

Student #2

96

518 Unit Plan Checklist

McKamey, Fall 2010

Section	Criteria	Points
1. Title Page	<ul style="list-style-type: none"> Is the title clear, and does it capture attention? Is there a visual aid (e.g. photo, drawing, other visual) that represents the unit? 	5 5
2. Table of Contents	<ul style="list-style-type: none"> Complete Clear 	5 5
3. Note to reader (context essay)	<ul style="list-style-type: none"> Unit briefly summarized 3 Features of the school/classroom context described, with examples Author makes a connection between contextual features and their unit plan design and teaching. In other words, why is this unit plan particularly appropriate for this context/these students? 	10 10
4. Unit Plan	<ul style="list-style-type: none"> Unit Plan Scope and Sequence (Lesson topic, activity, goals, types of assessments planned. (1-2 lines per lesson)) 	20 20
5. Assessment plan	<ul style="list-style-type: none"> Description of key assessments and relationship to unit plan goals, science domains, and blooms taxonomy. Example of what this might look like: You can place key assessments within the assessment graphic organizer with a short paragraph description. Final assessment and <u>rationale for assessment</u> - not included 	15 13
6. Selected lesson plans and supporting materials	<ul style="list-style-type: none"> Lesson plans (4) and supporting materials are included Lesson plans include goals, standards, assessments, activity plan, other items discussed in class/on template. Assessment and activity are aligned with lesson plan goals Lesson plans are informed by Grasps (e.g. real world connections, provide students with a role, provide context). At least one lesson is a 5E lesson cycle Field Trip Plan included Resource List Included 	20 20
7. Reflection	<p>Option 1:</p> <ul style="list-style-type: none"> What did you learn about yourself/curriculum design in doing this project? Provide a case study/example of how you encountered an obstacle or changed your thinking about some design aspect. <p>Option 2:</p> <ul style="list-style-type: none"> What worked in this lesson/unit? What didn't work? What changes would you make to the lesson/unit and why? <p>Option 3:</p> <ul style="list-style-type: none"> Why is this unit/topic important to teach to students? Consider not just GLE's, but also consider larger philosophical and/or beliefs you have as a teacher about education, science, schooling, diversity/globalization, and children. 	10 8

In class participation:

- Ongoing feedback to each other: 5 **5**
- Ongoing "tweaking" based on feedback: 10 **10**

~~Thank,~~

You have constructed a sound unit on the moon.

activities are keyed to learning objectives and assessments are appropriate and varied.

You have included a variety of different activities that help students understand concepts about moon (models, light + shadows, demonstrations, use of videos)

There were places where the unit/assessments + activities would benefit from more use of visuals, especially since this is an early elementary unit (see notes)

The unit would also benefit from more description of your rationale for final assessment.

Super job!

The Moon

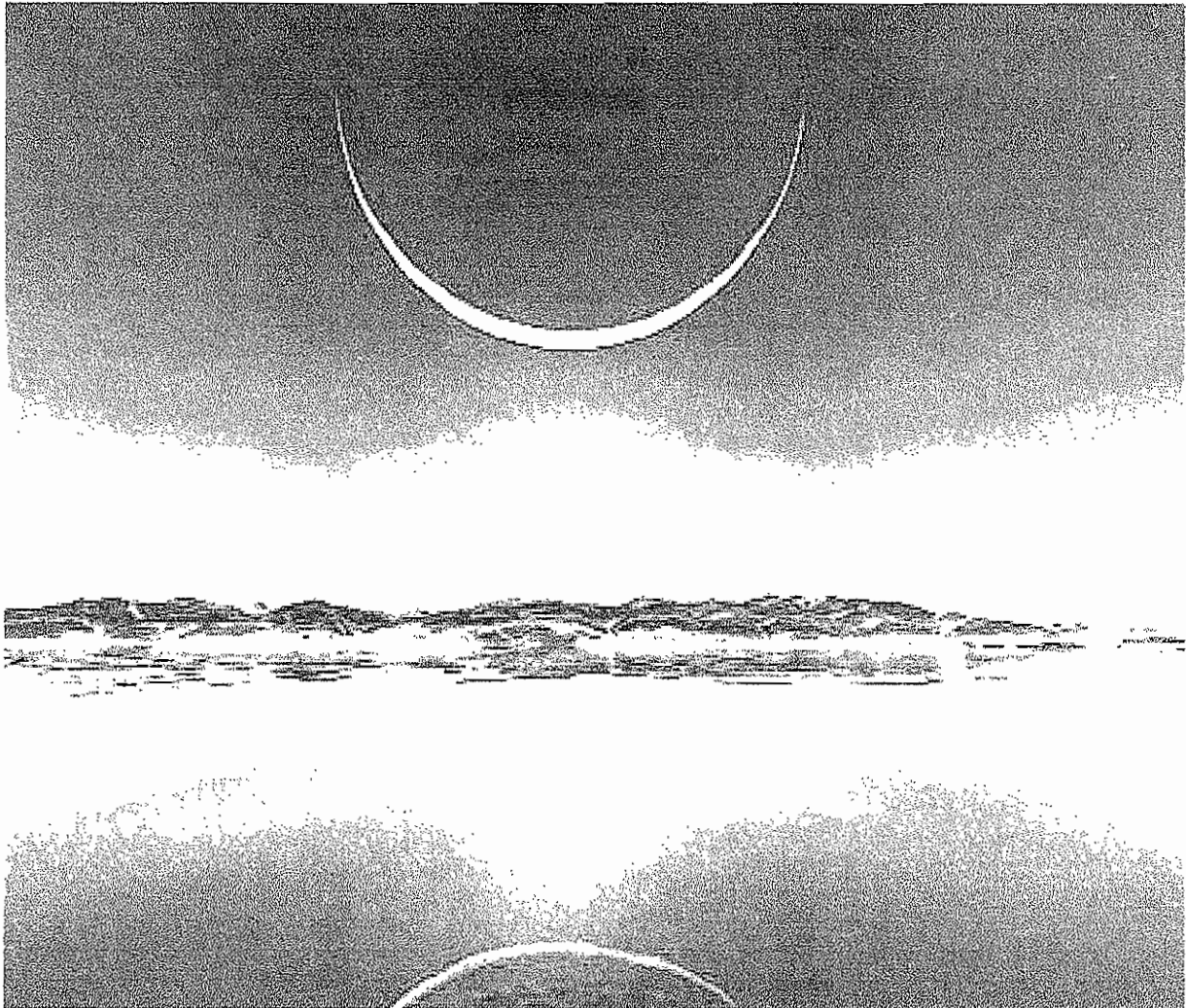


Table of Contents

Note to reader (context essay)

Unit Plan

- ✓ Topic #1
- ✓ Topic #2
- ✓ Topic #3
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Assessment plan

Selected lesson plans and supporting materials

- ✓ Lesson plan# 1
- ✓ Lesson plan #3
- ✓ Lesson plan #4
- ✓ Lesson plan #5

Field trip plan

Resource list

Reflection

Context Factors

Through this moon unit, I covered the following concepts: What is the moon? , How far is the moon from Earth? , What is the size of the moon? , How do the Earth, sun, and moon interact? , and What are shapes of the moon? In this paper, I will describe three environmental factors that affected the way I taught this unit: the nature of the school/classrooms, backgrounds of students, and the nature of the community.

The school where I work is an Islamic school. It is located in West Warwick. In addition to the four basic subjects-language arts, math, science, and social studies, this school offers religious studies to its students. Teachers incorporate religion in almost all their lesson plans. For example, the instruction or lesson plan might include religious vocabulary that go hand in hand with the concept that is being taught.

As a private institution, the school depends upon the community's donations and financial help. Therefore, the educational tools and materials are limited in classrooms. The teachers have to be creative as much as they can to provide their students with the tools needed so that the lesson can be thorough. This scarcity in materials affects the way the teacher instructs his or her students. The classrooms need many essential supplies that can enhance students' education and the quality of learning provided to them. The teachers might avoid performing an activity or delay it because of the lack of materials they undergo. To enable my students to understand the concepts aimed to be grasped throughout this unit, I had to undergo a long search to find a moon kit and other materials that are both affordable and beneficial for students.

Context factor

teachy implication

You also used readily available materials like balls and flashcards, internet, etc.

Most of students in this school belong to families that speak more than one language. This bilingual factor affects the strategy of teaching to be chosen by a teacher. The teachers have to use simple vocabulary to explain a concept to a certain group of students while others need no additional explanation. In addition, the teacher may have to repeat instructions more than one time so that students can follow and benefit. They have to use visual aids to clarify concepts to their bilingual students, and add benefit to the whole class, as they need to double their efforts to reach to their bilingual students. While teaching this unit, I used many pictures and diagrams as visual aids to benefit the students. ✓

In the community, where the school is, there is a mixture of different cultures and social habits. This fact affects the instructions used in the classrooms. Teachers have to use instructions to suit all students with different cultures and habits. For instance, while talking about cultures, the teacher has to accommodate all the cultures of his or her students. He or she needs to appreciate all these cultures without exception. He or she needs to show respect to all cultures and celebrate differences, as they have to ensure that the students respect each other's differences. In the mean time, when teaching my moon unit, I had to ensure that all my students, regardless of their different backgrounds and habits were able to grasp the concepts and understand ideas using hosts of teaching techniques and strategies. For example, some students believe that the sun guides us to know prayer times, while others believe that the moon determines our holidays. To suit all these students, I had to include these information points as hooks to attract my students' attention while teaching this unit.

Nice
example
specific
to your
school
context.

As a teacher, I do believe that this unit will be of importance in my students' educational life. While planning my moon unit, I tried to be as creative as I could so that I would be able to reach my desired goal- creating a more thoughtful, and connected generation to the whole universe as one unit. While teaching about the moon, I took the opportunity to familiarize the students with science inquiry. Using ^{the} scientific process, the students became scientists who investigated to discover scientific findings related to the moon. Additionally, I did my best to simplify the vocabulary used in the unit to make learning about the moon fun for my bilingual students in particular and for the whole class in general. To meet the needs of students with different backgrounds and different needs, I also used a host of teaching strategies.

The nature of school and classrooms, background of students, and the nature of the community are contextual factors that impact the process of learning and teaching in schools as they impact the way the instructor delivers his or her message to students. These factors affected the way I taught this unit. As a teacher, I know that all teachers have to consider these factors and others while planning their lessons. The more the teachers are aware of their surroundings, the more their instructions will be successful and fruitful.

Very nice
revision Souad!
Context factors +
implications for
teach clear.

Unit Plan

Lesson Topic #1

What is the moon?

Goals

- Students will know facts about the moon (The nature of the moon, the distance between the moon and the Earth, the interaction between the moon and the Earth).
- Students will create a book about the Moon exploring the above facts.
Students will model the Moon in relation to the Earth.

Activities

- ✓ Students will create a book about the Moon.
- ✓ Students will model the Moon in relation to the Earth.

Evaluation

Checklist

Lesson Topic # 2

What is the size of the moon?

Goals

- Students will compare between the moon size and the Earth size.
- Students will know that the moon is smaller than the Earth.

Activities

- ✓ Students will inquire into the Earth-moon size.

Evaluation

- Checklist

Lesson Topic # 3

How far is the moon from Earth?

Goals

- Students will know that the moon is close to the Earth.
- Students will model the distance between the moon and the Earth.

Activities

- ✓ Students will model the distance between the moon and the Earth.

Evaluation

- Checklist

Lesson Topic # 4

How do the Earth, sun, and moon interact?

Goals

- Students will know that the Earth rotates as it revolves around the sun.
- Students will know that the moon revolves around the Earth.
- Students will demonstrate the Earth, sun, and moon interaction.

Activities

- ✓ Students will conduct an investigation to find out how the Earth, sun, and moon interact.
- ✓ Students will demonstrate the Earth, sun, and moon interaction.

Evaluation

- Checklist

Lesson Topic # 5/Final assessment

What are shapes of the moon?

Goals

- Students will know that the moon has different shapes.
- Students will learn about three phases of the moon.
- Students will demonstrate three moon phases.
- Students will model three moon phases.

Activities

- ✓ Students will demonstrate three phases of the moon; new moon, half moon, and full moon.
- ✓ Students will model three phases of the moon.

Evaluation

- Rubric

Unit Topic: The moon

Science Domain	Unit Goals	Knowledge recall <i>Define, label, list, name, state, write</i>	Comprehension <i>Describe, explain, illustrate, paraphrase, summarize</i>	Application <i>Apply, compute, construct, demonstrate, solve, use</i>	Analysis/Synthesis <i>Analyze, categorize, compare, contrast, separate, invent</i>	Evaluation/Empathy <i>Critique, judge, justify, recommend, view from different perspective</i>	Self-evaluation <i>e.g. Doing this assignment helped me...What I learned was... I want to know more about...</i>
A. Science content knowledge	<ul style="list-style-type: none"> ➤ Students will know that the moon has different shapes. ➤ Students will learn about three phases of the moon 	Vocabulary: Phase Satellite Orbit Space Quarter	Students will use their scientific vocabulary to explain and summarize facts related to the moon.	Given a diagram, students will identify the difference between three phases of the moon.	Given pictures of three phases of the moon, students will predict the name of each phase and give at least two explanations.	While demonstrating the three phases of the moon, students will realize that the moon changes its shape because of its position in relation to the sun, and the Earth.	What did you learn about the three phases of the moon? What is still not clear to you?

Nich thought out

<p>C. Laboratory - Procedural knowledge</p>	<p>Using tools like lamp, pencil, and ball, students will demonstrate and model three phases of the moon.</p>	<p>Quarter</p>	<p>Using a moon kit, students will show the difference between the three phases of the moon.</p>	<p>Given tools like lamp, pencil, and ball, students will demonstrate the three phases of the moon.</p>	<p>Given materials like lamp, pencil, and ball, students will compare and contrast between the three phases of the moon.</p>		
<p>B. Science process skills (scientific method)</p>	<p>Students will make predictions, collect data to describe and communicate their findings about the three phases of the moon with their peers.</p>			<p>Using diagrams, students will explain how the three phases of the moon are different.</p>	<p>Students will predict, collect data, and use data to back up their predictions.</p>		

D. Scientific Attitudes	Students will ask questions and will be skeptical of their scientific findings.		<i>Students will use their observations in their science journals to describe the difference between the three phases of the moon.</i>		Students as groups will demonstrate and explain why the moon has different shapes.		
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Name of RIC student (s): Souad Slimani
 Name of Clinical Instructor:

Lesson Topic: The Moon/First Grade.

Date of lesson:

Learning goals: What will students know and be able to do at the end of the lesson?
(make sure to think broadly across different science domains: science knowledge, science process skills, laboratory – procedural knowledge, and scientific attitudes)

- Students will be scientists that will discover facts concerning the Moon.
- Students will know facts about the Moon (The surface of the moon, the distance between the moon and the Earth, the interaction between the moon and the Earth).
 - Students will create a book about the Moon exploring the above facts.
 - Students will model the Moon in relation to the Earth.

Types of Summative (at the gate) Assessments:*

Aligned with standards (GLE's)

Students will be asked to fill out the first two column of KWL chart.

ESS2 (K-2) –7
Students demonstrate an understanding of temporal or positional relationships between or among the Earth... and moon by ...
7b observing that the moon appears to move slowly across the sky.

Materials needed:

- ✓ KWL chart
- ✓ "The Moon" written by Seymour Simon
- ✓ Computers
- ✓ Children books about The Moon
- ✓ construction paper
- ✓ scissors
- ✓ Glue sticks
- ✓ pencils
- ✓ poster papers
- ✓ Lined papers

Key concepts & vocabulary: <i>what are the words that students will need to know? Use kid-friendly definitions</i>	
<ul style="list-style-type: none"> ➤ Satellite: an object that goes around a planet or star. ➤ Space: an open area in which everything is located. ➤ Orbit: go around/ a path that an object follows in the sky. ➤ Surface: The upper face of something. 	
Types of Formative (on the way) Assessments*	
<ul style="list-style-type: none"> • Teacher Observation • Discussion • <i>Selected response</i> 	
Engaging students	
Connections to real world and/or opportunities for students to bring their world/experience into lesson	Extension activities and/or Extra scaffolding or accommodations
What do you see in the sky almost every night? An open discussion will be organized to relate students to the lesson of the day.	Prompts will be used to guide students towards the desired outcome. I will use a picture of the moon as a prompt or visual for students.
How does this lesson position students? [What role or roles will students assume?]	
Students will be scientists who will search for facts concerning the Moon.	

Sample types of assessments

- *Selected response (e.g. multiple choice, true/false, fill in blanks, rating scales)*
- *Academic prompts (e.g. short answer, labeling, visual representation, essays, notebooks)*
- *Performance (e.g. creates a product or demonstrate something. Often a rubric is used to evaluate.)*
- *Teacher Observation*
- *Self assessments*

Activity plan

"E"*	Descript. of activity	Descript. of assessment and evidence (if any) collected*
<p>1E: Engagement <i>Lesson "hook."</i> <i>Excite students.</i> <i>What do students know?</i> <i>Want to find out?</i> <i>Connect to students lives and interests.</i></p>	<p>I will start the lesson of the day by asking prompting questions such as; would you like to go to the moon? If you went to the moon, who would you take with you? Each student will have WKL chart. Students are going to fill in the first two columns. Afterwards, I will read "The moon" written by Seymour Simon. Next, I will engage students in discussion. They will be encouraged to say what they learned from the book. Prompting inquiries, such as would you like to go to the moon? Why do you like to go to the moon? will be used to guide the students towards the desired outcome.</p>	<p>[often pre-assessment]</p>
<p>2E: Exploration <i>Activity or prompt that allows students to explore concepts.</i> <i>Often groupwork.</i> <i>Provides students with a common experience.</i></p>	<p>I will pose the following question: What is the Moon? To answer the question, class will be broken into three groups. Each group will predict the answer. They will collect data about the Moon. Computers and children books about the Moon will be provided for students to use. Teacher supervision will be needed. The following websites will be beneficial for students to use:</p> <ul style="list-style-type: none"> ➤ http://www.videojug.com/film/what-is-the-moon ➤ http://www.google.com/images?hl=en&rlz=1R2SNNTenUS361&wrapid=tlif12879734382301&q=the+Moon&um=1&ie=UTF-8&source=univ&ei=RerETMmQLIm4sQPEwtG2BA&sa=X&oi=image_result_group&ct=title&resnum=3&ved=0CD0QsAQwAg&biw=949&bih=426 <p>To guide the students towards the desired result, I will give each group a sheet of paper that includes sentences about the Moon. Some of these sentences are true, and some are wrong. The students will discuss these statements to figure out which ones are true and which ones are untrue. At the bottom of the paper, there will be room for students to fill in other facts or drawings related to the moon. Each group will present their findings to the</p>	<p>[often formative]</p> <p><i>Nice inclusion of technology!</i> <i>Are these videos appropriate for 1st graders?</i> <i>Selected response</i></p>

	class.	
3E: Explanation <i>Definitions, concepts, skills explained. Often a lecture format, but can be debriefing, student research or reading.</i>	<p>Facts about the moon will be written on the white board. I will read and explain them to class. Students and I will read them chorally. The facts will be the following:</p> <ul style="list-style-type: none"> ➤ The moon is the only natural satellite of earth. ➤ The moon and earth are close in space. ➤ The moon is orbiting around the earth. ➤ The surface of the moon is not flat. ➤ The moon has mountains and hills. ➤ The same side of the moon always faces earth. ➤ There is no air in the moon. ➤ The moon takes about one month to orbit the earth. <p>After giving class a chance to reread the facts and discuss them, I will hide the last part of each fact, as I will ask students to fill in the blanks while writing their books about the Moon. Students will be provided with lined papers and plain papers to write the facts and draw pictures to illustrate each fact. They will be encouraged to make their own Moon book.</p>	<p>[often formative]</p> <p>Science journal activity/ moon book</p>
4E: Extension/ evaluation <i>Apply concepts in a new way. Students refine skills, explore concept in more nuanced way or in a different learning style.</i>	<p>Students will be asked to model the Moon in relationship to the Earth making use of the facts they wrote in their books. To do so, class will be split into three groups; they will be provided with gray, blue, brown construction paper, scissors, glue sticks, pencils, and poster papers. They will be asked to make a model of the Moon in relation to the Earth. Therefore, they will model the Moon and the Earth getting ideas from the Moon facts have been studied previously in this lesson. To wrap up, each group will present their models to the class. At the end, every student will fill out the last column in the KWL Chart used at the beginning of the lesson.</p>	<p>[often formative]</p> <p><i>This seems like a separate class/ lesson given the number of other related activities you have planned</i></p>
5E: Evaluation <i>**Students demonstrate what they know and can do vis a</i>	<p>[often summative]</p> <p>To self assess, students will have a checklist that includes the following:</p> <p>While writing the Moon book:</p> <ul style="list-style-type: none"> • Did I mention all the moon facts in my book? • Did my drawings match the facts? • Did I write a title that is suitable for my book? 	

*vis learning
goals and
objectives.*

- Did I write my name as the author of my book?
- Did I check that my writing is free from spelling and grammar mistakes?

While modeling the Moon:

- Did I show that the Moon has mountains and hills?
- Did I show that the Moon is close to Earth?
- Did I show that the same side of the Moon always faces the Earth?
- Did I show that the Moon orbits the Earth?

*Visuals
would
help here*

Fill in the blanks:

➤ The moon is the only natural

.....

➤ The moon and earth are so

.....

➤ The moon is orbiting

.....

➤ The surface of the moon is

➤ The moon has

.....

➤ The same side of the moon always.....

.....

➤ There is no

.....

➤ The moon takes about one month to

.....

W	K	L
What I know	What I want to know	What I have learned

Name of RIC student (s): [REDACTED]

Name of Clinical Instructor:

Lesson Topic: How far is the moon from the Earth?/ First Grade Date of lesson:

Learning goals: What will students know and be able to do at the end of the lesson?
(make sure to think broadly across different science domains: science knowledge, science process skills, laboratory – procedural knowledge, and scientific attitudes)

- Students will know that the moon is close to the Earth.
- Students will mock up the moon and the Earth.
- Using an imaginary distance, students will model the distance between the moon and the Earth.
- Using balloons, students will model the moon, Earth distance.

Types of Summative (at the gate)

Aligned with standards (GLE's)

Assessments:*

WKL will be used at the beginning and the end of the lesson.

ESS2 (K-2) –7

Students demonstrate an understanding of temporal or positional relationships between or among the Earth... and moon by ...

7b observing that the moon appears to

	move slowly across the sky.
Materials needed:	
<ul style="list-style-type: none"> ✓ Construction papers ✓ Scissors ✓ Tape ✓ Balloons ✓ Markers ✓ Rulers ✓ Books, shoes as measurement means 	
Key concepts & vocabulary: <i>what are the words that students will need to know? Use kid-friendly definitions</i>	
<ul style="list-style-type: none"> • Distance: size of the gap between two places • Represent: serve as a means of expressing something 	
<u>Diameter</u> Types of Formative (on the way) Assessments*	
<ul style="list-style-type: none"> ✓ Teacher observation ✓ Self assessment ✓ Direct questions ✓ Discussion 	
Engaging students	
Connections to real world and/or opportunities for students to bring their	Extension activities and/or Extra scaffolding or accommodations

world/experience into lesson	
<p>Can we see the moon from the Earth?</p> <p>After posing this question, students will be engaged in an organized discussion that will connect them to the lesson of the day.</p>	<p>As accommodations, repeating instructions, simple vocabulary, and visual aids will be used to help students who need extra scaffolding. In addition, gestures and sign language will be used to manage the students' behavior as to create a healthy educational environment.</p>
<p>How does this lesson position students?</p> <p>[What role or roles will students assume?]</p>	
<p>Students will play the role of scientists who will try to figure out the distance between the moon and the Earth.</p>	



Sample types of assessments

- *Selected response (e.g. multiple choice, true/false, fill in blanks, rating scales)*
- *Academic prompts (e.g. short answer, labeling, visual representation, essays, notebooks)*
- *Performance (e.g. creates a product or demonstrate something. Often a rubric is used to evaluate.)*
- *Teacher Observation*
- *Self assessments*

Activity plan

"E"*	Descript. of activity	Descript. of assessment and evidence (if any) collected*
<p>1E:</p> <p>Engagement</p> <p><i>Lesson</i></p> <p><i>"hook."</i></p> <p><i>Excite students.</i></p> <p><i>What do students know? Want to find out?</i></p> <p><i>Connect to students lives and interests.</i></p>	<p>I will ask two students to stand up front of the class. I will ask the class to tell me how far the two students from each other are. After listening to the students' suggestions, I will inform the class that we are going to play a game to find out how far the moon is from the Earth. We will name one student Mr. Moon, and the other one Miss. Earth.</p>	<p>[often pre-assessment]</p> <p><i>Nice use of students model to talk about distances between objects.</i></p> <p><i>very age appropriate!</i></p>
<p>2E:</p> <p>Exploration</p> <p><i>Activity or prompt that</i></p>	<p>I will ask the following question: how do you think we will be able to measure the distance between Mr. Moon, and Miss. Earth? Discussion will be conducted to find out the right measurement that</p>	<p>A picture as visual aid will be used.</p> <p>Repeating instruction will be</p>

<p><i>allows students to explore concepts. Often groupwork. Provides students with a common experience.</i></p>	<p>can be used to measure this distance. I will use prompting questions to lead the students towards the desired goal. The class can use any object-a ruler, a shoe, a book...- they agree upon to measure the distance.</p> <p>After finding how far the two students are far from each other, I will split the class into clusters of three. I will inform the class that we will try to represent the moon and the Earth, as we will try figure out how far the moon is from the Earth. I will introduce the groups to a picture that shows the distance between the moon and the Earth. I will inform the class that the distance between the moon and the Earth is approximately 30 times Earth's diameter. I will guide the class to agree on one diameter that will represent the moon's diameter, and another diameter that will represent the Earth's diameter. Every group will be encouraged to model the moon and the Earth respecting the diameters agreed upon by the class. Afterwards, each group will try to model the moon, Earth distance taking into consideration</p>	<p>used.</p>
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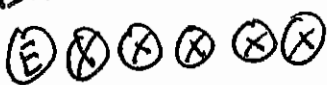
great idea
 using
 30x Diameter!
 I wonder
 if 1st graders
 will get this
 concept.
 You need
 to define
 "diameter" for
 them
 at the
 very least

→
 OK I
 see how
 you are
 doing
 this!

	the fact that the distance between the moon and the Earth is 30 times Earth's diameter.	
3E: Explanation <i>Definitions, concepts, skills explained. Often a lecture format, but can be debriefing, student research or reading.</i>	I will review with the class what they have already learned. The students already know how to use a ruler. They know what we mean by modeling something. They know that an inch is a unit of measurement. They also know that the moon is smaller than the Earth. Additionally, they know what a diameter is. Showing the class a picture that shows how far the moon is far from the Earth, I will inform the students that the distance between the moon and the Earth is approximately 30 times Earth' diameter.	[often formative]
4E: Extension <i>Apply concepts in a new way. Students</i>	The students will use inflated balloons to represent the distance between the moon and the Earth. Each group should <u>line up 30 inflated balloons</u> to show how far the moon is from our planet- the Earth. The size of the inflated balloon should match the size of the Earth' diagram the	[often formative] <i>Nice idea!</i>

<p>refine skills, explore concept in more nuanced way or in a different learning style.</p>	<p>class agreed upon. The groups could use tape or thread to ensure that the balloons are close to each other in a line.</p> <p>At the end of this lesson, the students will be asked to fill in the last column of the WKL chart.</p>	<p>Need to address the idea that the class made a model that the actual distance is much greater.</p>
<p>5E: Evaluation **Students demonstrate what they know and can do vis a vis learning goals and objectives.</p>	<p>[often summative]</p> <p>To assess student, teacher observation will be used. As far as self-assessment is concerned, students will be provided with a checklist to help them complete their tasks successfully. The checklist will contain the following:</p> <ul style="list-style-type: none"> • While modeling the moon and the Earth, did I use the diameters agreed upon by the whole class? • While showing the moon, Earth distance, did I take into consideration the fact that the distance between the moon and the Earth is 30 times Earth's diameter? 	<p>How could you make this assessment more age-appropriate?</p>

eg: have a chart where students color in the number of "balloons" / paste a moon in the appropriate place.

Earth


W	K	L
What I know	What I want to know	What I have learned

Name of RIC student (s): XXXXXXXXXX

Name of Clinical Instructor:

Lesson Topic: How do the Earth, sun, and moon interact?

Date of lesson:

Learning goals: What will students know and be able to do at the end of the lesson?
(make sure to think broadly across different science domains: science knowledge, science process skills, laboratory – procedural knowledge, and scientific attitudes)

- ✓ Students will conduct an investigation to find out how the Earth, sun, and moon interact.
- ✓ Students will know that the Earth rotates as it revolves around the sun.
- ✓ Students will know that the moon revolves around the Earth.
- ✓ Students will demonstrate the Earth, sun, and moon interaction.

Types of Summative (at the gate) Assessments:*	Aligned with standards (GLE's)
<p>To get the students' attention, I will pose the following question: how do you think the Earth, sun, and moon act together?</p> <p>After listening to the students' responses, I will inform the class that today we will see how the Earth, sun, and moon interact.</p>	<p>ESS2 (K-2) –7</p> <p>Students demonstrate an understanding of temporal or positional relationships between or among the Earth...and moon by ...</p> <p>7b observing that the moon appears to move slowly across the sky.</p> <p>7c observing that the moon looks slightly</p>

		different from day to day.
Materials needed:		
<ul style="list-style-type: none"> ➤ Short documentary ➤ Computer ➤ Science journals ➤ Markers ➤ Children books 		
Key concepts & vocabulary: <i>what are the words that students will need to know? Use kid-friendly definitions</i>		
<ul style="list-style-type: none"> ○ Interact: act together or with others. ○ Revolve: turn on or around a center. ○ Rotate: cause to turn on center. 		
Types of Formative (on the way) Assessments*		
<ul style="list-style-type: none"> • Teacher observation • <i>Academic prompts</i> • <i>Self assessments</i> 		
Engaging students		
Connections to real world and/or opportunities for students to bring their world/experience into lesson	Extension activities and/or Extra scaffolding or accommodations	

I will ask the following question: when do we see the moon? Afterwards, discussion will be conducted to relate students to the lesson of the day.	Visuals like a picture of the moon will be used.
How does this lesson position students? [What role or roles will students assume?]	
Students will be scientists who will investigate into the interaction of the Earth, sun, and moon.	Websites and children books related to the topic will be used.

Sample types of assessments

- *Selected response (e.g. multiple choice, true/false, fill in blanks, rating scales)*
- *Academic prompts (e.g. short answer, labeling, visual representation, essays, notebooks)*
- *Performance (e.g. creates a product or demonstrate something. Often a rubric is used to evaluate.)*
- *Teacher Observation*
- *Self assessments*

Activity plan

"E"*	Descript. of activity	Descript. of assessment and evidence (if any) collected*
<p>1E:</p> <p>Engagement</p> <p><i>Lesson</i></p> <p><i>"hook."</i></p> <p><i>Excite students.</i></p> <p><i>What do students know? Want to find out?</i></p> <p><i>Connect to students lives and interests.</i></p>	<p>Students will be introduced to a short documentary that shows the interaction between the Earth, sun, and moon. To help the students keep track of what is in the movie, they will be advised to use their science journal and markers to record or draw the main points mentioned in the documentary. Once the documentary will be thorough, discussion will be conducted to share ideas and opinions about what have been learned from the movie.</p>	<p>[often pre-assessment]</p> <p><i>How might you scaffold this for first graders who may not be writing sentences yet?</i></p> <p><i>Connect to objectives (e.g. movement of Earth) from moon together</i></p>
<p>2E:</p> <p>Exploration</p>	<p>Class will be split into three groups. Each group will conduct an investigation to find out how the</p>	<p>Teacher will be walking around to</p>

<p>Activity or prompt that allows students to explore concepts. Often groupwork. Provides students with a common experience.</p>	<p>Earth, sun, and moon interact. Web sites and children books related to the topic of the day will be available to help the students succeed in their mission. Once this task is over, each group will present their findings to the class.</p>	<p>afford help as needed.</p> <p><i>Great use of technology - how to support students needing to type/navigate websites?</i></p>
<p>3E: Explanation Definitions, concepts, skills explained. Often a lecture format, but can be</p>	<p>To debrief the students' research, I will guide them to know that the Earth rotates as it revolves around the sun. I will also explain that the moon revolves around the Earth. To fully demonstrate the Earth, sun, and moon interaction, my explanation will be accompanied with body gestures and movements.</p>	<p>[often formative] Body gestures and movements will be used while explaining the concept of the day.</p> <p><i>great idea</i></p>

<p><i>debriefing,</i> <i>student</i> <i>research or</i> <i>reading.</i></p>		
<p>4E: Extension <i>Apply</i> <i>concepts in a</i> <i>new way.</i> <i>Students</i> <i>refine skills,</i> <i>explore</i> <i>concept in</i> <i>more</i> <i>nuanced way</i> <i>or in a</i> <i>different</i> <i>learning</i> <i>style.</i></p>	<p>I will ask students to split into groups to demonstrate the Earth, sun, and moon interaction. A student can be the Earth, another student can be the sun, and the third student can be the moon. The student/Earth can rotate and revolve around the sun. The student/ sun can stand in the center. While the student/ moon can revolve around the Earth. The class and the school principal will be the audience.</p>	<p>[often formative]</p>
<p>5E: Evaluation **Students</p>	<p>To evaluate the students' understanding about this topic, Checklists will be used.</p>	<p>✓</p>

<p><i>demonstrate</i></p> <p><i>what they</i></p> <p><i>know and</i></p> <p><i>can do vis a</i></p> <p><i>vis learning</i></p> <p><i>goals and</i></p> <p><i>objectives.</i></p>	<p>Checklist for conducting investigation</p> <ul style="list-style-type: none">• Did I draw a clear picture or write at list three short sentences to tell how the Earth, sun, and moon interact?• Did I use the websites and children books available as resources to conduct my investigation?• Did I redraw a clear picture or rewrite at least three sentences to tell how the Earth, sun, and moon interact? <p>Checklist for demonstration</p> <ul style="list-style-type: none">• Did we, as a group, demonstrate the Earth as it rotates and revolves around the sun?• Did we, as a group, demonstrate the moon as it revolves around the Earth?
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How to support sentence writing?

Nice chart

Predict

Visuals/would walk
would help to support
student learning/
performance

Draw a clear picture or write at list three short sentences to tell how the Earth, sun, and moon interact.

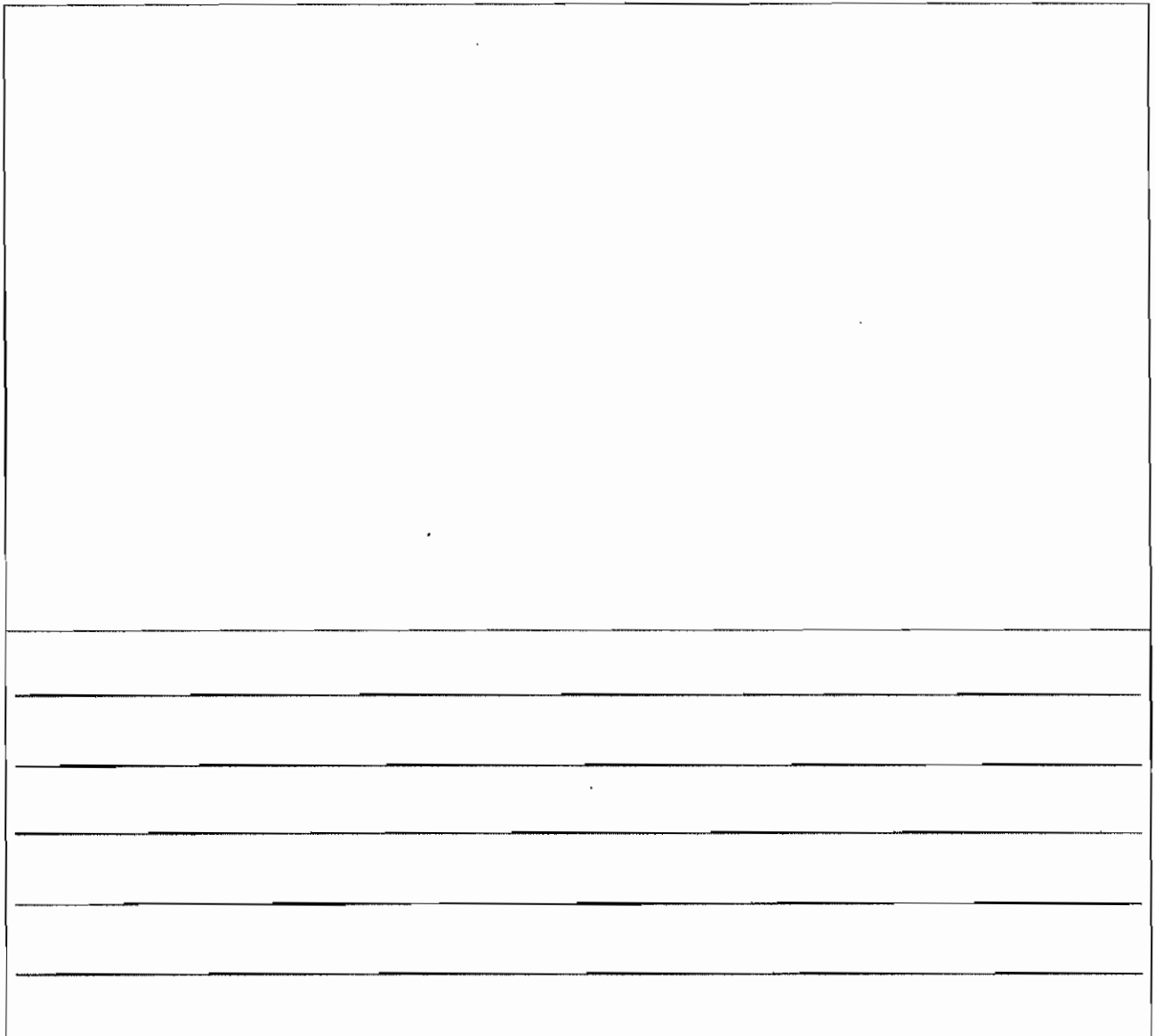
The form consists of a large rectangular box. The top portion of the box is a solid white space intended for drawing. The bottom portion of the box is divided into seven horizontal lines, providing space for writing three short sentences.

Investigate

Use the websites and children books available as resources to conduct this investigation.

Conclude

Draw a clear picture or write at least three sentences to tell how the Earth, sun, and moon interact.



The form consists of a large rectangular box. The top portion of the box is a large, empty white space intended for drawing a picture. The bottom portion of the box is divided into seven horizontal lines, providing a space for writing at least three sentences.

Name of RIC student: [REDACTED]

Name of Clinical Instructor:

Lesson Topic: Phases of the moon/Grade: One

Date of lesson:

Learning goals: What will students know and be able to do at the end of the lesson? <i>(make sure to think broadly across different science domains: science knowledge, science process skills, laboratory – procedural knowledge, and scientific attitudes)</i>	
<ul style="list-style-type: none">➤ Students will distinguish between three phases of the moon.➤ Students will define phase, satellite, orbit, space, quarter, half, whole.➤ Students will demonstrate three phases of the moon.➤ Students will model three phases of the moon using play dough.	
Types of Summative (at the gate) Assessments:*	Aligned with standards (GLE's)
Why does the moon have many shapes? Open discussion will be conducted to know where students are at concerning this topic.	ESS2 (K-2) –7 Students demonstrate an understanding of temporal or positional relationships between or among the Earth, sun, and moon by ... 7c Observing that the moon looks slightly different from day to day.
Materials needed:	
<ul style="list-style-type: none">✓ Diagram✓ Moon kit✓ Documentaries✓ Play dough✓ Journals✓ Flash light/lamp✓ Ball✓ Pencil	
Key concepts & vocabulary: <i>what are the words that students will need to know? Use kid-friendly definitions</i>	
Phase: a shape of the part of Earth's moon that is lightened by the sun. Satellite: an object that goes around a planet or star. Orbit: go around/ a path that an object follows in the sky. Space: an open area in which everything is located. Quarter: one of four equal parts.	

Half: one of two equal parts. Whole: entire part.	
Types of Formative (on the way) Assessments*	
Teacher Observation. Discussion.	
Engaging students	
Connections to real world and/or opportunities for students to bring their world/experience into lesson	Extension activities and/or Extra scaffolding or accommodations
Discussion will be organized to offer students the opportunity to express their opinions about the changes of the moon's shape. They will be able to use their journals to share their observations and illustrations with the class.	To ensure the success of this discussion, class will be informed that sign language will be used to remind them of the classroom rules and the appropriate behavior.
How does this lesson position students? [What role or roles will students assume?]	
Students will assume the role of scientists. They will try to figure out why the moon has many shapes.	

Sample types of assessments

- *Selected response (e.g. multiple choice, true/false, fill in blanks, rating scales)*
- *Academic prompts (e.g. short answer, labeling, visual representation, essays, notebooks)*
- *Performance (e.g. creates a product or demonstrates something). Often a rubric is used to evaluate.*
- *Teacher Observation*
- *Self assessments*

Activity plan

"E"*	Descript. of activity	Descript. of assessment and evidence (if any) collected*
1E: Engagement <i>Lesson</i> <i>"hook."</i>	I will show class a cookie, and ask the following question: "what is this"? After getting answers from students, I will show them half cookie as I will ask: "what is this"? After listening to their	[often pre-assessment]

<p><i>Excite students. What do students know? Want to find out? Connect to student's lives and interests.</i></p>	<p>responses, discussion will be conducted to differentiate between half and whole. Afterwards, each student will have two cookies to show a whole cookie and half cookie. Next, I will talk with students about the idea of a model. I will inform them that a model is something that represents something else. To be more specific, I will say that I am using a cookie to model the moon's phases.</p>	<p><i>Nice concrete introduction!</i> <i>→ connect back to modeling w/ balloons</i></p>
<p>2E: Exploration <i>Activity or prompt that allows students to explore concepts. Often group work. Provides students with a common experience.</i></p>	<p>I will pose the following question: "Why does the moon have many phases?" To answer this question, students will be divided into three groups. Each group will collect data using journals, diagrams, computers, and a moon kit. Afterwards, each group will present their data and findings. A science teacher will be invited to celebrate the students' performance.</p>	<p>[often formative] <i>Describe this (you demonstrated its use in class!)</i></p>
<p>3E: Explanation <i>Definitions, concepts, skills explained. Often a lecture format, but can be debriefing, student research or reading.</i></p>	<p>Mini- lecture will be used to define vocabulary, to explain concepts, and to debrief the students' research. During this mini-lecture, I will guide the students to know that the moon has different phases due to the position of the moon in relation to the sun, and the earth. I will inform the class that our focus today will be on three phases of the moon-New moon, half moon, and full moon. To wrap up this part of the lesson, I will explain what we mean by new moon phase, half moon phase, and full moon phase, as I will show the position of the moon, the earth, and the sun during each phase.</p>	<p>[often formative]</p>
<p>4E: Extension/ Evaluation <i>Apply</i></p>	<p>Recalling what they have studied throughout the whole unit, students will make a logical connection between the information they have in their journals and the concepts taught in the classroom. They, therefore, will be asked to</p>	<p>[often formative]</p>

<p><i>concepts in a new way. Students refine skills, explore concept in more nuanced way or in a different learning style.</i></p>	<p>demonstrate the following moon phases: New moon, half moon, and full moon. Class will be split into groups of three. Each group will demonstrate a phase of the moon while the rest of the class will be modeling the three phases using play dough.</p>	
<p>5E: Evaluation <i>**Students demonstrate what they know and can do vis a vis learning goals and objectives.</i></p>	<p style="text-align: right;">[often summative]</p> <p>To assess students, explanation, demonstration, and modeling will be taken into consideration.</p>	

✓ Nice rubric

Rubric for Final Assessment

Name:

Date:

	4- Exemplary	3- Accomplished	2- Developing	1- Beginning
Explanation	Student was able to explain clearly, why the moon looks like this during a specific phase. He/she used highly descriptive words to explain why the moon's shape is like this during this particular phase.	Student was able to explain why the moon looks like this during a specific phase. He/she used descriptive words to explain why the moon's shape is like this during this particular phase.	Student was not able to provide a complete explanation of why the moon looks like this during particular phase. The words he/she used to explain were not conveying.	Student was not able to explain why the moon's shape is like this during a specific phase. The words chosen for explanation were not clear.
Demonstration	Student was able to demonstrate a moon phase perfectly. He/she was able to show clearly the right position of the moon in relation to the Earth and the sun during this phase.	Student was able to demonstrate a moon phase. He/she was able to show the right position of the moon in relation to the Earth and the sun during this phase.	Student's demonstration was not clear. He/she showed the moon in position that is close from the right answer.	Student was not able to demonstrate moon phase. He/she was not able to show the right position of the moon in relation to the Earth and the sun during this phase.
Modeling	Student was able to model perfectly the position of the moon in relation to the Earth and the sun during each phase. He/she was able to model clearly the shape of the moon during	Student was able to model the position of the moon in relation to the Earth and the sun during each phase. He/she was able to model the shape of the moon during each phase.	The modeling was messy; it was not clear. Student was able to model three shapes of the moon. Labeling the phases was not clear.	The modeling was a mess. Student could not model the position of the moon in relation of the Earth and the sun.

	each phase. He/she was able to label each phase successfully.	He/she was able to label each phase.		
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Appendix

Field trip assignment

Summary

Students will be scientists who will visit the Museum of Natural History and Planetarium. Attending a space science workshop, the students will discover our moon. They will know that the moon is our closest neighbor in space.

Details

Field trip location:

Museum of Natural History
Roger Williams Park
1000 Elmwood Avenue
Providence, RI 02907

Relevant contact information:

The office number: 401. 785. 9457

Estimated cost of trip per student: \$7.00

Goals

Goals of field trip experience are the following:

- ✓ Students will learn new facts about the moon and reinforce what have been taught in the classroom.
- ✓ Students will predict, observe, collect data, and use their data to back up their predictions.

→ examples?
How does this connect to unit objectives?

Activities

- ✓ Students will attend a workshop about the moon
- ✓ Students will find answers to questions and clues while conducting museum scavenger hunt

appropriate
museum
activity
↑

↓
How are these related to your unit objectives?

The museum staff will organize the activities mentioned above. In the meantime, I will prepare my students to be ready to benefit from the trip, as I will explain to them the vocabulary that they will encounter while on the trip. Another area I am going to focus on is the way I will expect the students to behave inside the museum in particular and throughout the whole trip in general. After coming back to the classroom, the students will have to answer the following question: What was your favorite part about your visit to the museum today? Discussion will be organized to give a chance to every student to answer.

Modifications for learners

- ✓ Students who have had time expressing themselves in writing might draw a picture to illustrate what they have learned from this trip.
- ✓ Teacher can repeat instructions many times until all students understand concepts and ideas
- ✓ Teacher can explain vocabulary to English learners using simple words and visual aids such as pictures.
- ✓ Class will be divided into small groups, paying attention to the nature of each child and how he or she behaves towards his or her classmates. For instance, two students who keep arguing cannot be together in one group.

- ✓ Students who will finish the task given to them early can write down their suggestion how they will want the next field trip to be and what they will want to learn during this field trip.

Assessment

At the end, all the students will be encouraged to write down what they have learned from this trip in their science journals.

Resource List



Websites

- <http://www.youtube.com/watch?v=op6vsLNf3WY&NR=1>
- <http://www.youtube.com/watch?v=W47Wa7onrlQ&feature=related>
- <http://www.youtube.com/watch?v=lkWyM-M8o0c&feature=related>
- <http://www.videojug.com/film/what-is-the-moon>
- http://www.google.com/images?hl=en&rlz=1R2SNNT_enUS361&wrapid=tlif12879734382301&q=the+Moon&um=1&ie=UTF8&source=univ&ei=RerETMmQLIm4sQPEwtG2BA&sa=X&oi=image_result_group&ct=title&resnum=3&ved=0CD0QsAQwAg&biw=949&bih=426
- <http://www.youtube.com/watch?v=XJ2rglRFhnA&feature=related>
- <http://www.youtube.com/watch?v=pwuvsEdecYA&NR=1>
- <http://www.youtube.com/watch?v=2aFGNGEcDOK&NR=1>
- <http://www.youtube.com/watch?v=nXseTWTZlks&feature=related>
- <http://www.youtube.com/watch?v=rp7FQXSrmdQ&feature=related>
- http://www.harcourtschool.com/activity/moon_phases/index.html

Children books

- *Astronomy by World Book*
- *The Moon by Seymour Simon*
- *The Moon: Earth's Companion in Space by Michael D Cole*

- *Earth and Earth's Moon* by World Book
- *Goodnight Moon* by Margaret Wise Brown, illustrated by Clement Hurd
- *Papa, Please Get the Moon for Me* by Eric Carle
- *Owl Moon* by Jane Yolen
- *Kitten's First Full Moon* by Kevin Henkes
- *Astronomy / Out of This World!* by Dan Green and Simon Basher
- *And If the Moon Could Talk* by Kate Banks, illustrated by Georg Hallensleben
- *Happy Birthday, Moon* by Frank Asch
- *Many Moons* by James Thurber, illustrated by Marc Simont
- *The Moon Shines Down* by Margaret Wise Brown, illustrated by Linda Bleck
- *I Took the Moon for a Walk* by Carolyn Curtis, illustrated by Alison Jay
- *Over the Moon: An Adoption Tale* by Karen Katz

Materials

- Science journals
- Pencils
- Glue sticks
- Construction papers
- Rulers
- Students' shoes
- Computers
- Play dough
- Balloons

- Children books
- Moon kit
- Lamp
- Ball
- Diagrams
- Moon/ space pictures
- Moon phases pictures
- Lined papers
- Poster papers
- Markers

Unit Reflection

Students benefited a lot from the concepts taught in this unit. The unit content helped the students to widen their knowledge concerning the moon. Students knew many facts about the moon such as; moon surface, moon/Earth distance, moon/Earth size, moon, Earth, sun interaction, and three moon's phases. They also benefited from the hands on and minds on activities included in the unit. The students were encouraged to work as groups, which made learning about the moon fun. In addition, class benefited from the effective teaching methods used while teaching this unit. The students have benefited a lot from this unit. They have learned hosts of facts concerning the moon. The concepts taught in this unit have inspired the students to think of what is beyond our planet, Earth. Teaching the students about space in general and the moon in particular have leaded them to be more thoughtful and connected to the whole universe.

As a teacher, I do believe that students learn in different ways, but almost all children respond well to praise. Therefore, I used a variety of teaching techniques as I used praise whenever I met with my students. I also presented my moon lessons with a big smile and excitement, which had a positive impact overall class. Besides, I respected the fact that the students have different ways of absorbing information and of demonstrating their knowledge. Hence the result was amazing; all the students were able to understand the unit concepts and demonstrate their knowledge perfectly. I also considered the students' background knowledge, environment, and learning goals. Being able to do so had a positive effect on the students'

learning. My students loved to attend science classes, as they were excited while learning new things about the moon each time we met.

This unit has guided the students to know that life does not end on Earth; there are many things out there that need to be discovered. This unit has taught the students how to be scientists who are eager to continuously discover and know new facts.

Because of the scarcity of materials and the tight budget available in the school where I work, I could not provide my students with more sophisticated learning tools that would help enhance their learning more. There are hosts of education tools that would more enrich this unit. Some of these materials are the following:

- Cluster kits
- Space posters
- Special education science resources
- Microscope *interesting! how would you use ~~the~~ microscopes in the moon unit?*

Due to time constraints for this unit, the following activities were omitted from the unit:

- ✓ Scavenger Hunt Game
- ✓ Moonlight Madness
- ✓ Phases of the Moon
- ✓ Matching Game

Some of these activities are online while others can be done using word cards and picture cards.

What didn't work as well as you had hoped + how might you improve?.