

Science Homework #9

SECTIONS 3A, B, C, D, & E

OCTOBER 13-17, 2025

Homework

Science Fair Project Packet:

Complete pages 6, 7, and 8 of the packet. The packet is to be printed and handwritten, not uploaded or emailed.
Thank you 😊

Page 6

- Identify Variables (Independent, Dependent, Constants, and Control Group (if applicable).
- List materials and amounts for each material

Page 7

- List procedures (read directions at the top of the page for detailed instructions)

Page 8

- SET UP data table and graph (no data yet)

- Complete Topic 2 Earth in Space and Time Study Guide.

Vocabulary

Topic 2 Earth in Space and Time Vocabulary



NEW



Reminders

- Homework # 9 (Orange Folders) due Friday, 10/17/25

- Topic 2 Stars, Sun, and Gravity Test Wed, 10/15

Contact Me

laura.hernandez@archimedean.org

Topic 2 Earth in Space and Time: Study Guide

The Sun: Our Star

Our Sun is the center of our solar system and is crucial for life on Earth.

- **What is the Sun?**
 - The Sun is a **star**. It's a giant ball of hot gases that produces its own light and thermal energy.
 - It is the **largest object** in our solar system.
 - **What is the Sun made of?**
 - The Sun is composed of very hot gases, primarily **hydrogen** and **helium**.
 - **How does the Sun produce energy?**
 - The Sun creates light and heat energy through a process called **fusion**. This energy travels to Earth as sunlight and heat.
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The Physical Sun

The Sun has several distinct layers and features that can be observed.

Layers of the Sun: The Sun has six layers in total, including the core, the photosphere, and the corona.

- **Photosphere:** This is the visible outer surface of the Sun.
 - **Corona:** This is the Sun's outer atmosphere, which is Latin for "crown".
 - **Sunspots:** These are dark spots that appear on the photosphere. They are cooler than the areas surrounding them, which is why they look darker.
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Forces in the Universe

Two important invisible forces are gravity and magnetism.

- **Gravity**
 - A force of attraction that **pulls** two objects toward each other.
 - Earth's gravity pulls **all objects** toward its center.
- **Magnetic Force**
 - A force that can either **push or pull** objects.
 - It only affects **certain materials**, known as magnetic materials, such as iron.
 - Materials like wood, plastic, and aluminum are **nonmagnetic**.

Feature	Gravity	Magnetic Force
Action	Pulls only	Pushes or pulls
Objects Affected	All objects	Only magnetic materials

Viewing Objects in the Sky

The appearance of objects in the sky depends on their size and distance from us.

- **Relative Size and Distance:**
 - Objects like the Sun and Moon appear large because they are much **closer** to Earth than other objects like stars.
 - Stars often look like tiny specks because they are very **far away**, even though many are much larger than our Sun.
- **Telescopes:**
 - A telescope is a tool that helps us see **faraway objects** more clearly.
 - It uses **lenses and mirrors** to gather more light, making distant objects appear bigger and brighter.
 - With telescopes, we can see details that are invisible to the naked eye, such as **craters on the Moon** or the color of planets.

Earth in Space and Time: Study Guide

Complete the following sentences using the most appropriate term from the provided word bank.

The Sun and Its Properties

Word Bank: star, hydrogen, thermal, 2 nonillions, helium, fusion, largest

1. The Sun is classified as a _____.
 2. It is the _____ object in our solar system.
 3. The two primary gases that make up the Sun are _____ and _____.
 4. The Sun produces light energy and _____ energy, which helps keep Earth from freezing.
 5. Energy is produced in the Sun through the process of _____.
 6. The Sun's mass is estimated to be _____ kilograms.
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The Physical Sun and Its Features

Word Bank: corona, sunspots, six, photosphere, cooler, chromosphere

1. The Sun has _____ layers, which include the core, radiation zone, convection zone, _____, _____, and _____.
 2. The visible outer surface of gases is called the _____.
 3. The outermost layer, which is Latin for "crown," is the _____.
 4. The dark areas on the Sun's surface are called _____.
 5. These features are areas where the temperature is _____ than the surrounding areas.
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Gravity vs. Magnetic Force

Word Bank: pull, iron, nonmagnetic, gravity, push

1. Both _____ and magnetism are forces that can _____ objects together.
 2. A key difference is that magnetic force can also _____ objects apart.
 3. Magnetic force only attracts magnetic materials, such as _____.
 4. Objects like aluminum and plastic are considered _____ because they are not attracted to magnets.
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Viewing Objects in the Sky

Word Bank: far, closer, telescope, bigger, craters, specks

1. A _____ is a powerful tool that makes _____ objects appear _____.
2. The Moon and Sun can be seen clearly without a telescope because they are _____ to Earth than other objects.
3. Stars and planets look like tiny _____ from Earth because they are very _____ away.
4. When viewing the Moon with a telescope, one can clearly see details like _____ on its surface.