# Table of Contents

*Understanding by Design Stages 1-3* ................................................................. 3  
*WHERETO chart* .................................................................................................. 4  
*Standards* ............................................................................................................ 5  
*Unit Resources/Materials* .................................................................................... 7  
*Lesson #1* ........................................................................................................... 9  
*Lesson #2* .......................................................................................................... 11  
*Lesson #3* .......................................................................................................... 14  
*Lesson #4* .......................................................................................................... 16  
*Lesson #5* .......................................................................................................... 18  
*Lesson #6* .......................................................................................................... 21  
*Lesson #7* .......................................................................................................... 23  
*Lesson #8* .......................................................................................................... 26  
*Lesson #9* .......................................................................................................... 28  
*Lesson #10* ....................................................................................................... 31  
*Writing Rubric* .................................................................................................. 33  
*Pre/Post Test* .................................................................................................... 33  
*Packet Home* .................................................................................................... 36  
*Lunar Cycle Cards* ............................................................................................. 41  
*Reflections* ....................................................................................................... 42
### Stage 1 Desired Results

**ESTABLISHED GOALS**
Students will learn the cycle of Earth’s moon. Students will create a book with art and writing reflecting their growing knowledge and understanding of the moon. Students will learn stories from cultures involving the moon.

**Transfer**
Students will be able to independently use their learning to...
Understand the lunar cycle and its importance on Earth.

**Meaning**

**UNDERSTANDINGS**
Students will understand that...
The cycles influenced by energy from the sun and by Earth’s position and motion in our solar system.
Phases are consistent and predictable.
Many cultures wonder and use the moon. Components of a friendly letter.

**ESSENTIAL QUESTIONS**
Why do we have moon phases?
What is the importance of the moon to Earth and its inhabitants?
What are some of the lunar legends in various cultures?

**Acquisition**

**Students will know...**
Essential vocabulary: new, full, waxing, waning, crescent, gibbous, first quarter, third (or last) quarter, cycle, lunar phase, lunar eclipse, crater
How regular and predictable motion of the Earth and moon determine the apparent shape of the moon over time.

**Students will be skilled at...**
Identifying lunar phases
Students will be able to explain in their own words why there are moon phases, and name each stage.

### Stage 2 - Evidence

**Evaluvative Criteria**

<table>
<thead>
<tr>
<th>Writing Rubric Discussions</th>
<th>PERFORMACE TASK(S):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oreo cookie phases (potential)</td>
<td>Moon Journaling</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Final Moon Journal typing</th>
<th>OTHER EVIDENCE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-/ Post-Test</td>
<td>Explain in their own words why we have moon phases.</td>
</tr>
</tbody>
</table>

### Stage 3 – Learning Plan

See lesson plans below

**Schedule:**
Lesson # 1 – Introduction 1/27/17 (Friday) and New Moon 1/28/17 (Saturday)
~The following are as time allows~

Lesson #2 – “I wonder...” and Pencil sketch
Lesson #3 – “Notes from Nature” and Pen/Ink Drawing
Lesson #4 – Brain Pop Science Day
Lesson #5 – “Metaphors of Midnight”
Lesson #6 – “Similes in Starlight”
Lesson #7 – “Starry Night” Art Emulation to go with Similes
Lesson #8 – “A symbol /moon story
Lesson #9 – Alutiiq “The Girl Who Married the Moon” and wrap-up symbol story
Lesson #10 – End of Unit Discussion and Test
<table>
<thead>
<tr>
<th>W</th>
<th>Where are we going? What is expected?</th>
<th>Teach moon phases. Guide students to discover why we have moon phases.</th>
<th>Learn the 8 outlined phases of the moon, why they occur.</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>How will we hook (Introduce this to) the students? How will we pre-assess student knowledge, understanding and skills to inform instruction?</td>
<td>Diagnostic assessment. Have students take a test at the beginning and end of the units. It will be on the moon phases and why we have them.</td>
<td>Take the test at the beginning and end of unit.</td>
</tr>
<tr>
<td>E</td>
<td>How will we equip students for expected performances?</td>
<td>Supply them with worksheets, websites, and guidance for success.</td>
<td>Work their best with the resources I have provided.</td>
</tr>
<tr>
<td>R</td>
<td>How will we rethink or revise? (on-going, formative, keep coming back as needed)</td>
<td>Use observations, and independent work to determine if students are meeting the learning goal or not. Use 5E for scientific understanding of moon phases.</td>
<td>Participate and finish all their independent work.</td>
</tr>
<tr>
<td>E</td>
<td>How will students self-evaluate and reflect their learning?</td>
<td>Provide Moon Journals for writing and inquiry</td>
<td>Write every night to the moon about what they are wondering and their thinking about the moon. Students will also be working on in-class writing that will help them to map out what they do know about the moon and what they are still working to describe/understand.</td>
</tr>
<tr>
<td>T</td>
<td>How will we tailor learning to varied needs, interests, and learning styles? (differentiation, accommodation, modification)</td>
<td>Provide worksheets, videos for students to watch, and scaffolding for students.</td>
<td>Have clear instructions to follow. Speak out when something is hard or too easy for them. Talk about the activities and discussions they like/don’t like.</td>
</tr>
<tr>
<td>O</td>
<td>How will we organize the sequence of learning? (please include the sequence)</td>
<td>Essential goal for students. Diagnostic assessment. Learn the names of moon phases daily. Watch videos, read, about why we have moon phases.</td>
<td>Essential goal for students. Diagnostic assessment. Learn the names of moon phases daily. Watch videos, read, about why we have moon phases.</td>
</tr>
</tbody>
</table>

WHERETO chart idea/layout retrieved from Anastasia Ishnook’s UbD Moon Phases Lesson. Cited below.
Standards

Alaska Science Content Standard

[Grade 5] SD3.1 observing a model that shows how the regular and predictable motion of the Earth and moon determine the apparent shape (phases) of the moon over time (Local)

[3] SD4.1 recognizing that objects appear smaller the farther away they are

[3] SD4.2 recognizing that objects have properties, locations, and movements that can be observed and described

[3] SF1.1-SF3.1 exploring local or traditional stories that explain a natural event (L)

[3] SG2.1 comparing the results of multiple observations of a single local event (L)

[3] SG4.1 asking questions about the natural world

Alaska Cultural Standards For Students

B.1. Culturally-knowledgeable students are able to build on the knowledge and skills of the local cultural community as a foundation from which to achieve personal and academic success throughout life. Students who meet this cultural standard are able to acquire insights from other cultures without diminishing the integrity of their own.

E.4. Culturally-knowledgeable students demonstrate an awareness and appreciation of the relationships and processes of interaction of all elements in the world around them. Students will determine how ideas and concepts from one knowledge system relate to those derived from other knowledge systems.

Alaska Cultural Standards For Educators

E.1. recognize cultural differences as positive attributes around which to build appropriate educational experiences

National Art Education Standards

A.1. generate and conceptualize artistic ideas and work

B.3. perform, present and/or produce artistic work

Alaska Art State Standards: Grade 3

A.1. Participate in dance, drama, music, visual arts, and create writing.

A.2. Refine artistic skills and develop self-discipline through rehearsal, practice, and revision.

A.3. Appropriately use new and traditional materials, tools, techniques, and processes in the arts.

B.1. Recognize Alaska Native cultures and their arts.

D.5. Consider other culture's beliefs about works of art.

D.6. Recognize that people connect many aspects of life through the arts.

Alaska Writing Standards: Grade 3

W.3.3.b Use narrative techniques, such as dialogue, decryption and elaboration, and concrete and sensory details to describe actions, thoughts, and feelings and to develop experiences and events showing the response of characters to situations or problems.

W.3.4 With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose.

W.3.5 With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.

W.3.6 With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others and to locate information about topics.

W.RW.3.10 Write routinely over extended time frames and shorter time frames for a range of discipline-specific tasks, purposes, and audiences.

English Language Arts Standards Speaking and Listening: Grade 3

ELA.SL.3.1.b. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).

ELA.SL.3.1. d. Explain their own ideas and understanding in light of the discussion.

ELA.SL.3.2. Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

English Language Arts Standards Language: Grade 3

ELA.L.3.2.a. Capitalize appropriate words in titles.

ELA.L.3.2.b. Use commas in addresses

English Language Arts Standards Knowledge of Language: Grade 3

ELA.KL.3.3.a. Choose words and phrases for effect.

ELA.KL.3.5. a. Distinguish the literal and nonliteral meanings of words and phrases in context (e.g., take steps)

ELA.KL.3. 6. Acquire and accurately use grade-appropriate conversational, general academic, and domain specific words and phrases, including those that signal spatial and temporal relationships (e.g., After dinner that night we went looking for them)

English Language Arts Standards Reading: Grade 3
**RL.3.2.** Determine the author's purpose, message, lesson, or moral and explain how it is conveyed through key details in the text; summarize stories in correct sequence, including fables and folktales from diverse cultures.

**RL.3.3.** Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events (e.g., creating or solving a problem).

**RESOURCES:**


Phases of the Moon Explanation for kids – Animation Lesson Unit. Makemegenius. 6:33. https://www.youtube.com/watch?v=bWeaQctUp1c


“Owl Moon” by Jane Yolen

“Papa, please get the moon for me” by Eric Carle

“Box of Daylight” from the Tlingit culture (Sealaska Heritage Foundation)

https://www.youtube.com/watch?v=cbk9tcZaebs Alutiiq story made at Kodiak School

Anastasia Ishnook. UbD Moon Phases Lesson.

**UNIT MATERIALS:**

Pencils

White color pencils or crayons

Fine-tip Sharpe
Chromebooks/Computers for each student
Laminator and Laminator sheets
Three-hole puncher or single hole punch
Metal opening O-rings (small) – 3 for each book
Blue construction paper
Black construction paper
Purple construction paper
White printer paper
Projector or Smart board
Whiteboard with whiteboard markers
Packet Home with moon calendar (attached)
Pre/Post Test (attached)
Yellow Acrylic Paint
Blue Acrylic Paint
White Acrylic Paint
Black Pens
Brain Pop Vocabulary Activity (attached)

Internet access for following videos:

https://www.youtube.com/watch?v=wz01pTvuMa0&t=162s  NSTA Moon Phases Explanation
https://www.youtube.com/watch?v=ck9tcZaebs  Alutiiq Girl Who Married The Moon
https://www.youtube.com/watch?v=91mSLGOfH2E&t=180s  Starry Night Animation
https://www.brainpop.com/science/space/moon/  Brain Pop Video
https://www.brainpop.com/science/space/moon/quiz/  Brain Pop Online Quiz

Notes
Start small to let inquiry grow.

This Moon Book looks best when students are submitting their writing and art and you laminate it. Post it on some purple, black, or dark blue construction paper roughly 8.5” x11” or bigger. Then, 3-hole punch it, bind them together with round hook fasteners and voila! A Beautiful book.

Depending on how this unit will be used, I also included the packet home I made. I sent it home about 10 days before the New Moon was going to happen.
Lesson #1 – New Moon and New Journals!

Alaska Content and Cultural Standards:

Alaska Science Content Standard
[3] SG2.1 comparing the results of multiple observations of a single local event (L)

[3] SG4.1 asking questions about the natural world

Alaska Cultural Standards for Educators
E.1. recognize cultural differences as positive attributes around which to build appropriate educational experiences

English Language Arts Standards Speaking and Listening: Grade 3
ELA.SL.3.1.b. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).

ELA.SL.3.1.d. Explain their own ideas and understanding in light of the discussion.

Subject/Topic: Introduction to the Moon Journaling

Lesson Goals: To introduce moon unit – expectations, materials, timeline, project.

Length: 45 minutes

Objectives:
Uncovering the lunar cycle. Starting a KWL as a class. Understanding the routine and expectations for journaling every night.

Assessment:
Prior to the moon lesson, give students the pre-assessment.

Students participation in sharing what they know or want to know about the moon.

Lesson:

Anticipatory Set/ Attention Grabber/ Motivation/ Lesson Introduction
Hand out the pre-assessment to every student. Students will need a pencil and white crayon. Explain that this is going to be a hard test that I don’t expect you to know all the answers to. I would like you to do your best, and know that the test is not going to hurt your grade. I am not looking at how many answers you got wrong. When you find a question you do not know the answer to, give it your best guess. I will know you are finished when you flip over the test and are drawing a picture of a cow jumping over some luminous object.

Activities: Explanation/ Stimulus material/Discovery Activity
Ask students what they know about the moon. List their thoughts and questions on the board. Informally create a class KWL chart. Encourage them to ask questions they have about the moon. I hope that over the course of the unit, we will be able to come back to this chart (online or re-write on butcher paper) and write more about what we have learned.
Closure and evaluation/assessment

So, starting tonight we are going to write every night after observing the night sky for about 10 minutes. Each night, you are going to start the entry by entering three important pieces of information: date, time, and temperature. So, let’s start with writing down the first one together, on the first page.

Date: [The starting day’s date] JANUARY 27, 2017.

Right now, is it a good time to write down? [No.] Please write down the time you either started observing or once you have finished observing.

Thirdly, I would like you to write down the temperature because it’s going to be fun to compare the temperature with each classmate, to see if there’s a possible connection between the moon and temperature, or any other reason you might find.

After those three items are recorded, I would like you to leave a blank space then start writing what you observe on the next lines. For instance, good things to record are what you were doing before the observation, what was around you or happening during your observation, any thoughts or questions that you wondered while you were watching the night sky, etc. Does anyone have anything else they might like to share with the class about good things to record while we do our nightly observations? Allow time for responses.

Diversity Strand:

This is an introductory lesson that anybody and hopefully everybody can share what they want. I hope to give enough time that students are allowed to have as much time as they need in order to dig up questions that they might have or facts they want to retrieve. Every student receives the same looking composition notebook.

Students that need more structure are given journals that already have “date: ________ time:______ temperature: _____” at the top.

Families were given a packet with information about expectations a week and a half prior to the New Moon. Such that, if families or students are finding it hard to have so much freedom about what to record, more support will be granted. This follows for all the following lessons: students may be given questions to answer about what they are experiencing with the night sky, sentence starters, etc.

Materials List:

25 composition notebooks

25 copies of Pre/Post Assessment

White Crayons

Pencils with erasers

Whiteboard/marker or some equivalent
Moon Lesson #2 – “I wonder…”

Alaska Content and Cultural Standards:

Alaska Science Content Standard

[3] SD4.2 recognizing that objects have properties, locations, and movements that can be observed and described

[3] SG2.1 comparing the results of multiple observations of a single local event (L)

[3] SG4.1 asking questions about the natural world

Alaska Cultural Standards for Educators

E.1. recognize cultural differences as positive attributes around which to build appropriate educational experiences

National Art Education Standards

A-1.) generate and conceptualize artistic ideas and work

Alaska Art State Standards: Grade 3

A.1. Participate in dance, drama, music, visual arts, and create writing.

A.2. Refine artistic skills and develop self-discipline through rehearsal, practice, and revision.

Alaska Writing Standards: Grade 3

W.3.1.a Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists fact- or text- based reasons.

W.3.1.b Provide reasons that support the opinion

W.3.4 With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose.

W.3.5 With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.

W.3.6 With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others and to locate information about topics.

W.RW.3.10 Write routinely over extended time frames and shorter time frames for a range of discipline-specific tasks, purposes, and audiences.

English Language Arts Standards Language: Grade 3

ELA.L.3.2.a. Capitalize appropriate words in titles.

ELA.L.3.2.b. Use commas in addresses

Subject/Topic: Space Science Inquiry

Lesson Goals: Students will add to the Wonder section of class KWL and write their first letter to the moon
**Length:** 30 minutes

**Objective:**
Students will practice correct letter format.

Write a letter to the moon asking the moon several questions.

**Assessment:**
Writing assessment based on completion, length, and punctuation, content.

**Lesson:**

**Anticipatory Set/ Attention Grabber/ Motivation/ Lesson Introduction**

Ask students to have their moon journal and a pencil out on their desk. Ask students to share their entry from last night, or if they want to say what they saw, felt, etc. as they were observing the night sky. If students are being shy, the teacher will share their observation from the night before and ask questions to start the conversation. Since the unit is set to begin on a New Moon a.k.a. no visible moon, ask the students how bright the moon was. Allow students to share information.

**Activities: Explanation/ Stimulus material/Discovery Activity**

Earlier this year, we practiced writing letters. On the board, I have put a blank format to help remind us of the format for a letter. In the first right hand corner, we put the date. Then we add a space, followed by whom we are writing to on the left side. In this case, we are all writing a letter to the moon. You may call the Moon Mr. Moon, Mrs. Moon, and any Moon related name you would like.

Please begin by writing “Dear …,” The comma after the name is important so please do not forget it. After that, you are going to have another space to break the letter up. This is where you begin your letter. In my example, I am going to start with [depending on level, maybe start with introducing themselves, what they saw last night, or straight to the point of questions, or “I wonder…”]. There are several ways to end a letter. Who would care to raise their hand with ideas of how they might end their letter: [Sincerely, Your friend, Have a good night, etc.].

When you are done, go over your letter to make sure you have all the important parts of a letter, and also to make sure that you have correct capitalization and punctuation. After you check both of those off, I can come and check off your writing. Sign onto Google Docs and write your letter as it is. You may edit your font and font size but the letter format needs to remain that same.

Once that is finished, share it with me so I can print it off later. Then you will begin the corresponding art lesson.

The art portion is a pencil line sketch. Now, class. Describe to me what a line can look like? [allow students to respond, or cut straight to stating that lines can be straight, curved, wiggly, thick, thin, etc]. Students are to create a pencil sketch of their first night of their moon journaling. They can draw the visible lack of a moon, where they were, the landscape around them, anything they want related to their first night of journaling.

Have students sign their name on the front of the drawing. These will be pasted on the same piece of paper (opposite sides) in their final product.
Closure and evaluation/assessment

Inform students that during tonight’s writing – they should make specific notes about what they notice with their senses. What they can smell, see, hear, taste, and touch during their observation. The more details/information they add, the easier tomorrow’s writing will be called “Notes from Nature.”

Diversity Strand:

The scaffolding is formatted so every student will be visually able to format their letter from the visual left on the board. In addition, students that have trouble staying focused or need more motivation will be asked to, in addition to the letter format, write three sentences/questions beginning with “I wonder.” This may be written for them on the rough draft or they may do it themselves. Students may reference the class KWL that is posted in the classroom.

Materials List:
Computers/Chromebooks/In-Class technology to type on.

~Helps to have enough for each student, but students will be writing and typing at different rates. Possible to have art and typing being two different groups of students, rotating.

Students’ Own Moon Journals

Pencils

Erasers

Sharpeners

Whiteboard/Smart Board

Whiteboard Markers or the like depending on the board used
Alaska Content and Cultural Standards:

Alaska Science Content Standard
[5] SD3.1 observing a model that shows how the regular and predictable motion of the Earth and moon determine the apparent shape (phases) of the moon over time (Local)

[3] SD4.1 recognizing that objects appear smaller the farther away they are

[3] SD4.2 recognizing that objects have properties, locations, and movements that can be observed and described

National Art Education Standards
A-1. generate and conceptualize artistic ideas and work

Alaska Art State Standards: Grade 3
A.3. Appropriately use new and traditional materials, tools, techniques, and processes in the arts.

Alaska Writing Standards: Grade 3
W.3.3.b Use narrative techniques, such as dialogue, decryption and elaboration, and concrete and sensory details to describe actions, thoughts, and feelings and to develop experiences and events showing the response of characters to situations or problems.

W.3.4 With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose.

W.3.5 With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.

W.3.6 With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others and to locate information about topics.

English Language Arts Standards Language: Grade 3
ELA.L.3.2.a. Capitalize appropriate words in titles.

English Language Arts Standards Knowledge of Language: Grade 3
ELA.KL.3.3.a. Choose words and phrases for effect.

ELA.KL.3.6. Acquire and accurately use grade-appropriate conversational, general academic, and domain specific words and phrases, including those that signal spatial and temporal relationships (e.g., After dinner that night we went looking for them)

Subject/Topic: Nature Science

Lesson Goals:

Write an additional writing piece called “Notes About Nature.”

Art piece is a pen sketch.

Students will sort the phases of the moon
**Length:** 40 minutes

**Objective:**
Students will write a piece based on what they witnessed/experienced last night while watching the night sky.

Students will create a pen/ink drawing.

**Assessment:**
Students will be assessed on attempt at rough draft, revising with help of partner or teacher, then the final typed writing piece.

**Lesson:**

**Anticipatory Set/ Attention Grabber/ Motivation/ Lesson Introduction**
Have students each get a set of the 8 appearances of a regular moon. Ask them to sort them in the order that they think they go in. This is an independent activity, but perhaps they can share their idea about the cycle once they are done. Before they move around, talk to each student that is finished with their hand raised. If they lined up the phases in the correct order, ask them what comes after the last one. They may move the picture from the beginning and put it at the end. Repeat: what comes after that one? Once it becomes repetitive and predictable, ask them if they can order the phases in a way that they wouldn’t have to move a card to show which moon comes next. After checking in with everyone, then introduce the lunar cycle.

**Activities: Explanation/ Stimulus material/Discovery Activity**
On the opposite page (back page) of their most recent entry, student’s will write their rough draft of “Notes from Nature.” This writing piece will be focusing on what we see in nature, hear, smell, touch and maybe even taste of nature during our thoughts and reflections of the night sky.

For the art piece, students will have to be careful about what they decide to draw. Pen cannot be erased very easily. Some things important to note about when creating art, if an object is farther away, should I draw it big or small?

**Closure and evaluation/assessment**
Ask students what they wrote about/witnessing during their nightly writings. Ask what is happening to the moon and have them explain why it is happening.

**Diversity Strand:**
Allow students to write as much as they can. If students did not write much or at all during last night, have them write down in their journal what they think it would have been like. They may talk to their shoulder/face partners for what they saw the night before. The phases may be with or without the label so students who need help with the phases can be given that support, but students who know the phases can be challenged to name them.

**Materials List:**
Students Own Moon Journals  
Pencils and erasers  
Black pens  
White 8.5x11” printer paper  
Copies of the 8 moon phases, cut out (one set for each group or student)
Moon Lesson #4 – Brain Pop Day

Alaska Content and Cultural Standards:

Alaska Science Content Standard
[Grade 5] SD3.1 observing a model that shows how the regular and predictable motion of the Earth and moon determine the apparent shape (phases) of the moon over time (Local)

Subject/Topic: Brain Pop video and activity – break from writing

Lesson Goals:
Students will go through vocabulary about the moon.

Length: 20 minutes

Objective:
Students will learn vocabulary to help describe the lunar cycle.

Assessment:
Students will be assessed on participation in class discussion and understanding on the vocabulary worksheet.

Lesson:

Anticipatory Set/ Attention Grabber/ Motivation/ Lesson Introduction
Many of you are still unsure of what the moon phases are or even what they might be called. We are going to watch a video and take a break from writing and art to explore more of the essential vocabulary of the moon. You are going to be given a sheet with some good vocabulary to know. Have students pass out worksheet. You may

Activities: Explanation/ Stimulus material/Discovery Activity
Possible answers for Brain Pop Moon activity

- Phase: Different stages or appearances of something
- Wax (verb): to coat something, appear larger each night, increase
- Wane: show less lighted area, get smaller or less, finish, decreasing in size
- Solar: from Sun
- Orbit: path of a planet, satellite, or moon, revolution of space object
- Illuminate: shine light or shining light
- Lunar: from the moon
- Circuit: single trip around circular path

Students can choose their own word at the bottom to define from the video
Closure and evaluation/assessment

Let’s do the online quiz as a class. Raise your hand if you want to share and we will discuss each answer. After students share their answers, ask them to explain it using the video as evidence. After you have talked about each of the possible answer, have students raise their hand or collect a tally for which answer the majority agrees upon (even if it may be wrong). Students will see the correct response and refer to students who got it wrong and have them explain a possible reason why they thought something differently. If possible, keep track of students right and wrong answers or make note of students that are especially knowledgeable about the moon or struggling more. This is the second time we have talked specifically about the moon phases names and the lunar cycle.

Diversity Strand:
Students are able to follow along and work with people

Materials List:
Brain Pop Video https://www.brainpop.com/science/space/moon/

Brain Pop Online Quiz https://www.brainpop.com/science/space/moon/quiz/

25 copies of Brain Pop Vocabulary Activity (see resources of unit)
Pencils
Moon Lesson #5 – “Metaphors of Midnight”

Alaska Content and Cultural Standards:

Alaska Science Content Standard
[5] SD3.1 observing a model that shows how the regular and predictable motion of the Earth and moon determine the apparent shape (phases) of the moon over time (Local)

[3] SD4.1 recognizing that objects appear smaller the farther away they are

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A.2. Refine artistic skills and develop self-discipline through rehearsal, practice, and revision.

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W.3.4 With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose.

W.3.5 With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.

W.3.6 With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others and to locate information about topics.

W.RW.3.10 Write routinely over extended time frames and shorter time frames for a range of discipline-specific tasks, purposes, and audiences.

English Language Arts Standards Speaking and Listening: Grade 3
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English Language Arts Standards Knowledge of Language: Grade 3
ELA.KL.3.3.a. Choose words and phrases for effect.

ELA.KL.3.5. a. Distinguish the literal and nonliteral meanings of words and phrases in context (e.g., take steps)

Lesson Goals:
Students will write Metaphors of Midnight

NSTA explains and demonstrates the moon phases
https://www.youtube.com/watch?v=wz01pTvMa0&t=162s

Length: 30 minutes

Objective:
Students will be able to sort the phases of the moon when given the phase name after watching the moon video.

Students will create metaphors based on their last moon journal entry.

Assessment:
Students’ writing will be assessed according to the rubric attached to the unit. Students will also be assessed on participation during the moon phase discussion.

Lesson:

Anticipatory Set/ Attention Grabber/ Motivation/ Lesson Introduction
Most if not all students should be questioning about the moon changes and why? Why is the New Moon moonless? Does the moon light itself? If so, how can it be all the way lit up and only slivers at different times? Is the moon’s motion predictable? Some of these questions will be discussed during the National Science Teachers Association video describing the moon phases. It is a video geared towards reteaching to students in your own classroom but I will show my students this video directly. It is 4:15 in length and will be paused during key times for student inquiry. As the speaker says each moon phase, write it on the board in order.

Explicitly explain that waning is when it’s getting smaller. When a person is waning they are falling away [show yourself falling away]. So, if I was the waning moon, am I getting bigger or smaller [and do the waning motion]. Waxing is when the moon is getting bigger, or growing. Think about it as “wax on” if you watched the Karate Kid or when you see candle wax. You’re adding the wax to the moon and it’s slowly growing in size [show a slow growing motion with your hands]. So, again, if I’m the moon and I’m waning, am I getting bigger or smaller? How about if I’m waxing? Ask students to put their thumbs up or down on how they feel about waxing and waning moons.

Activities: Explanation/ Stimulus material/Discovery Activity
I will explain the meaning of metaphors (figurative language that compares two unlike objects but does not use the words “like”, “as,” or “than”). A metaphor is a phrase or statement that describes one thing by comparing it to something else. A metaphor does not use a signal word such as “like” or “as” to make the comparison. Instead, it often states that one thing is something else. Here is an example: “My sister is a bear in the morning.” This statement is comparing my sister to a bear. It does not mean my sister is actually a bear. It means my sister is similar to a bear in the morning.

I will give examples of other metaphors and identify the objects being compared and their meaning. Examples: “The snow is a blanket.” “The bread is a rock.”

In your writing for today, you are going to write a piece called “Metaphors of Midnight.” You are going to being comparing unlike things from your entry from last night to something that is unlike it. I would like you pieces each to be your own, it’s not going to be that fun if everybody has the same metaphors. However, creativity is something shared. If you’re stuck on creating a metaphor, you can talk with your shoulder or face partners around you. Does that mean that you can talk about the game last night? [no.] Can you go to the next group and stat talking with your friends over there [no.]. Please be responsible and considerate or your voice level. I am going to give you about 20 minutes to work on this. I will be coming around to check on you throughout the time. Make sure I check you off before you start typing your piece. Afterwards, share it with me.
You may finish up any writing or other art projects we have done so far. If you’re all caught up please read silently to yourself.

**Closure and evaluation/assessment**

Ask for students to clean up everything but keep their moon journals out. Ask students to share their favorite metaphors that they came up with or another student’s metaphor that they heard or read and really enjoyed. Cold call on students the following questions:

- I’m a waxing moon. Show me with your hands if I’m getting bigger or smaller
- I’m the new moon. What do I look like?
- I’m a waning moon. Show me with your body if I’m growing in size or shrinking away.
- I’m a crescent moon. Show me with your arms what I would look like.
- I’m a funny gibbous moon. Come up to the board and draw me.
- I am a full moon. What fraction of the moon can you see?

**Diversity Strand:**
Students will receive repeated information and visuals along with actions to help them recall the moon phases. They will also be given time to work on creating metaphors.

**Materials List:**
Each student needs their own moon journal

Chromebook or computers for the whole class or at least a portion depending on flexibility

Pencils

https://www.youtube.com/watch?v=wz01pTvMa0&t=162s

NSTA moon phases YouTube link

Any other art materials for students doing make-up writing or art
Moon Lesson #6 “Similes in Starlight”

Alaska Content and Cultural Standards:

Alaska Science Content Standard
[5] SD3.1 observing a model that shows how the regular and predictable motion of the Earth and moon determine the apparent shape (phases) of the moon over time (Local)

Alaska Art State Standards: Grade 3
A.1. Participate in dance, drama, music, visual arts, and create writing.
A.2. Refine artistic skills and develop self-discipline through rehearsal, practice, and revision.

Alaska Writing Standards: Grade 3
W.3.4 With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose.
W.3.5 With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.
W.3.6 With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others and to locate information about topics.
W.RW.3.10 Write routinely over extended time frames and shorter time frames for a range of discipline-specific tasks, purposes, and audiences.

English Language Arts Standards Language: Grade 3
ELA.L.3.2.a. Capitalize appropriate words in titles.

English Language Arts Standards Knowledge of Language: Grade 3
ELA.KL.3.3.a. Choose words and phrases for effect.
ELA.KL.3.5.a. Distinguish the literal and nonliteral meanings of words and phrases in context (e.g., take steps)

Subject/Topic:
Using similes in writing

Lesson Goals:
Students will write Similes in Starlight.

See Vincent Van Gogh’s Starry Night

Grade level: Third

Length:
40 minutes

Objective:
Students will create a writing piece using similes.
Assessment:
Students will be assessed according to the rubric attached to this unit.

Lesson:

Anticipatory Set/ Attention Grabber/ Motivation/ Lesson Introduction

Yesterday, we worked on comparing two unlike things without like, as, or than. Many of us, myself included, had a hard time coming up with comparisons. Today, I have good news! We are going to be using like, as, or maybe than. Yesterday, I said my sister is a bear in the morning. Today, I could say she sleeps like a bear in hibernation. Yesterday I might have meant that my sister is grouchy in the morning or walks around slowly like a bear but today I’m saying she sleeps soundly. This piece will be titled “Similes by Starlight.”

Activities: Explanation/ Stimulus material/Discovery Activity

Alright, right now I’m going to give you 20 minutes to work on your writing. Remember, you may talk to a shoulder or face partner to help get ideas or share your own. However, if people are moving around trying to talk to their friends, we lose time that should be spent writing on fun talk time. We will have fun talk time tomorrow during the art lesson.

Closure and evaluation/assessment

In the next lesson, everyone that is finished with their simile writing will be painting with acrylics emulating Vincent Van Gogh’s Starry Night. What is one of your favorite similes that you wrote based on your moon journal writing? Go around the room and ask each student – it can be their own or one that another student shared with them. This is a good time to check that they understand a simile is comparing two unlike things using like or as.

Diversity Strand:

Students can choose what they write about in accordance with what they have recorded. They are given enough time and may write as much or as little as they are able with the rubric in mind. I will be going around the room to give support but students are also able to call upon their peers to help them.

Materials List:

Students’ Own Moon Journals
Pencils and erasers
Image of Starry Night by Vincent Van Gogh
Technology to type the final piece on
Moon Lesson #7 “Starry Night” Emulation

Alaska Content and Cultural Standards:

Alaska Science Content Standard
[3] SD4.1 recognizing that objects appear smaller the farther away they are

Alaska Cultural Standards For Educators
E.1. recognize cultural differences as positive attributes around which to build appropriate educational experiences

National Art Education Standards
A-1.) generate and conceptualize artistic ideas and work
B-3) perform, present and/or produce artistic work

Alaska Art State Standards: Grade 3
A.1. Participate in dance, drama, music, visual arts, and create writing.
A.3. Appropriately use new and traditional materials, tools, techniques, and processes in the arts.
D.6. Recognize that people connect many aspects of life through the arts.

English Language Arts Standards Speaking and Listening: Grade 3
ELA.SL.3.1.b. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).

Subject/Topic: Students paint their own Starry Night

Lesson Goals:
Recreate their own Starry Night

https://www.youtube.com/watch?v=91mSLGOfH2E&t=180s
Watch Van Gogh Starry Night animation

Grade level: Third

Length: 45 minutes

Objective:
Students will use acrylic paints to emulate Van Gogh’s “Starry Night”

Students will use line, color, and variety elements during their painting.

Assessment:
Students will be evaluated on how they incorporated some aspect of “Starry Night” into creating their own impression of a starry night.
Lesson:

_Anticipatory Set/ Attention Grabber/ Motivation/ Lesson Introduction_

Inform students that we are going to be painting with motion and emotion in mind. Yesterday, we saw Vincent Van Gogh’s Starry Night. I am going to show it on screen for you now. What colors do you notice? [Pointing to the wind] what is this going along here? Did Van Gogh use one long stroke or multiple strokes while painting? How does he show light coming off the moon? Allow students to point out anything else that stands out to them.

Today, we are going to be using paints to recreate a Starry Night. You may focus on the motion that Van Gogh shows, or show the emotion with the colors you choose, the illumination of the sky with the moon and stars, or whatever else sticks out to you. I will be coming around and asking you about what you think Van Gogh was thinking while he was painting his Starry Night and what you’re thinking as you’re painting your own.

_Activities: Explanation/ Stimulus material/Discovery Activity_

1. Hand out light colored paper (it needs to be a light color so that they can see where they place their white pastel coloring) and prepared plates with the given colors (blue, yellow, white).

2. Discuss the crescent moon and show them how to draw one. Hint: draw a capitol C, then a lower case C inside it.

4. Have students draw their crescent moon on an upper corner of the paper using yellow.

5. Next we discuss the stars in our picture. We discuss how/why they are blurry dots, not pointy stars that they are used to.

6. Using either one color or a combination of colors, the students put stars on their sky.

7. Demonstrate how Van Gogh created the lines around the stars to make them radiate out from the center. I use four broken lines around the dot, then four more, then four more, etc. I demonstrate how to do this on the white board first, showing the correct way to draw the lines and the incorrect way (scribbles) around the stars.

8. I then demonstrate how to draw the wind, winding around the paper. I compare the wind lines to the lines on a street. I repeat the pattern that I created with the other colors.

(help with the steps to create a Starry Night retrieved from Judlebug81 at http://www.thesmartteacher.com/exchange/resource/729/Van_Gogh_Starry_Night)

_Closure and evaluation/assessment_

Have students clean up their areas. Ask students if they want to share their painting. Have students compare to their shoulder or face partner the use of lines in their paintings. Did you use the same type of lines (thickness, length)? What about colors? Do one of you have a darker or lighter painting overall? Van Gogh has a dark painting if you look at the bottom but the sky seems light but still dark? What about the stars in your Starry Night? Are the stars all the same size or different? Does it look good either way? Compliment the students around on one specific thing you like about their painting from the elements we were just discussing.
**Diversity Strand:**
Students will be able to create their own interpretation of a Starry Night. They might choose to focus on a post-impressionist technique, a starry night as it appears to them, portraying motion, or many other facets of Van Gogh, night skies, or stars that connect with them.

**Materials List:**
White or light colored construction paper for the background
Blue acrylic paint
Yellow acrylic paint
White Acrylic Paint
Paintbrushes
Paper plates to hold the paint for each group (or student) or cups
A portal to show the animated Starry Night
Video of Animated Starry Night
   https://www.youtube.com/watch?v=91mSLGOfH2E&t=180s
Image of just the Starry Night
Alaska Content and Cultural Standards:

Alaska Science Content Standard
[5] SD3.1 observing a model that shows how the regular and predictable motion of the Earth and moon determine the apparent shape (phases) of the moon over time (Local)

National Art Education Standards
A-1.) generate and conceptualize artistic ideas and work

Alaska Art State Standards: Grade 3
A.1. Participate in dance, drama, music, visual arts, and create writing.

A.2. Refine artistic skills and develop self-discipline through rehearsal, practice, and revision.

Alaska Writing Standards: Grade 3
W.3.4 With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose.

W.3.5 With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.

W.3.6 With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others and to locate information about topics.

Subject/Topic:
Use of symbols in writing and art

Lesson Goals:
Students will rewrite their entry from the night before but replace at least one word per sentence with a symbol representing that word.

Length: 45 minutes

Objective:
Students will use symbols during writing to accurately create a story with a mixture of words and images.

Assessment:
Students will be assessed on their writing process according the rubric attached in this unit. Purpose will be defined as creating a story or writing entry based on their moon journal entries and replacing some written words with images.

Lesson:

Anticipatory Set/ Attention Grabber/ Motivation/ Lesson Introduction

Today, we are going to be creating a symbol story. It’s mixing writing and art, but first, what is the meaning of the word “symbol?” [it is something that represents a meaning].
So, we are going to write “A 🌚 🌼”. Based on the symbols I used, what do you think I was trying to say? [A Moon Story/Book]. So, you are going to be creating your own story. Look at your writing from last night and try to come up with the story of your night. Add more details that you can remember. I am looking for a story with at least 5 complete sentences, and at least one symbol in each sentence.

**Activities: Explanation/ Stimulus material/Discovery Activity**

You have 20 minutes to work on your rough draft of your symbol story. When you are done, I will give you a new piece of lined paper. You are going to write in your neatest hand writing you story from your moon journal on it after I’ve checked it off. After that, you are going to outline in it in one of my fine Sharpie black markers. Walk around the room and support students during their writing.

**Closure and evaluation/assessment**

At the end of class, ask students to share some of the symbols they came up with. Note that not everyone has the exact same looking symbol in his or her writing compared to the next person. Do they still symbolize the same thing? When I think of snow and now you are thinking of snow, is it possible that we have two different ideas of snow in our heads? Call on a student to describe what they were thinking of snow [could be describing how cold it is, wet/hard/soft/icy, etc.]. Although this symbol story might not seem like a piece of art, art represents the artist’s ideas and thoughts throughout his or her work. Tomorrow you may finish up your final draft. In addition, we will be learning another Alaska Native story about a girl who married the moon.

**Diversity Strand:**

Students are able to go their own pace and come up with their own logical symbols to create a story or entry. Students will be given extra time to finish, and are able to collaborate with nearby peers to create symbols to use.

**Materials List:**

- Lined paper
- Students’ Own Moon Journals
- Pencils with eraser
- Fine Sharpie Markers
Moon Lesson #9 – “The Girl Who Married the Moon” An Alutiiq Tale

Alaska Content and Cultural Standards:

Alaska Science Content Standard
5 SD3.1 observing a model that shows how the regular and predictable motion of the Earth and moon determine the apparent shape (phases) of the moon over time (Local)

3 SF1.1-SF3.1 exploring local or traditional stories that explain a natural event (L) Cross referenced with SA3.1.

Alaska Cultural Standards For Students
B.1. Culturally-knowledgeable students are able to build on the knowledge and skills of the local cultural community as a foundation from which to achieve personal and academic success throughout life. Students who meet this cultural standard are able to acquire insights from other cultures without diminishing the integrity of their own.

E.4. Culturally-knowledgeable students demonstrate an awareness and appreciation of the relationships and processes of interaction of all elements in the world around them. Students will determine how ideas and concepts from one knowledge system relate to those derived from other knowledge systems.

Alaska Art State Standards: Grade 3
A.1. Participate in dance, drama, music, visual arts, and create writing.

B.1. Recognize Alaska Native cultures and their arts.


D.5. Consider other culture's beliefs about works of art.

D.6. Recognize that people connect many aspects of life through the arts.

English Language Arts Standards Speaking and Listening: Grade 3
ELA.SL.3.1.b. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).

ELA.SL.3.2. Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

English Language Arts Standards Knowledge of Language: Grade 3
ELA.KL.3.5. a. Distinguish the literal and nonliteral meanings of words and phrases in context (e.g., take steps)

ELA.KL.3. 6. Acquire and accurately use grade-appropriate conversational, general academic, and domain specific words and phrases, including those that signal spatial and temporal relationships (e.g., After dinner that night we went looking for them)
English Language Arts Standards Reading: Grade 3

**RL.3.2.** Determine the author’s purpose, message, lesson, or moral and explain how it is conveyed through key details in the text; summarize stories in correct sequence, including fables and folktales from diverse cultures.

**RL.3.3.** Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events (e.g., creating or solving a problem).

**Subject/Topic:** Alaska Native story concerning the moon and writing piece wrap-up

**Lesson Goals:**
Students will listen to another Alaska Native story about the moon

**Length:** 30 minutes

**Objective:**
Students will be able to explain how the traditional Alutiiq tale “The Girl Who married the Moon” explains the lunar cycle.

**Assessment:**
Students will participate in a discussion during the video and afterwards.

**Lesson:**

**Anticipatory Set/Attention Grabber/Motivation/Lesson Introduction**
Review How Raven Stole the Sun. Ask what happened in the story and fill in any connections for students that weren’t there or had forgotten. Where was the sun, moon, and stars before Raven released them from the boxes? Why were they hidden? What were people like before the sun and moon were released? What were they like after? What did we learn about the old man who had them?

Today, we are going to listen to another Alaska Native story. The Tlinigit people are in Southeast Alaska, right around where Juneau is. Today, we are going to listen to a story called, “The Girl Who Married the Moon.” It is from the Alutiiq people, and they traditionally live on the south central and southwest coast, around Kodiak and the higher part of the Aleutian Chain. This video was created by high school students on Kodiak. Please be a kind audience.

**Activities: Explanation/Stimulus material/Discovery Activity**
Show “The Girl Who Married the Moon.” Inform students that when they say something in English, they might say it again in Alutiiq.

How is the Moon going to test their patience? Do you think that is a fair way to test patience? Why do you think the Moon keeps telling her to not look in there (the shed)? What do you suppose might be in there?

When the girl enters the shed and the camera looks at each of the masks, stop the videos and have student say which phase of the moon they symbolize/represent.

After the video: so, why do you think the Moon decided to split up his time as the moon? Is that a good idea? Think about what you know about the first half of the lunar cycle, then think about the latter half. Is there anything different about the Man or Woman cycle of the moon?
Thinking back to “Box of Daylight,” the video had real people wearing masks and costumes. How is this video similar? How is it different when it comes to how it looks? How are people or beings represented?

Students may work on any Moon make-up work they are missing, focusing on Symbol story first.

**Closure and evaluation/assessment**

Ask students, “what are some symbols you used in your story and what do they represent?” Are there symbols in “The Girl Who Married the Moon?” Symbols are something that represent another things. Like letters represent sounds. Would you say the masks are symbols? At the end of the story, what did we learn about the moon phases?

How many of you chose to represent the moon with a New moon? Cold call a student what a new moon would like if they would have chose it. Write “new moon” on the board. Repeat for waxing crescent, first quarter, waxing gibbous, full moon, waning gibbous, third quarter, and waning crescent. Students may come up to the board and draw it as they explain.

**Diversity Strand:**

Students are able to follow along with the story and share their ideas openly – each person may come away remembering a different part of the story or slightly different meaning behind depending on how they look at it.

**Materials List:**

Students’ Own Moon Journals

Pencils with erasers

Fine tip Sharpie Markers

Lined Paper

https://www.youtube.com/watch?v=cbk9tcZaeb Alutiiq story made at Kodiak School
Moon Lesson #10 – Unit Wrap Up

Alaska Content and Cultural Standards:

Alaska Science Content Standard
[5] SD3.1 observing a model that shows how the regular and predictable motion of the Earth and moon determine the apparent shape (phases) of the moon over time (Local)

Subject/Topic:
Wrapping up the moon lesson

Lesson Goals:
Students will take their final moon test and share their favorite parts about the unit or learning about the moon.

Length: 45 minutes

Objective:
Students will complete a lunar cycle assessment.

Students will reflect what they learned about the moon.

Assessment:
Students will be assessed through a paper exam for the post-unit test.

Lesson:

Anticipatory Set/ Attention Grabber/ Motivation/ Lesson Introduction
Today we are going to be taking our last moon test. I have the tests you took before we started studying the moon and I know that we have all learned a lot over the course of this unit. You will not be able to talk to your partner or use your notes but I will be looking out how much you have improved, not how many you got right compared to everyone in class. You will be given as much time as you need. Students who do not finish now will be given time later. I will read each question out loud and if you have any other questions during the test, wait until I am done reading the test and you may raise your hand silently. I will come to you when I can. You do not have to wait for me to read the question to answer it. When you are done, you may read at your desk. Who has questions?

Activities: Explanation/ Stimulus material/Discovery Activity
Read each question, only clarifying to the class if there seems to be a majority that seems scared/anxious/confused about a question. Students may need reminding to wait until you have read all questions before they may ask you to clarify.

Closure and evaluation/assessment
At the end, have the students that haven’t finished go into the hallway to keep working with the understanding that they are not talking but finishing up. With the rest of the class, have them swap papers with a shoulder or face partner to grade. Have them write “C.B. (corrected by) ______” at the bottom. Next, go over the answers. Once corrections are over, have the students return it to the original students, let them look it over, and then turn it in. One of the questions on the test is what each student thought was the coolest or most interesting thing about the moon that they have learned. Allow students share and explain their responses.
**Diversity Strand:**
Students will be given as much time as possible to finish their assessment on the moon and stories about the moon.

**Materials List:**
Pencils

25 copies of Post-Unit Assessment

White colored pencil or crayon for each student

Red pens
The Rubric I would consult in most of my assessment for the writing portion of the unit.

**Suggested answers to the Pre/Post unit test:**

1. Something along this spectrum:

   ![Moon Phases](image)

   New Moon / waxing crescent / first quarter / waxing gibbous / full moon is all white / waning gibbous / third quarter / waning crescent

2. Rock
3. The sun illuminates the moon.
4. Satellite
5. Roughly 28-29.5 days according to various sources
6. Craters, (dead) volcanoes, lava flows
8. Various Answers and not formally graded.
Pre/Post Moon Unit Assessment

Name: ____________________________                             Date: ___________________________

1. Use a white crayon to color the phases listed in each box. (8 points)

<table>
<thead>
<tr>
<th>New Moon</th>
<th>Waxing Crescent</th>
<th>First Quarter</th>
<th>Waxing Gibbous</th>
<th>Full Moon</th>
<th>Waning Gibbous</th>
<th>Third Quarter</th>
<th>Waning Crescent</th>
</tr>
</thead>
</table>

2. What is the moon made of? (1 point)

____________________________________________________________________________

3. Why does the moon look bright in the night sky? (1 point)

____________________________________________________________________________

4. Is the moon a star, a planet, or a satellite? (Circle one) (1 point)

5. How long does it take the moon to go through its entire set of phases? (1 point)

____________________________________________________________________________

6. The moon is covered with __________, __________, and ____________. (3 points)

7. Explain how one culture views the moon. Name the culture and how they interpret the moon. (2 points)

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

8. What’s your favorite fact about the moon?

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________
DEFINE  Can you explain the terms below in your own words?

PHASE:

WAX (VERB):

WANE:

SOLAR:

ORBIT:

ILLUMINATE:

LUNAR:

CIRCUIT:

Choose an additional term from the movie to define.
Dear Families,

This quarter, third graders will embark on a journey of inquiry. For several years, the third grade team has participated in an extensive unit revolving around the moon. With our study on the moon, we take time to study the science, the literature, and the art of the moon. In addition, each third grader will produce their own writing, art, and build on their understanding of the moon and its lunar cycle. Students will be provided a brand new journal in order to chronicle the moon’s appearances and any, or hopefully all, musings they have while they watch the moon from wherever or whenever they may.

In this packet, there is a form to sign by you and your child. It informs you that the Moon Journal and connected artwork assignments will be a substantial portion of their science, art, and writing grades. Any failings to contribute will likewise result in grade shortcomings. In order to encourage participation and wonder, you, the parent/guardian/family member(s) will be able to participate with your child in this journaling process. Each entry you create will garner your student’s grade with 5 extra credit points. Please contribute and ponder with your child!

There is the copy of the lunar calendar within this packet. The mew moon and our Moon Journal writing will begin January 27 and will complete its 29.5-day cycle February 25. The procedure for full credit is that they write every night in letterform to the moon. This includes weekdays and weekends alike. This can be done as soon as they see that night’s moon up until it disappears the next morning. We are not encouraging them to stay up all night watching the moon, but would require that they write while they look outside. Observations lasting 10 minutes are ideal. If it is nowhere to be seen, they must still write. They can write about the weather of the night, who and what is around them and any thoughts they might have about why and what they are seeing.

\( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) \)

Please sign after you have read this statement and agree that the length of the Moon Journals is your student’s Science and Writing grades for third quarter.

Parent / Guardian _____________________________________________

Student ______________________________________________________

The breakdown:

Each night, write down the time, temperature, and date! Remember observe the moon for at least ten minutes. This is an important part of the homework.
Example for Moon Journal Writing

Recording observations with pictures and words:

7:15 PM                  -13 degrees                  February 10th

Tonight the [moon] shines right about my [door]. I walked outside and stood on the [stairs]. It was right before [sunset/moonset/moonrise] and the sky was so beautiful. The [moon] tonight was a [full] moon. I [saw] as it grew brighter in the [mountains, sky]. Finally, I sat in the [snow] to [write] and watch the [moon].

Example for Moon Journal Writing

Scientific observation. Write your observations tonight using some facts you have learned about the moon.

- The name of the moon
- The spots on the moon
- The location of the moon
- The names of the stars if you know any
- The name of the mountains
- The significance of the sun
- Any other facts you may have learned or already know about the moon

Example for Moon Journal Writing

I wonder writing – list all you questions about the moon, sky and stars, we will work on putting it into fluid writing in class. This is a finished example of what it might look like;

Dear Mr. Moon,

I wonder why you glow so bright and sometimes why it’s so dark during the day that is seems night? I wonder why sometimes you are there and other times I have to search you out and might not see you at all?
I wonder if you move around or stay in the same spot forever?
I wonder if when Neil Armstrong walked on you if his footsteps left a path in you?
I wonder if you ever get tire and when you do, how do you sleep?
I wonder if you stay awake long after I lay down, do you watch over me as I sleep?

Example for Moon Journal Writing

Nature Writing. Record as much about nature as possible, that’s it! What you see, hear, feel, smell, and maybe even taste! Remember to write the time, date and temperature/

Tonight I only see a small part of the moon, it seems so far away. I went to reach out and touch it. It is warm tonight, about 20 degrees, but there is a little bit of wind that is kicking up a little bit of snow that blows across the paths outside. I can hear the whistle of the wind as it hurries across the
tundra. The sky is pure black with bright stars splattered across the sky. I smell only the fresh air that winter brings. As I look out my window, I notice that the moon makes shadows appear and trees make almost scary shadows across the snow. All of a sudden, I hear the curfew bell and it reminds me that it is late; the moon sure is bright tonight.

Example for Moon Journal Writing

Storytelling – pick one of the following options and write a story of you own about how it happened.

Choices: Why the moon gets smaller? Who is the man in the moon? How was the moon formed? Why the moon rises when the sun sets? Why do stars shine? How can the moon be visible in the morning?

You are writing a legend of your own on one of the above topics or make up one of your own based on the moon.

Example for Moon Journal Writing

Making Lines of writing into poetry.

Just write down your observations tonight and then break into smaller sentences like this:

Tonight the moon hangs high up in the sky. The sky casts is beautiful colors like a brightly decorated Easter egg. The trees stand tall all alone on the tundra and not a star is seen in the wide sky. One by one dogs begin to howl, hello moon, good night day they say.

Tonight the moon
Hangs in the sky.
It casts beautiful colors
Of a remember Easter Egg.
Trees stand one by one,
Alone on the tundra on starless night.
Dogs bark one by one,
Hello moon, Hello, Good Night day, they all seem to say.
Moon Visualization Calendar

Starts January 27 – Ends February 25
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FULL MOON

NEW MOON

WANING GIBBOUS

WAXING CRESCENT

WANING HALF

WAXING HALF

WANING CRESCENT

WAXING GIBBOUS
Reflections

I was very optimistic at the start of my unit. I had the drive and spirit that this Backwards Design model was going to help me and my students pull off a really great moon unit. After my first day, I was a bit flustered. I didn’t have nearly enough time to set the expectation and have students understand the inherent importance of writing nightly. I handed out the moon journals and did the lesson, but it felt like if I could do this lesson over again, I would slow it down and emphasize the importance and how to write down thoughts and reflections during writing. I originally planned on having a test run in class by placing a video of a night or night sky on the screen and have students sit and watch. Then, I would do a think/write aloud of an entry and they would help me build on it. I would tie in how their family members can help add to this part of their grade just by writing an entry, too.

During the next lesson, I did not set a very good routine. It was hard to establish a moon writing time since we have Treasure Books due soon and the class has been working on their story for months by now. My host teacher started this and we haven’t even edited or helped revise all the students’ writings. With having inherited that, it took away from much of my moon writing time. “I wonder” should be an easy piece because everyone has been asking and adding questions to the class KWL but many students failed to start. One of the expectations is that it is in letter-format, but I made sure that every student had a strong start in that category – they just needed to come up with the phrase in which to end the letter after they’ve written it. So, I knew that I needed to do more scaffolding and so I started doing more explicit scaffolding for the whole class.

I felt that I did better at slowing down and doing more thorough walkthroughs of the writing prose we went through after that. However, I felt like I had an expectation with my host and the other third grade teachers who were doing the unit (but in their own way) to keep up with the writing and art pieces every day. So, I went for the easy art pieces at first and tried to get my students through the writing. But, at the end of the day, I really only have 30 minutes to have students transitioned in, follow instruction, uncover moon knowledge, write a piece, type, create art, and then transition out to do our emotion behavior curriculum and end of day procedure. I would have liked to integrate the unit a little into the reading block, but my attempts with that let my small group rotations missing some part of the reading curriculum that I did not feel right altering.

My host teacher came in after my takeover after attending a teacher tech conference and I really liked the integration of technology (Google Classroom) with the moon writing assignments. It made it easier to manage what the class was doing and have more feedback from myself and fellow students.

It does not take students a full moon cycle to uncover for themselves the knowledge they seek about the moon. Many of my students were able to meet the science standards and culture standards, the two areas I felt most passionately about. I felt forced into teaching third graders many different types of writing too quickly and fell short of meeting my (and my unit’s) writing, and even art, standards. Some students will swell with pride as they take their Moon books home with them, and others will see the plastic laminated pages and toss it aside.

To do this unit over again would focus on doing two art and writing pieces a week, cut and dry. I would have separate days for culture study and then science study. I think that would make it more of a themed unit and more easily manageable for the older primary grades. For example: Monday and Wednesdays are writing days, Tuesdays are Science days, Thursdays are Culture days, and Friday is an art day. More art could be tied in with the science and culture days, but the emphasis needs to be placed on still completing the writing work.