**Phases of the Moon Unit**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period \_\_\_\_\_\_\_\_\_\_\_

Due Date: **October 16, 2013**

**The Big Idea: Motion and Forces**

**What effects are caused by the motion of Earth and the moon?**

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| Directions | Examine the activities you can do to learn the unit objectives. All of the activities and the dates we are doing them are listed below. They are due at the latest on **October 16**. No work will be accepted after **October 16** unless you are absent that day. The test is on October 17.**The activities in bold are required for every student to do**. These will help you learn the basics of the unit. After you have mastered the basics, move to section B and then section A for more challenging activities. You must demonstrate knowledge for each level before moving on to the next section.When you complete an activity, you must turn it in to receive feedback. **YOU MAY NOT TURN IN MORE THAN TWO ACTIVITIES PER DAY. Including the last day of the unit.**As always, if you have questions ask or email. |
| Objectives | * Demonstrate that the Moon reflects the Sun’s light as it orbits Earth.
* Track, model, and illustrate the phases of the Moon as seen from Earth.
* Create working definitions of the terms “waxing” and “waning”.
* Make predictions about the Moon’s appearance on the basis of observed patterns.
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| State StandardsAddressed | INQC InvestigateCollecting, analyzing, and displaying data are essential aspects of all investigations.INQE ModelModels are used to represent objects, events, systems, and processes. Models can be used to test hypotheses and better understand phenomena, but they have limitations.INQF ExplainIt is important to distinguish between the results of a particular investigation and general conclusions drawn from these results.ES1AThe Moon’s monthly cycle of phases can be explained by its changing relative position as it orbits Earth. An eclipse of the Moon occurs when the Moon enters Earth’s shadow. An eclipse of the Sun occurs when the Moon is between the Earth and Sun, and the Moon’s shadow falls on the Earth.ES1CMost objects in the solar System are in regular and predictable motion. These motions explain such phenomena as the day, the year, phases of the moon, and eclipses. |

**Vocabulary**

|  |  |  |
| --- | --- | --- |
| waxing | phases of the moon | waning |
| hypothesis | relative | gibbous |

Use the calendar to document your progress each day.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
| **9/30**Missing AssignmentSheetsIntro to ClickersAnticipation Guide onClickersMoon PhaseObservation LogMoonlight ProbeDone as whole class | **10/1**Introduce UnitWriting Hypothesis | **10/2**LAB 5.1StudentSheet 5.1:Investigating theMoon’s ReflectedLight Reflecting on Lesson5.1: Investigating theMoon’s ReflectedLight Get Logical: Phases of the Moon  | **10/3** LAB 5.2StudentSheet 5.2:Modeling Phases ofthe MoonReflecting on Lesson5.2: Modeling Phases of the Moon | **10/4**Continued…Reflecting on Lesson5.2: Modeling Phases of the MoonGrade Hypothesis |
| **10/7**Grade and Discuss:Lab 5.1:Investigating theMoon’s ReflectedLight and Lab 5.2: Modeling Phase of the Moon | **10/8**VocabularyPhases of the MoonGuide-O-Rama | **10/9**Phases of the Moon GamePhases of the Moon Reading and Worksheet | **10/10****S.L.A.M.****Unit Work Day** | **10/11****No****School** |
| **10/14**Moon TalkWorksheet | **10/15**Gazing at the MoonProbeRace to the MoonVideo | **10/16**Discuss Review GuideRevisit AnticipationGuide**All “C” work due****All “B” work due****All “ A” work due** | **Unit Test** |  |

**“C” Activities**

**All assignments marked with an \* need teacher instruction before you may begin.**

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| --- | --- | --- | --- |
| Description | **Points****Possible** | **Due Date** | **Completed** |
| **Moon Light Probe** | 5 | 10/1 |  |
| **Writing Hypothesis** | 10 | 10/3 |  |
| **\*LAB 5.1: Student Sheet 5.1: Investigating the Moon’s Reflected Light** | 10 | 10/3 |  |
| **\*Lab 5.1: Reflecting on Lab 5.1: Investigating the Moon’s Reflected Light** | 10 | 10/3 |  |
| **Get Logical: Phases of the Moon** | 5 | 10/15 |  |
| **\*LAB 5.2: Student Sheet 5.2: Modeling Phases of the Moon** | 10 | 10/4 |  |
| **\*Lab 5.2: Reflecting on Modeling Phases of the Moon** | 10 | 10/4 |  |
| **Phases of the Moon Guide-O-Rama** | 10 | 10/9 |  |
| **Phases of the Moon Reading and Worksheet** | 10 | 10/10 |  |
| **Moon Talk Worksheet** | 10 | 10/15 |  |
| **Gazing at the Moon Probe** | 5 | 10/15 |  |
| **\*Race to the Moon Video** | 5 | 10/15 |  |
| **Moon Observation Log** | 20 | 10/16 |  |
| **\*Vocabulary** | 10 | 10/16 |  |
| **Review Guide** | 10 | 10/16 |  |

**All “B” and “A” work must be typed to receive a score (unless otherwise noted)**

**“B” Activities**

**(Choose ONE)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Description** | **Points****Possible** | **Due Date** | **Completed** |
| Moon Phases | 15 | 10/16 |  |
| Moon Phases 2 | 15 | 10/16 |  |
| Lowell Observatory Moon Clock | 15 | 10/16 |  |
| Phases of the Moon Home/School Connection (may be handwritten) | 15 | 10/16 |  |

**“A” Activities**

**(Choose ONE)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Description** | **Points****Possible** | **Due Date** | **Completed** |
| Full Moon | 15 | 10/16 |  |
| News Flash! | 15 | 10/16 |  |
| Lunar Calendar (May be handwritten) | 15 | 10/16 |  |
| The Phases of Venus (May be handwritten) | 15 | 10/16 |  |