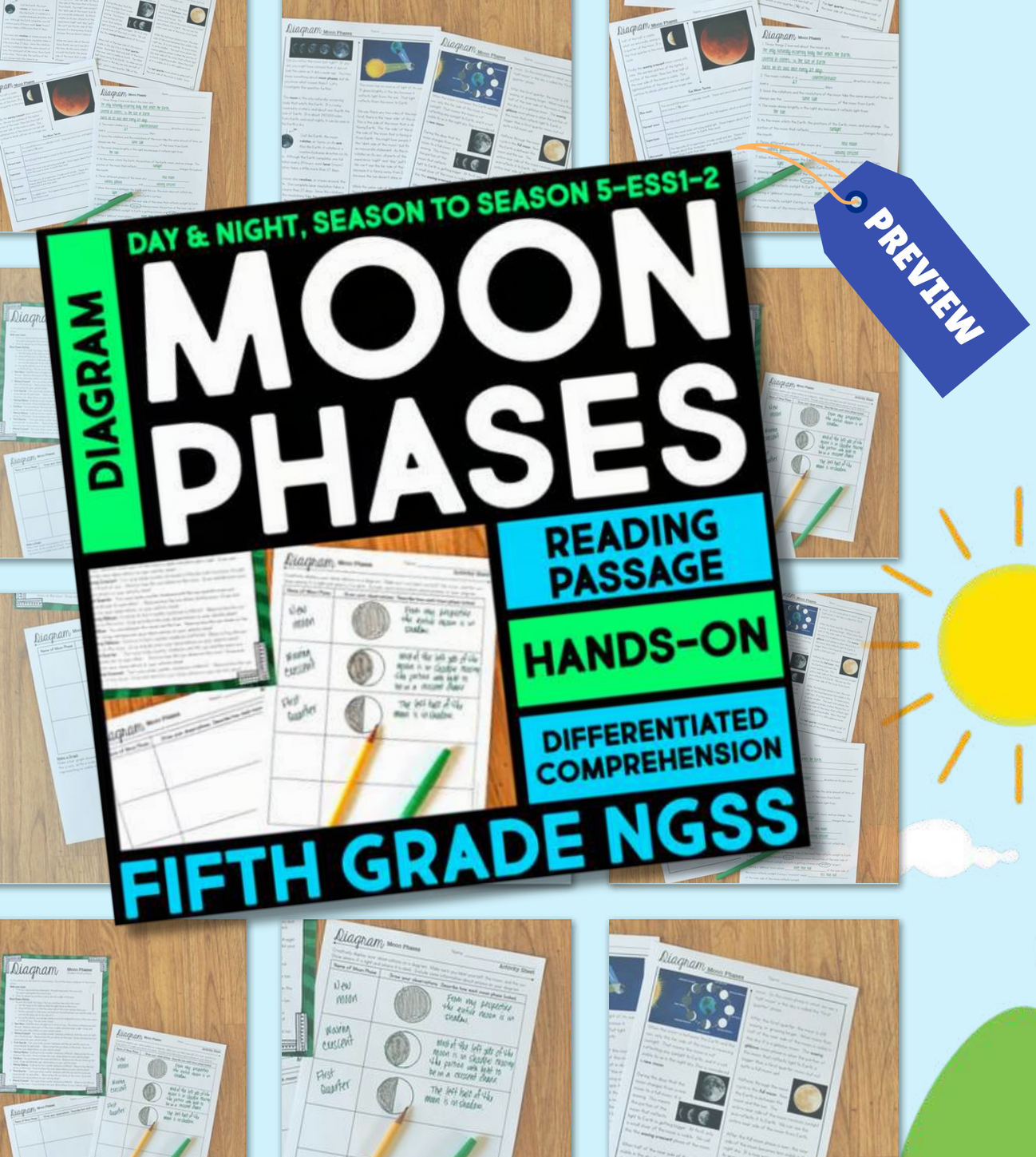


Discover Why the Moon Changes Shape?

5TH GRADE

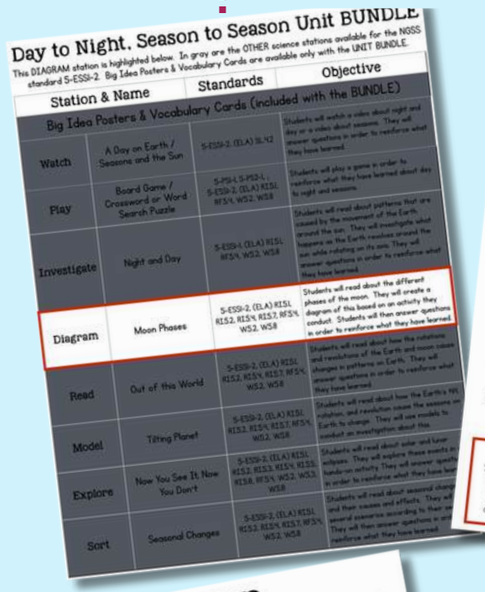
DIAGRAM MOON PHASES

DAY & NIGHT

KEEP SCROLLING TO SEE WHAT'S INSIDE!

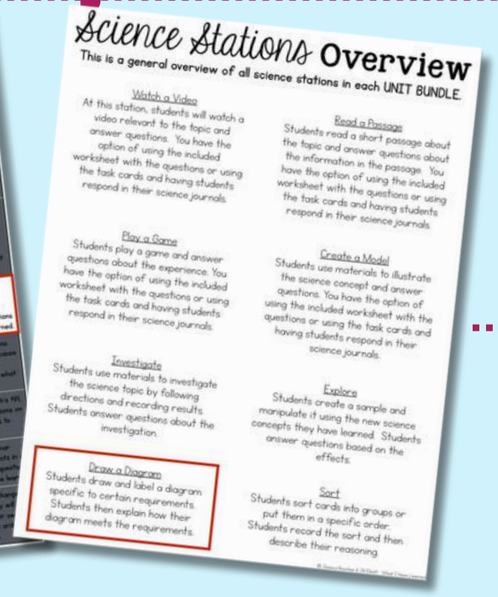
ACTIVITY OVERVIEW




Day to Night, Season to Season Unit BUNDLE

This DIAGRAM station is highlighted below. In gray are the OTHER science stations available for the NGSS standard 5-ESS1-2. Big Idea Posters & Vocabulary Cards are available only with the UNIT BUNDLE.

Station & Name		Standards	Objective
Big Idea Posters & Vocabulary Cards (included with the BUNDLE)			
Watch	A Day on Earth / Seasons and the Sun	5-ESS1-2, (ELA) SL.1, 2	Students will watch a video about night and day or a video about seasons. They will answer questions in order to reinforce what they have learned.
Play	Board Game / Crossword or Word Search Puzzle	5-PS1-1, 5-PS2-1, 5-ESS1-2, (ELA) RI.5.1, RF.5.4, W.5.2, W.5.8	Students will play a game in order to reinforce what they have learned about day to night and seasons.
Investigate	Night and Day	5-ESS1-1, (ELA) RI.5.1, RF.5.4, W.5.2, W.5.8	Students will read about patterns that are caused by the movement of the Earth around the sun. They will investigate what happens as the Earth revolves around the sun while rotating on its axis. They will answer questions in order to reinforce what they have learned.
Diagram	Moon Phases	5-ESS1-2, (ELA) RI.5.1, RI.5.2, RI.5.4, RF.5.4, W.5.2, W.5.8	Students will read about the different phases of the moon. They will create a diagram of this based on an activity they conduct. Students will then answer questions in order to reinforce what they have learned.
Read	Out of this World	5-ESS1-2, (ELA) RI.5.1, RI.5.2, RI.5.4, RI.5.7, RF.5.4, W.5.2, W.5.8	Students will read about how the rotations and revolutions of the Earth and moon cause changes in patterns on Earth. They will answer questions in order to reinforce what they have learned.
Model	Tilting Planet	5-ESS1-2, (ELA) RI.5.1, RI.5.2, RI.5.4, RI.5.7, RF.5.4, W.5.2, W.5.8	Students will read about how the Earth's tilt, rotation, and revolution cause the seasons on Earth to change. They will use models to conduct an investigation about this.
Explore	Now You See It, Now You Don't	5-ESS1-2, (ELA) RI.5.1, RI.5.2, RI.5.3, RI.5.4, RI.5.8, RF.5.4, W.5.2, W.5.3, W.5.8	Students will read about solar and lunar eclipses. They will explore these events in a hands-on activity. They will answer questions in order to reinforce what they have learned.
Sort	Seasonal Changes	5-ESS1-2, (ELA) RI.5.1, RI.5.2, RI.5.4, RI.5.7, RF.5.4, W.5.2, W.5.8	Students will read about seasonal changes and their causes and effects. They will complete several scenarios according to their text. They will then answer questions in order to reinforce what they have learned.


Science Stations Overview

This is a general overview of all science stations in each UNIT BUNDLE.

Watch a Video
At this station, students will watch a video relevant to the topic and answer questions. You have the option of using the included worksheet with the questions or using the task cards and having students respond in their science journals.

Read a Passage
Students read a short passage about the topic and answer questions about the information in the passage. You have the option of using the included worksheet with the questions or using the task cards and having students respond in their science journals.

Play a Game
Students play a game and answer questions about the experience. You have the option of using the included worksheet with the questions or using the task cards and having students respond in their science journals.

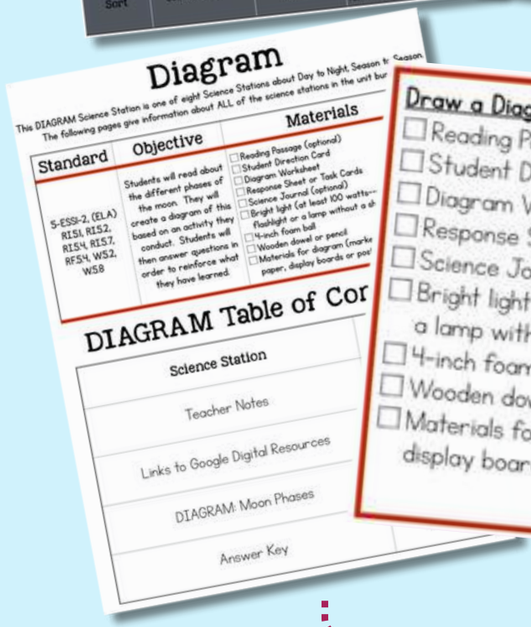
Create a Model
Students use materials to illustrate the science concept and answer questions. You have the option of using the included worksheet with the questions or using the task cards and having students respond in their science journals.

Investigate
Students use materials to investigate the science topic by following directions and recording results. Students answer questions about the investigation.

Explore
Students create a sample and manipulate it using the new science concepts they have learned. Students answer questions based on the effects.

Draw a Diagram
Students draw and label a diagram specific to certain requirements. Students then explain how their diagram meets the requirements.

Sort
Students sort cards into groups or put them in a specific order. Students record the sort and then describe their reasoning.

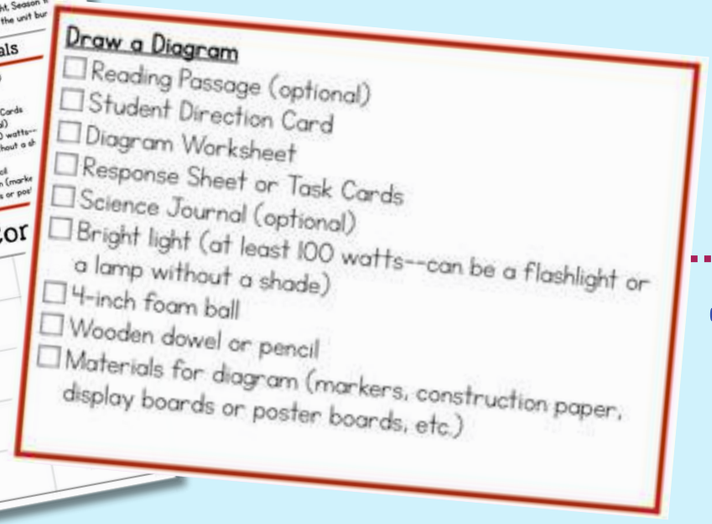

Diagram

This DIAGRAM Science Station is one of eight Science Stations about Day to Night, Season to Season. The following pages give information about ALL of the science stations in the unit bundle.

Standard	Objective	Materials
5-ESS1-2, (ELA) RI.5.1, RI.5.2, RI.5.4, RI.5.7, RF.5.4, W.5.2, W.5.8	Students will read about the different phases of the moon. They will create a diagram of this based on an activity they conduct. Students will then answer questions in order to reinforce what they have learned.	☐ Reading Passage (optional) ☐ Student Direction Card ☐ Diagram Worksheet ☐ Response Sheet or Task Cards ☐ Science Journal (optional) ☐ Bright light (at least 100 watts--can be a flashlight or a lamp without a shade) ☐ 4-inch foam ball ☐ Wooden dowel or pencil ☐ Materials for diagram (markers, construction paper, display boards or poster boards, etc.)

DIAGRAM Table of Cor

Science Station
Teacher Notes
Links to Google Digital Resources
DIAGRAM: Moon Phases
Answer Key


Draw a Diagram

- ☐ Reading Passage (optional)
- ☐ Student Direction Card
- ☐ Diagram Worksheet
- ☐ Response Sheet or Task Cards
- ☐ Science Journal (optional)
- ☐ Bright light (at least 100 watts--can be a flashlight or a lamp without a shade)
- ☐ 4-inch foam ball
- ☐ Wooden dowel or pencil
- ☐ Materials for diagram (markers, construction paper, display boards or poster boards, etc.)

Table of Contents

Science Station Overview

Materials Checklist

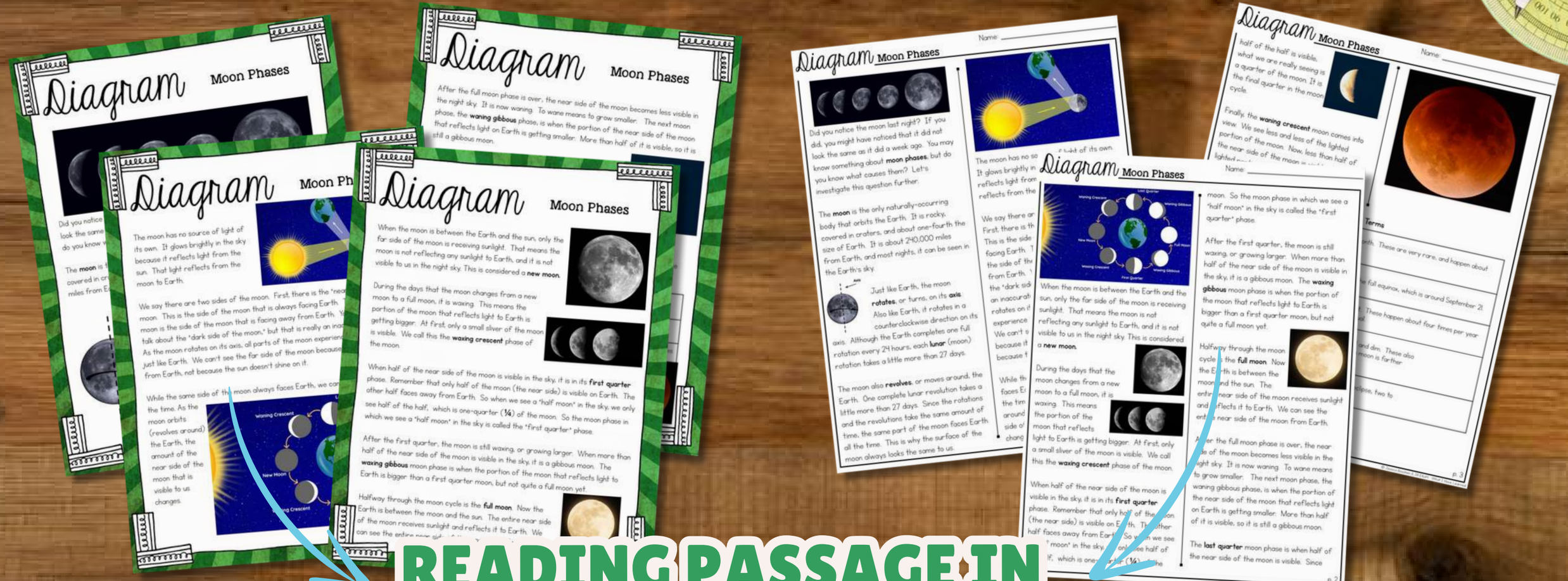
Table of Contents / Teacher's Notes

WHAT'S INCLUDED
DIAGRAM SCIENCE STATION

- Teacher Notes
- **Student Text** in two formats
- Student **Instructions**
- **Activity Sheets** for observation
- Differentiated **Questions**
- Answer Key
- Google Form™
- Google Slides™



DIAGRAM: READING PASSAGE



READING PASSAGE IN TWO FORMATS

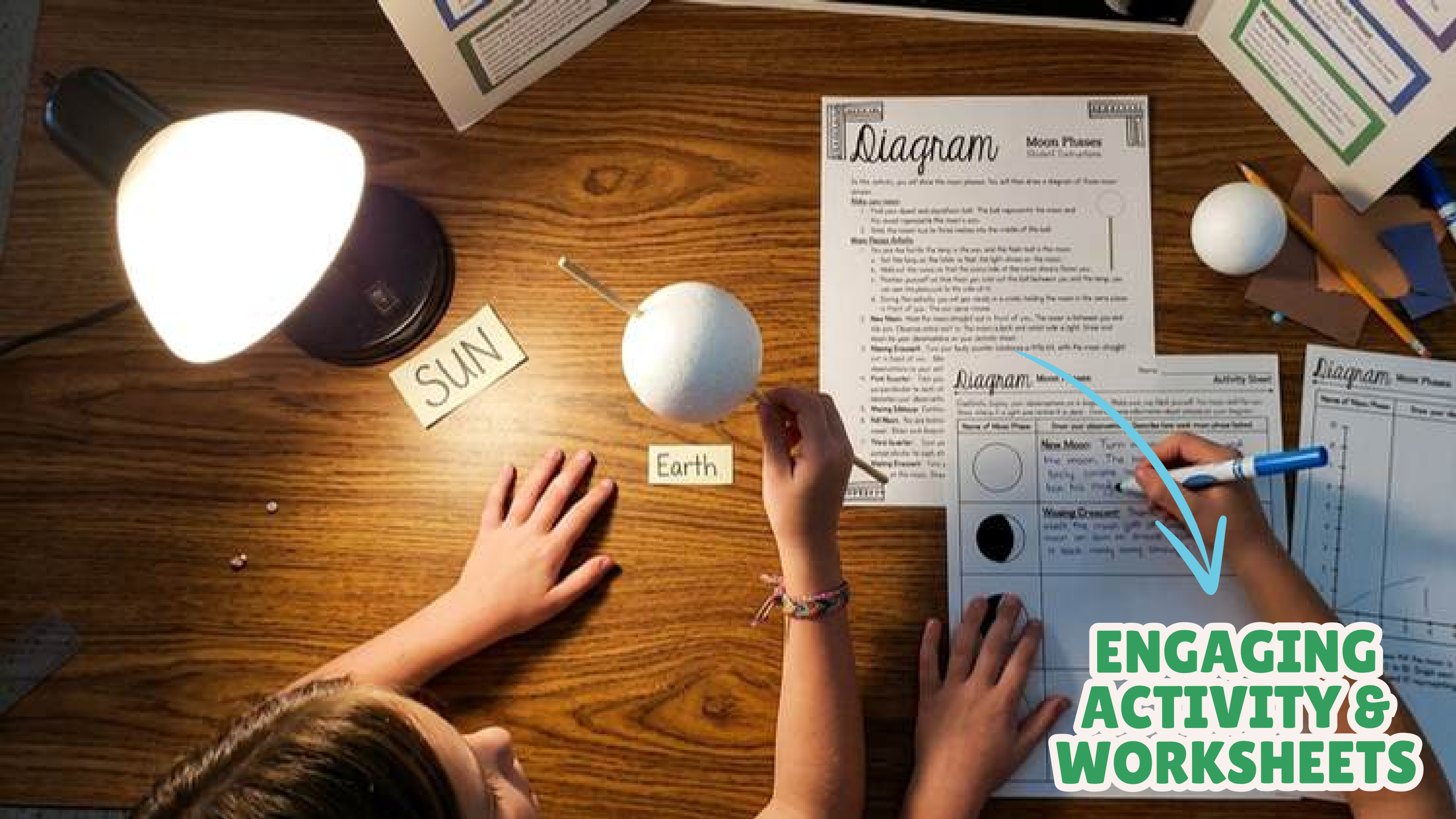
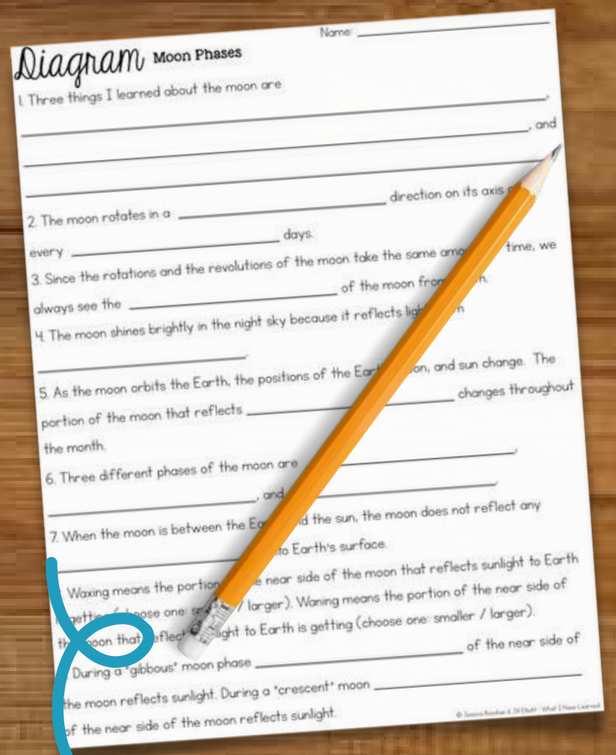
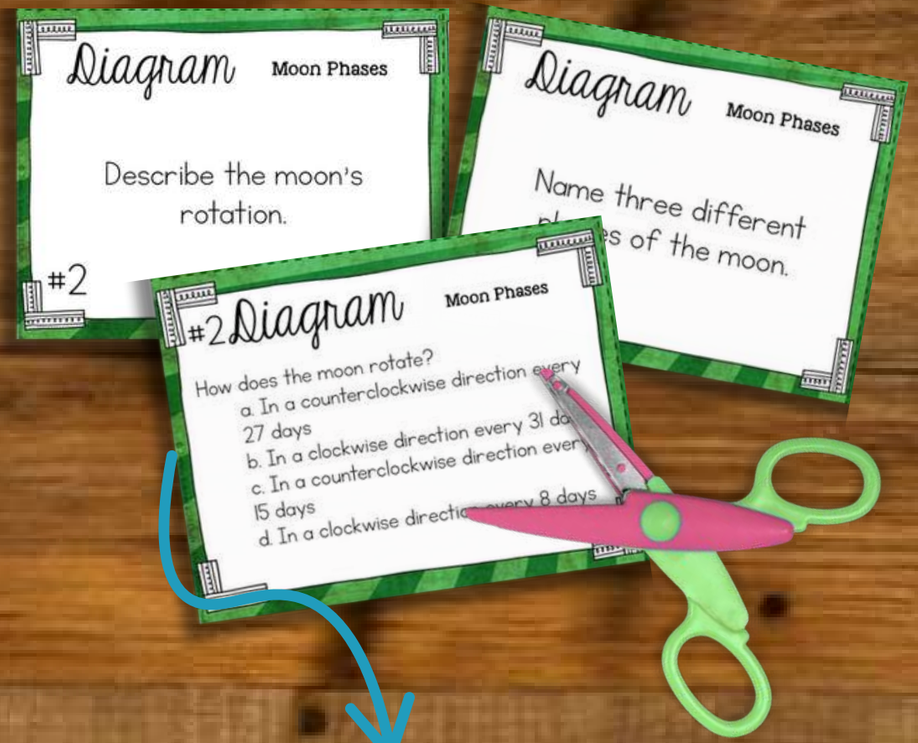

SUN
Earth
Diagram
Moon Phases
ENGAGING ACTIVITY & WORKSHEETS


Diagram
Moon Phases
Diagram
Moon Phases
Activity Sheet
Name of Moon Phase
Draw your observations
New Moon
Waxing Crescent
First Quarter
Diagram
Moon Phases
Name of Moon Phase
ENGAGING ACTIVITY
& WORKSHEETS

DIFFERENTIATED QUESTIONS







SHORT ANSWER

FILL-IN-THE BLANK

TASK CARDS: SHORT ANSWER & MULTIPLE CHOICE

Diagram — Moon Phases



Did you notice the moon last night? If you did, yo
look the same as it did a week ago. You may kno
do you know what causes them? Let's investig

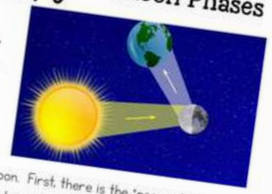
The **moon** is the only naturally-occurring bod
covered in craters, and about one-fourth th
miles from Earth, and most nights, it can b

Axis

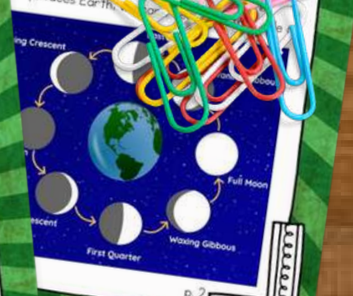
Just like Ear
Also like Ear
on its axis.
rotation

Diagram — Moon Phases

The moon has no source of light of its own. It glows brightly in the sky because it reflects light from the sun. That light reflects from the moon to Earth.



We say there are two sides of the moon. First, there is the "near side" of the moon. This is the side
moon that is always facing Earth. The "far side" of the moon that is facing away from Earth. You might hear people
a moon," but that is really an inaccurate statement.
all parts of the moon experience "night" and "day,"
far side of the moon
doesn't shine on it.
ways faces Earth.



p. 2

Diagram — Moon Phases

When the moon is between the Earth and the sun, only the far side of the moon is receiving sunlight. That means the moon is not reflecting any sunlight to Earth, and it is not visible to us in the night sky. This is considered a **new moon**.



During the days that the moon changes from a new moon to a full moon, it is waxing. This means the portion of the moon that reflects light to Earth is getting bigger. At first, only a small sliver of the moon is visible. We call this the **waxing crescent** phase of the moon.



When half of the near side of the moon is visible in the sky, it is in its **first quarter** phase. Remember that only half of the moon (the near side) is visible on Earth. The other half faces away from Earth. So when we see a "half moon" in the sky, we only see half
which

Aft
half
wax
Earth

Halfway through the
Earth is between the moon and the sun. The entire near side of the moon receives sunlight and reflects it to Earth. We can see the entire near side of the moon from Earth.



p. 3

ADD TO CART

Diagram — Moon Phases

Name: _____

1. Describe three things about the moon.
Choose three: the only naturally-occurring body that orbits the Earth, rocky, covered in craters, ¼ the size of Earth, 240,000 miles from Earth, can be seen in Earth's sky most nights, turns (orbits, rotates) on its axis once every 27 days, revolves around the Earth once every 27 days, same side always faces Earth

2. Describe the moon's rotation.
The moon rotates in a counterclockwise direction on its axis once every 27 days.

3. Why do we always see the same side of the moon from Earth?
Since the rotations and the revolutions of the moon take the same amount of time, the same part of the moon faces Earth all the time.

4. What makes the moon shi tly in the night sky?
The moon shines brigh sky because it reflects light from the sun.

5. Why does
As the moon Earth, moon, and sun change. The portion of the hout the month.

6. Name three differen
Choose three: new moo arter, waxing gibbous, full moon, waning gibbous, third qua

7. What causes the new moon
When the moon is between the he moon does not reflect any light onto Earth's surface.

8. What is the difference between a "waxi on phase?
Waxing means the portion of the near hat reflects sunlight to Earth is getting larger. Waning means the portion the moon that reflects sunlight to Earth is getting smaller.

9. What is the difference between a "gibbous" n phase?
During a "gibbous" moon phase more than e of the moon reflects sunlight. During a "crescent" moon phase near side of the moon reflects sunlight.

#2 Diagram — Moon Phases

How does the moon rotate?
a. In a counterclockwise direction every 27 days
b. In a clockwise direction every 31 days
c. In a counterclockwise direction every 15 days
d. In a clockwise direction every 8 days

#6 Diagram — Moon Phases

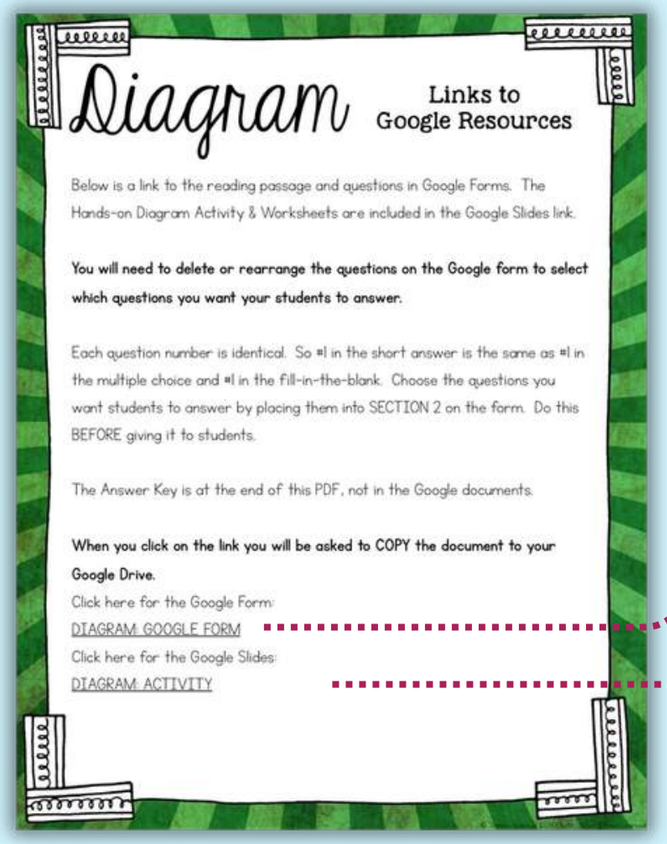
Which of these is not a phase of the moon?
a. First quarter
b. Blue moon
c. Waxing gibbous
d. Waning crescent

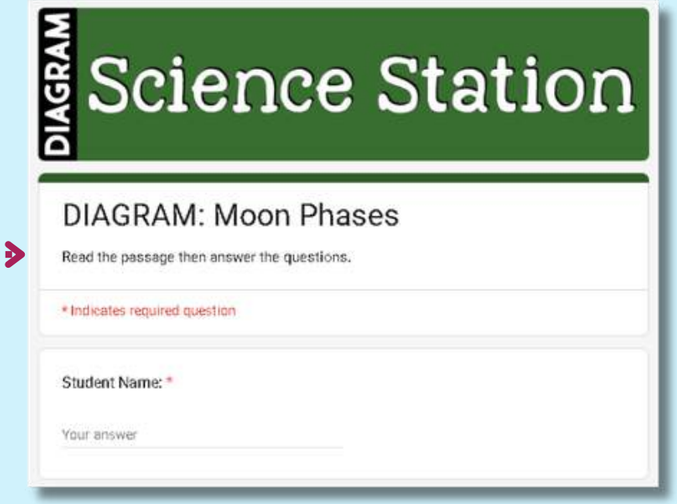
Diagram — Moon Phases

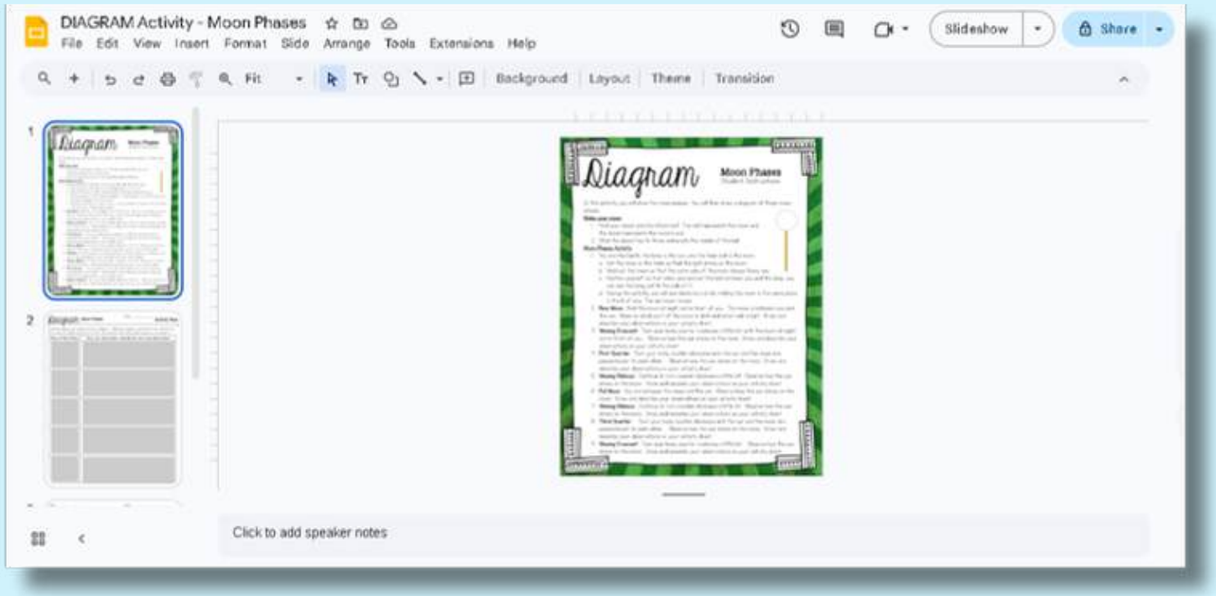
Name three different phases of the moon.

#6

DIGITAL VERSIONS







DIGITAL VERSIONS

- ✔ Google Sheet with Activity & Directions
- ✔ Google Form with Reading & Questions

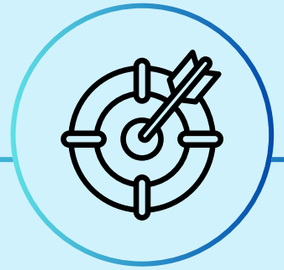
Answer keys provided

YOU WILL LOVE THIS BECAUSE



Hands-On and Visual Learning

This activity simplifies complex moon phase concepts, helping students clearly understand patterns through hands-on modeling, visuals, and structured learning tasks.



Time-Saving for Teachers

Ready-to-use materials, teacher notes, and answer keys reduce prep time while keeping lessons engaging, standards-aligned, and purposeful.



Balanced Learning Approach

Combines reading, creating, and reflecting so students learn science content while developing problem-solving and critical thinking skills.

TEACHERS LOVE IT!

★★★★★

I absolutely love this resource for my classroom!

Sarah H.

★★★★★

I loved how many options there were with this product!

Kathryn P.





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My passion is making learning accessible to all students.
I love scaffolding learning, breaking down the concepts and building them up so that students can see the connections.
I love figuring out the small components that build up to the big ideas and helping students see it all.





What I have LEARNED