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

Absences:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Off task behavior:
* Off task behavior:
* Off task behavior:

Today I am:

* Explain how simple machines affect the amount of effort force, distance through which a force is applied, and/or direction of force while doing work.
* Classifying celestial bodies in the solar system into categories based on physical properties.
* Describing the relative proximity of common celestial bodies in the sky to the Earth. (MC)
* Describing how the location of celestial bodies and the structure of the universe affects the appearance from Earth Apply the concept of a light year in real world situations
* Demonstrating an understanding of concepts relating to the relative motion of object in the solar system (years, days, moon phases)

\_\_\_\_\_ Video: Rube Goldberg (Summary)/ Study Jam Video: Simple Machines

\_\_\_\_\_Notes/PowerPoint: Simple Machines

\_\_\_\_\_Foldable: Simple Machines

\_\_\_\_\_ Rube Goldberg Project

**Project Requirements/Guidelines**

Project Requirements/Guidelines

HOW TO CHOOSE A GROUP:

* Up to 4 people per group, you may also choose to work alone
* People who you can meet with about 2-3 times outside of school
* People who you will work well with
* People who have similar schedule (same time free)
* You can choose anyone in Physical Science (they do not have to be in your class period)

**INSTRUCTIONS CONTINUE ON NEXT PAGE**

Building of Rube Goldberg Machine

* + 10 total transfers of energy which should include:
* 4 steps with a large identifiable amount potential energy.
* All 4 different types of friction:
  + air
  + rolling
  + sliding
  + viscous
* A step clearly illustrating each Law of Motion.
  + 1st Law - Inertia
  + 2nd Law  - Force = (Mass)(Acceleration)
  + 3rd Law – Action/Reaction Pairs
* 4 intentionally different forms of energy
  + Chemical
  + Kinetic - Mechanic
  + Sound
  + Electromagnetic (light)
  + Thermal
* Electrical

\_\_\_\_\_\_\_ You Tube How the Solar System Formed (Summary)



\_\_\_\_\_\_\_\_ Video Rap: About the Planets/Video Terrestrial vs. Gas Planets <https://www.youtube.com/watch?feature=player_embedded&v=UcaZfWaNR64>

\_\_\_\_\_\_\_\_Notes/PowerPoint (Solar System/Planets)

\_\_\_\_\_\_\_ Travel Brochure or Cereal Box Advertisement of the Solar System See Teacher for instructions.

\_\_\_\_\_\_\_Project: Asteroids, Comets, and Meteors: <http://www.jackson.stark.k12.oh.us/libraries.cfm?subpage=1573207>

\_\_\_\_\_\_You Tube Video: “How Small are You?”

\_\_\_\_\_\_PowerPoint: How far are celestial bodies?/Astronomical Units

\_\_\_\_\_\_It’s in the Cards Vocabulary: Light Year/Astronomical Unit

\_\_\_\_\_\_ Measuring Distance Project (See teacher for worksheet)

http://www.cfep.uci.edu/cspi/docs/lessons\_secondary/Solar-System.pdf

<http://teachers.sduhsd.net/mboman/Unit%20C/Astronomical%20Units%20and%20Light%20Years.pdf>

\_\_\_\_\_You Tube Video: Boy Discovers Planet

\_\_\_\_\_What is a light year? Video Summary: <http://shows.howstuffworks.com/34950-what-is-a-lightyear-video.htm>



\_\_\_\_\_\_Notes/PowerPoint: Light Year

\_\_\_\_\_\_Read article and summarize key points: <http://earthsky.org/space/what-is-a-light-year>



\_\_\_\_\_Light Year Project: http://ccacademy.enschool.org/ourpages/auto/2014/8/16/62311738/Light-Years-Worksheet.pdf