

Scientific Method (Mythbusters Sheet):

- ☆ Analysis:
 - Figuring out what the data means
- ☆ Conclusion:
 - Relating your results to your hypothesis
- ☆ Control:
 - Things in an experiment that don't change
- ☆ Data:
 - Observations from an experiment
 - Usually numbers
- ☆ Experiment:
 - Something we do to prove our hypothesis
- ☆ Graph:
 - Visual way to organize data:
 - You can make predictions
 - You can more easily see relationships
- ☆ Hypothesis:
 - Educated guess
 - MUST include a reason why
- ☆ Procedure:
 - Step by step directions on how to complete the experiment
- ☆ Purpose:
 - Reason for doing an experiment
- ☆ Theory:
 - Widely accepted idea about how something works or happens
- ☆ Variable:
 - ONE thing in an experiment that changes

Branches of Earth Science (Table with definitions, examples, and current events)

- ☆ Astronomy:
 - Study of space / universe
 - Astronomer could study:
 - Stars
 - Earth's movements in relation to Sun and Moon
 - Black holes
 - Galaxies
- ☆ Geology:
 - Study of Earth and its process
 - Geologist could study:
 - Rocks and minerals
 - Volcanoes
 - Underground features

- Plate tectonics
- ☆ Hydrology:
 - Study of water
 - NOT in your book → your book refers to this as oceanography
 - Hydrologist could study:
 - Ocean
 - Precipitation (rain or snow)
 - Composition
 - Glaciers
- ☆ Meteorology:
 - Study of the atmosphere
 - Meteorologist could study:
 - Weather
 - Climate
 - Storms
 - Wind patterns

Metric System (yellow sheet):

- ☆ Bases:
 - Liters (L):
 - Measures **volume**
 - Volume is the amount of space and object takes up
 - Meters (m):
 - Measures length or distance
 - Grams (g):
 - Measures **mass**
 - Mass is the amount of material an object has
 - Not the same as weight → weight depends on gravity
 - Seconds (s):
 - Measures time
- ☆ Prefixes:
 - Kilo- (k):
 - Means 1000
 - Base:
 - No prefix → single letter
 - Means 1
 - Deci- (d):
 - Means 1/10 OR 0.1
 - Centi- (c):
 - Means 1/100 OR 0.01
 - Milli- (m):

- Means 1/1000 OR 0.001

Earth's Structure (sheet with circle picture / back of branches sheet):

- ☆ Crust:
 - Thinnest layer
 - Outermost layer
- ☆ Mantle:
 - Partially melted layer beneath the Earth's crust
- ☆ Outer Core:
 - Liquid Ni and Fe
 - Creates our magnetic field
- ☆ Inner Core:
 - Solid Ni and Fe
 - Solid because of the pressure
 - Hottest layer
- ☆ Why layers?
 - Earth completely melted
 - More dense materials (like Ni and Fe) were allowed to sink to the center
 - Less dense materials floated on the surface

Density:

- ☆ The amount of material (definition of mass) in a given space (definition of volume)
- ☆ $D = m/V$
 - $D = \text{Density (g/cm}^3 \text{ OR g/mL)}$
 - $m = \text{mass (g)}$
 - $V = \text{volume (cm}^3 \text{ OR mL)}$

Nebular Hypothesis (plain paper):

- ☆ Describes the formation of our solar system including the Earth
 - Giant cloud of gas and dust
 - Forms disc → spins faster
 - Sun forms in middle (fusion)
 - Planets form along orbits
 - Leftovers make comets, asteroids, and meteorites
- ☆ Moon:
 - Fifth planet or big asteroid (Mars size) hit Earth
 - Made Earth bigger (some of material bonded with Earth)
 - Leftover material made the moon
- ☆ Atmosphere:
 - Original → formed by volcanic gases; poisonous
 - Fixed by plants (algae)

- ☆ Water (Oceans):
 - Steam from volcanoes
 - Comets