
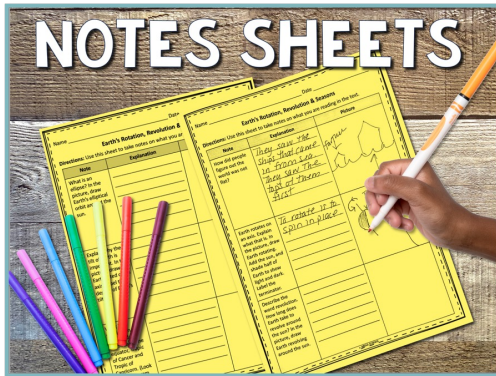
These worksheets are part of a larger lesson.

Check out this complete lesson about Earth's seasons, rotation and revolution!



Click the box to check it out

COMPLETE **NO-PREP DIFFERENTIATED** LESSON TO MAKE TEACHING ROTATION, REVOLUTION & SEASONS A BREEZE!



FOR MORE INFORMATION PLEASE **CHECK OUT THIS PRODUCT ON MY WEBSITE.**

Name _____ Date _____

Rotation Revolution & Seasons Lab

Materials per Group:

- globe
- flashlight
- pencils

Vocabulary:

- axis
- rotation
- terminator
- revolution

Additional Group Members:

Explore:

Why does Earth experience day and night?

Background:

Earth experiences day and night in a predictable pattern. Our day/night cycle occurs over the period of 24 hours.

axis 23.5°



Name _____

Directions: Choose the best answer for each of the following questions or statements.

1. This is what causes day and night.
A. Earth's rotation B. Earth's revolution
C. The sun's rotation D. The sun's revolution

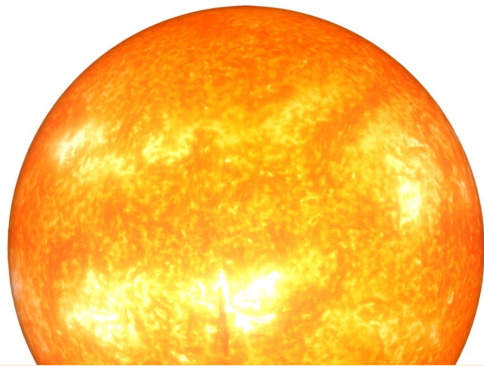
START WITH A PRETEST AND SEASONS LAB ACTIVITY USING MINIMAL EQUIPMENT.

Try it Out:

1. Locate your approximate location on the globe.
2. One person will hold the flashlight to simulate sunlight. This person will point the flashlight at Earth during the simulation.
3. Another person will hold Earth. Make sure to angle Earth so the poles are directly pointing up and down, but at an angle close to 23.5°.
4. The person holding Earth should hold Earth by its axis. Slowly rotate Earth counterclockwise.
5. Find the terminator. Determine where dusk and dawn are located on Earth.
6. Make sure everyone in your group has a chance to rotate Earth and experience day and night.

1

3. The sun travels around the solar system.
C. Earth is tilted on its axis.
D. The sun's temperature varies every few months.
4. Earth is tilted on its:
A. axis B. side
C. oval D. pole
5. The amount of time it takes Earth to revolve around the sun is a:
A. day B. 24 hours
C. month D. year
6. In the northern United States and Canada, there are how many seasons?
A. six B. four
C. five D. two
7. In what season is the northern hemisphere angled away from the sun?
A. summer B. fall
C. spring D. winter



Demonstrate an

WE WILL

g
of

SET UP YOUR LESSON WITH PRINTABLE OBJECTIVES, VOCABULARY AND PROPS.



revolution

axis

Earth's Rotation, Revolution & Seasons

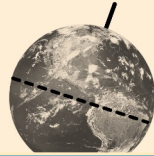
Have you ever been awake early enough to see the sun rise? Why does the sun move across the sky during the day, and where does it go at night? Many cities in the world experience four seasons. Have you ever thought about what causes the predictable cycle of seasons? Is winter caused when Earth moves farther away from the sun, and summer when it moves closer? Nope. In fact, you will learn that the exact opposite is true! Read on to learn more about Earth and its relationship with the sun.

- ellipse
- winter solstice
- axis
- Antarctic Circle
- Tropic of

Earth's Tilt

Earth's axis is tilted at 23.5 degrees. It is entirely because of this tilt that we have seasons. When the northern hemisphere is tilted toward the sun, we experience summer. At the same time, the southern hemisphere - which is tilted away from the sun - experiences winter.

Look at the picture of Earth. Notice that the northern hemisphere is tilted toward the sun. Because of that, Earth will receive more hours of daylight, making it warmer, but also more direct rays from the sun, increasing the heating process as well.



Earth's Orbit

You now know that Earth's rotation causes day and night, and its revolution around the sun is the reason for our year. But did you know the moon is considered to be a satellite of Earth? That is because Earth's gravitational pull keeps it near the planet. Just like the moon is our satellite, Earth and all other planets in the solar system are satellites of the sun. We stay in orbit around the sun because of its enormous gravitational pull.

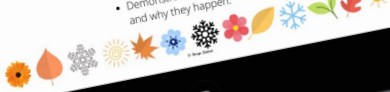
FUN FACT!

Earth is an average of

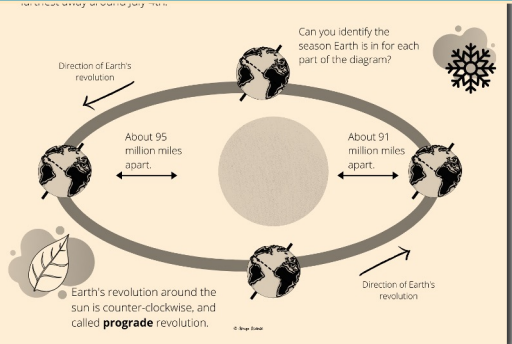
ASSIGN COLOR LESSON TO YOUR LMS AND PRINT THE LESSON TO USE IN CLASS.

We Will Learn To:

- Understand the seasons and their relation to Earth's tilt.
- Explain Earth's position in relation to the sun during each season.
- Demonstrate an understanding of solstices and equinoxes and why they happen.



On this day in the southern hemisphere it is the winter solstice and is the shortest day of the year. On the 21st or 22nd in the northern hemisphere it is called the **Tropic of Capricorn solstice**. In the southern hemisphere it is the longest day of the year.



Name _____ Date _____

Earth's Rotation, Revolution & Seasons

Directions: Read the vocabulary word. In the next column, draw a picture of the word. Then in the last column, use the word in a sentence.

Vocabulary Word	Picture	Sentence
Antarctic Circle		
Arctic Circle		
Axle		

Name _____ Date _____

Earth's Rotation, Revolution & Seasons

Directions: Use this sheet to take notes on what you are reading.

Note	Explanation
How did people figure out the	

Name _____ Date _____

Earth's Seasons

On the diagram below, please complete the following:

- Draw arrows to show in which direction the Earth revolves around the sun.
- Underneath each of the Earths, indicate which season Earth is in.

ASSIGN SUPPLEMENTAL ACTIVITIES TO ASSESS VOCABULARY & COMPREHENSION.

Equinox	
Prograde	

what that is. Draw a picture of Earth rotating. Add the sun, and shade half of Earth to show light and dark. Label the terminator.

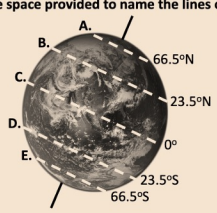
Describe the word revolution. How long does Earth take to revolve around the sun? Draw a picture of Earth revolving around the sun in a prograde direction.

If distance from the sun is NOT the reason we have seasons, then what is it? How could you explain this to someone who does not understand why we have seasons?

Name _____ Date _____

Earth's Seasons

Use the space provided to name the lines on the Earth:



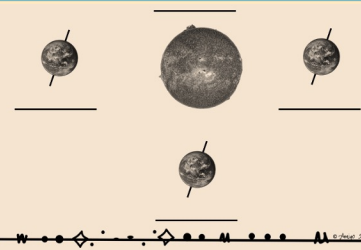
A. _____
 B. _____
 C. _____
 D. _____
 E. _____

_____ experiences seasons is due to :
 A. The distance from the sun
 B. Earth's rotation on its axis
 C. The distance of the Earth from the sun
 D. The temperature of the sun

At the summer solstice, the sun's direct rays will pass over which line?
 A. Tropic of Cancer
 B. Equator
 C. Tropic of Capricorn
 D. Arctic Circle

Why does the North Pole receive warmer temperatures during summer due to what?

FINISH WITH A POST TEST!



_____ happens twice a year. During this time, the sun's direct rays fall upon _____
 A. Tropic of Cancer
 B. equator
 C. Tropic of Capricorn
 D. Antarctic Circle

True or false for the following statements.
 8. Earth travels around the sun in a counterclockwise path.
 9. At the winter solstice, the Antarctic Circle experiences 24 hours of daylight.
 10. The revolution of Earth around the sun is responsible for day and night.

True / False 9. Earth revolves around the sun due to gravity.
 True / False 10. Earth's path around the sun is in the shape of an ellipse.



SEASONS RUBRIC

NAME _____

DIRECTIONS:

- Pay attention to the rubric.
- Every task is worth 2 points for a total of 24 points.
- I will use this exact rubric to grade your work.

WHAT CAUSES DAY AND NIGHT?

- Draw Earth and the sun correctly depicting what a day is.
- Picture is colored and labeled with the number of hours in Earth's day.
- Earth's rotation is shown in the correct direction.
- The terminator is drawn and labeled.

POINTS

 TOTAL _____

WHAT CAUSES SEASONS?

- Draw the sun and Earth in 4 positions around the sun.
- The picture correctly shows spring, summer, fall & winter.
- Revolution around the sun is in the correct direction.

POINTS

 TOTAL _____

SUPPLEMENT WITH A PROJECT!

Label the line that the equinoxes occur on. Write "equinox". TOTAL _____

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Earth's Seasons

Z E S I W K C O L C R E T N U O C N A N
V L R E C N A C F O C I P O R T Q W V R
E L C R I C C I T C R A T N A Z A T X O
N I E C I T S L O S R E T N I W C W C C
P P Y E E C I T S L O S A O X N H I M I
D S B X C L U T J D F R D D Y I S N N R
X E G R L I Z Q A R H Q I J H R U T N P
J R H N E P T R C R V A B R N S X E B A
N N X J X V R S A O C P T S V P G R X C
K Q V H P Y D O L A V T V L V R Q S Y F
P B F Y W A E H G O J L I R M I U S H O
F E Q Y Z C U H O R S J A C X N O X O C
R U Q Q E P H T J L A R X N C G T D E I
E L L U B Y H Z U Y S D E G I I Z F G P
W E O B I M D T J M M J E M Q K R I B O
H A Q B U N W Q R Y N S N P M L N C O R
B R P R K G O L Q A X I B R R U D Z L T
L D P B U B Z X G Z E X V Z S R S X G E
H E M I S P H E R E N A R E M M U S W J
Y Q C E Q F O R H E Q U A T O R D U L L

ellipse

prograde

solstice

equinox

equator

winter solstice

summer solstice

Arctic circle

Antarctic circle

tropic of cancer

tropic of Capricorn

summer

autumn

winter

spring

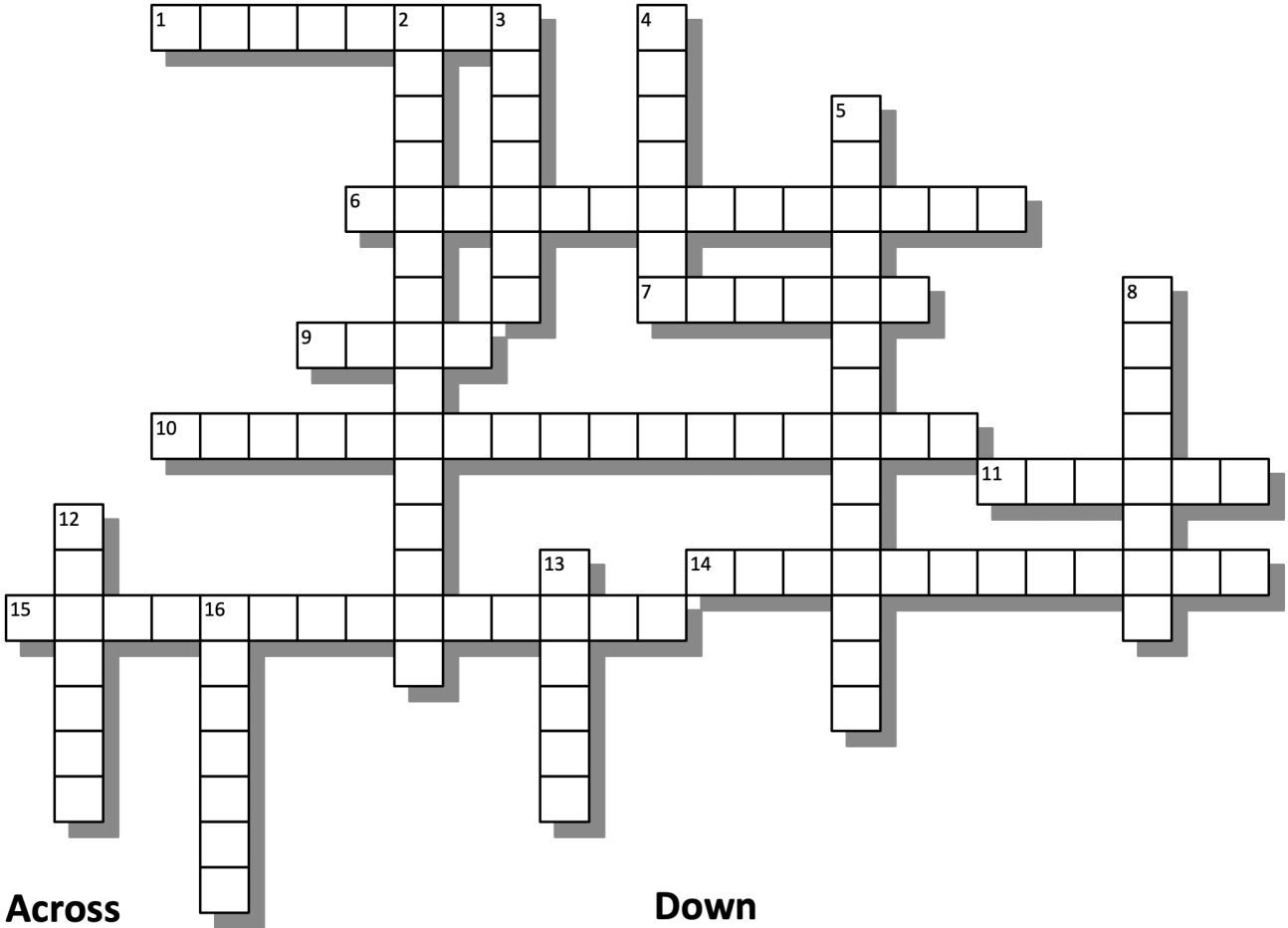
counterclockwise

axis

hemisphere

Earth

Earth's Seasons



Across

1. The counter-clockwise motion of a planet around the sun.
6. When the sun passes over this line, we experience the longest day of the year.
7. In the northern hemisphere, this season begins when the sun's direct rays pass over the Tropic of Cancer.
9. Earth rotates on an invisible one.
10. When the sun's direct rays pass over this line, the northern hemisphere experiences the shortest day of the year.
11. The reason we have seasons is because Earth is _____ on its axis.
14. People living above this line will experience 24 hours of daylight during the summer solstice in the northern hemisphere.
15. When the sun's direct rays pass over the Tropic of Cancer.

Down

2. A zone exactly like the Arctic Circle but in the southern hemisphere.
3. A shape that resembles a flattened circle.
4. If Earth was not tilted, Earth would not experience any of these.
5. When the sun's direct rays pass over the Tropic of Capricorn.
8. The day the sun reaches its greatest distance either north or south of the equator.
12. Latin for "equal night".
13. In the northern hemisphere, this season begins when the sun's direct rays pass over the Tropic of Capricorn.
16. The imaginary line that separates the northern and southern hemispheres.

Earth's Seasons

Z E S I W K C O L C R E T N U O C N A N
 V L R E C N A C F O C I P O R T Q W V R
 E L C R I C C I T C R A T N A Z A T X O
 N I E C I T S L O S R E T N I W C W C C
 P P Y E E C I T S L O S A O X N H I M I
 D S B X C L U T J D F R D D Y I S N N R
 X E G R L I Z Q A R H Q I J H R U T N P
 J R H N E P T R C R V A B R N S X E B A
 N N X J X V R S A O C P T S V P G R X C
 K Q V H P Y D O L A V T V L V R Q S Y F
 P B F Y W A E H G O J L I R M I U S H O
 F E Q Y Z C U H O R S J A C X N O X O C
 R U Q Q E P H T J L A R X N C G T D E I
 E L L U B Y H Z U Y S D E G I I Z F G P
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 Y Q C E Q F O R H E Q U A T O R D U L L

ellipse

prograde

solstice

equinox

equator

winter solstice

summer solstice

Arctic Circle

Antarctic Circle

tropic of cancer

tropic of Capricorn

summer

autumn

winter

spring

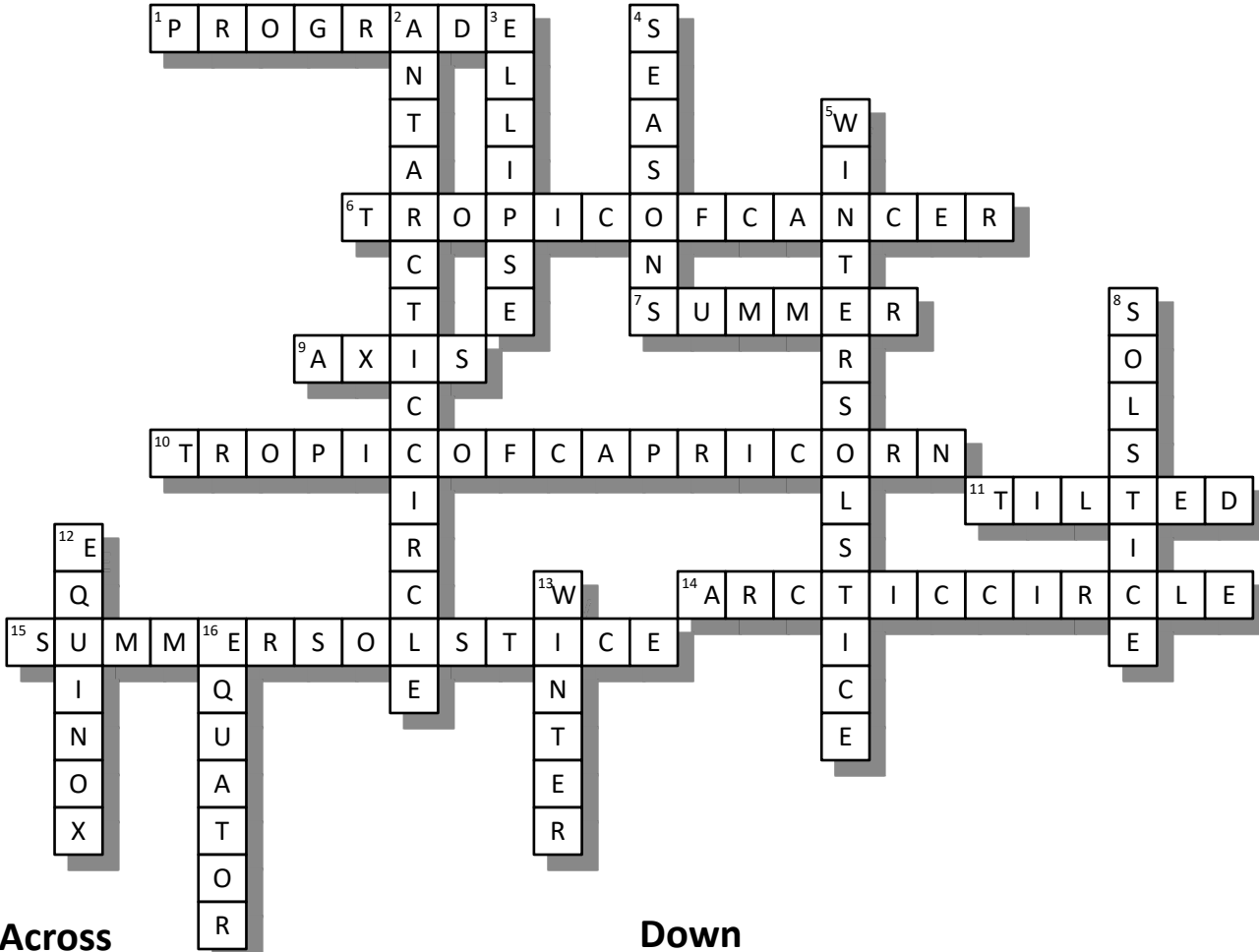
counter clockwise

axis

hemisphere

Earth

Earth's Seasons



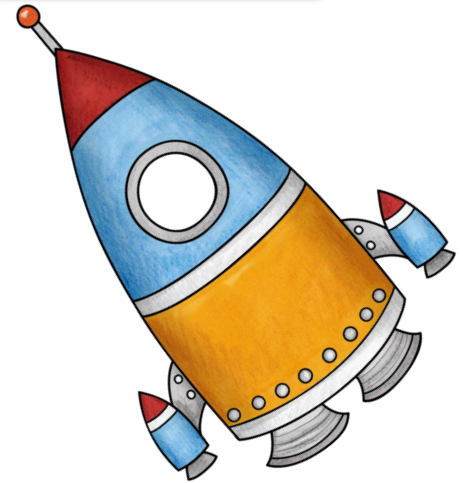
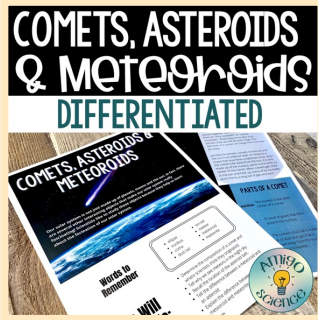
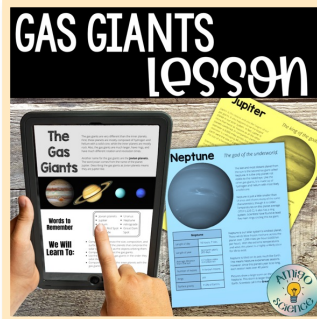
Across

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- The imaginary line that separates the northern and southern hemispheres.

Additional Astronomy Activities:



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ASTRONOMY ACTIVITIES & LESSONS SUPER BUNDLE



Thanks to these clipart and font artists:

