

## Warm Ups for Week 1

Monday / Tuesday: No School

Wednesday: What do these pictures represent?

Pictures removed to reduce the size of this document.

Thursday: There are Multiple Intelligences, name seven.

Musical

Interpersonal

Spatial

Bodily

Intrapersonal

Logical

Linguistic

Naturalist

Friday: No warm up given. Class devoted to Lab writing assessment

## Warm Ups for Week 2

Monday: What is the next part of the science experiment, and when is it due?

The only answer that will change throughout the year. The list of assignments and due dates can be found at my teacher web page:

<http://teacherweb.com/CO/PlatteRiverAcademy/MikeWillsea/photo1.stm>

Tuesday: Name a hypothesis for any experiment

Must be stated in IF, THEN, BECAUSE format. Telling what you will change (IF), what you expect to happen (THEN), and why you think it will happen (BECAUSE.)

Example: IF I jump off of the school roof, THEN I will break my leg, BECAUSE there will be too much force at impact for my leg to withstand.

Wednesday: What is the difference between quantitative and qualitative data?

Both describe observations for a lab.

Quantitative: Has the letter N in it, and refers to the numbers you will record. Must include units.

Qualitative: Like qualities...this is the adjectives you will use to describe your observations.

Thursday: Name any problem for any experiment. (Not experimental error)

The problem is the question you hope to answer at the end of the experiment. It should not be yes or no. A good way to start these are, "What will happen when..."

Example: What will happen when we drop 3 differently weighted balls off the roof?

Friday: Warm up draw today. Be ready to pick one question from the bucket.

## Quarter 1 Week 3

Monday: What are the three types of variables?

1. Independent: The variable you will be changing in the experiment
  2. Dependent: The variable you will be recording.
- Controlled: The variables (4 minimum) that will remain the same throughout.

Tuesday: What are the 3 types of rocks? (8th grade only: How is each formed?) (ES pg, 87)

The rock types are IGNEOUS, SEDIMENTARY, and METAMORPHIC.

IGNEOUS: Formed by melting, cooling and crystallizing

METAMORPHIC: formed by heat and/or pressure, and/or chemicals.

SEDIMENTARY: formed by weathering, transportation, deposition, compaction and cementation.

Wednesday: Name 5 factors that affect a places climate?

- 1) Latitude (closeness to the equator)
- 2) Being close to water
- 3) Windward and leeward sides of the mountains (windward moist, leeward dry)
- 4) Wind and ocean currents (cold currents make a place cooler)
- 5) Altitude (higher elevation makes a place cooler.)

Thursday: What do you do if you get chemicals in your eyes, what about your skin?

In both cases you must tell the teacher. For your eyes, you go to the sink and use the eye wash bottles. For your skin you will rinse the affected area thoroughly.

#### Week 4 Warm Ups

Monday:

The law of superpositions says that in sedimentary rocks, the older rocks will be found \_\_\_\_\_. The lower you dig.

Tuesday:

What are the 10 things that a graph needs to be complete?

- |                      |                                       |
|----------------------|---------------------------------------|
| 1. Descriptive title | 6. Evenly spaced x-axis               |
| 2. Labels for x-axis | 7. Evenly spaced y-axis               |
| 3. Labels for y-axis | 8. Data                               |
| 4. Units for x-axis  | 9. Key                                |
| 5. Units for y-axis  | 10. Description (this graph shows...) |

Wednesday:

Why is latitude the most important factor that determines a places climate?

At the equator, the suns rays will be most direct, making for intense rays, and a hot climate. At the poles, the suns rays are slanted, making for less intense rays, and a cold climate.

Thursday:

What is the main organ of the circulatory system, and what is it's main job?

The heart is the main organ, and it circulates blood through the body.

#### Week 5 Warm Ups

Monday:

Was your day off everything you hoped it would be?

This question will not be in the bucket.

Tuesday:

Why test an experiment multiple times?

Testing an experiment more times (or using multiple subjects) will lead to more accurate results. This will help reduce the effects of extreme data, or experimental errors.

Wednesday:

There are several things that lead to a decrease in the amount of living things on earth. Name one, and how it affected life.

- ❑ Meteors have crashed into Earth, creating huge clouds of debris that block sunlight, and cause plants and animals to die.
- ❑ Volcanoes and their lava have changed temperatures and habitats.
- ❑ Ice ages have changed temperatures and habitats.

Thursday:

What is one main organ of the digestive system, and what is its job? (8<sup>th</sup> grade: name two)

Stomach: will breakdown food into molecule-sized pieces.

Small intestine will remove nutrients from food

Large intestine will remove water from food

Esophagus will transport the food from mouth to stomach

Mouth will breakdown food into smaller pieces

Friday:

Warm up draw.

### Week 6 Warm Ups

Monday:

What tools would you use to measure 4 out of the following: temperature, pressure, wind, humidity, clouds and precipitation.

Temperature: thermometer

Humidity: Psychrometer or hygrometer

Pressure: barometer

Clouds: no tool, just your eyes

Wind: anemometer (Annie-mom-eter)

Precipitation Rain Gauge

Tuesday:

Name the steps of the water cycle. 7<sup>th</sup> grade name 4, 8<sup>th</sup> grade name 5.

You can start with any, but then they should be in order:

Evaporation, condensation, precipitation, run-off, infiltration, collection.

Wednesday:

What are herbivores, omnivores, carnivores, and detritivores?

Herbivores eat plants

Carnivores eat meat

Omnivores eat plants and meat (animals)

Detritivores eat dead matter or wastes

Thursday:

What is one main organ of the respiratory system, what is its job?

The lungs oxygenate our blood, and remove the waste product carbon dioxide.

## Week 7 Warm Ups

A short reminder to those of you who print out the warm-ups...  
Printing these out does not give you permission to talk while your classmates look up the answers during class.

Monday:

What will the skies look like if there is a high-pressure weather system? What about a low pressure system?

High pressure means clear skies

Low pressure means cloudy / Stormy skies

Tuesday:

What is the formula for photosynthesis?

In words: Water + Carbon Dioxide + Light Energy makes Sugar + oxygen

In chemical formula:  $6\text{H}_2\text{O} + 6\text{CO}_2 + \text{light energy}$  makes  $\text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$

7<sup>th</sup> grade should know words, 8<sup>th</sup> grade should know words and formula.

Wednesday:

What is the formula for respiration?

Words: Sugar + oxygen makes Water + Carbon Dioxide + Light Energy

Formulas:  $\text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$  makes  $6\text{H}_2\text{O} + 6\text{CO}_2 + \text{light energy}$

Thursday:

Warm Up draw.

These two formulas, photosynthesis and respiration, are the same formula, but in reverse of each other. Keep that in mind as you study.

## Week 8 Warm Ups

Monday:

What is the main structure and 4 things does the skeletal system do for your body?

Bones are the main structures

- 1) Protection (like the skull protects the brain, and the ribs protect our internal organs.)
- 2) Movement (the muscles need something solid to hold onto to cause us to move.)
- 3) Shape (without bones we would be a large blob on the floor)
- 4) Storage and marrow production.

Tuesday:

What do these clouds look like: cumulus, stratus, cirrus, cumulonimbus?

Cumulus: puffy, clouds like a kindy would draw

Stratus: blanket-like clouds

Cirrus: wispy clouds

Cumulonimbus: large hail producing clouds

Wednesday:

There are several types of symbiosis. Name three and what each interaction involves.

Symbiosis is the interaction between two species.

- 1) mutualism: both species benefit
- 2) commensalisms: one species benefits, the other does not benefit, and is not harmed either
- 3) parasitism: one species benefits, while the other is harmed.

Thursday:

Name 5 safety precautions that you can do in a science lab.

- 1) wear goggles
- 2) wear an apron
- 3) use tongs to hold something hot
- 4) know where the fire extinguisher is, and how to use it
- 5) tie back loose hair
- 6) put chemicals only where they are supposed to go
- 7) walk carefully and deliberately, avoiding bumps
- 8) wear gloves when you might handle something dangerous
- 9) know that when anything that goes wrong, you need to tell the teacher
- 10) Make sure your area is clean

### Week 9 Warm Ups

Monday:

What are one similarity and one difference between the orbit of a comet and the orbit of a planet?

Similarity: they both orbit around the sun

Difference: A planet has a more circular orbit, with a generally constant speed. A comet has an elliptical orbit, with varying speed.

Tuesday: What is the difference between continental, marine, tropical and polar air masses?

Continental air masses start over land, and tend to be dry.

Marine air masses start over land, and tend to be wet.

Tropical air masses start over land, and tend to be hot.

Polar air masses start over land, and tend to be cold.

Wednesday:

Name 5 safety tools in the science classroom. (What you use to stay safe.)

Answers may vary. Some examples include:

Goggles	Apron
Tongs	Gloves
Fire Extinguisher	Pyrex glass in beakers

Thursday:

Give 3 examples of cycles in nature.

Answers may vary but could include: Water, Carbon dioxide / Oxygen, Nitrogen, Phosphorus, Rock, Life...

## Quarter 2 Week 1

Monday:

What are the units for length, time, volume, mass and density? (of course you need to use SI, or metric units)

Length: meter

Time: second

Volume: milliliters

Mass: Gram

Density: (Mass/Volume)  
grams per ml (g/ml)

Tuesday:

What is the main organs and function of the central nervous system?

Brain and Spinal cord are the main organs, and they transmit info from the brain to the body, and vice versa.

Wednesday

What are autotrophs, and heterotrophs?

Autotrophs make their own food, heterotrophs eat other things to get their energy.

Thursday

They are called fossil fuels because \_\_\_\_\_. Coal comes from fossilized \_\_\_\_\_, while oil comes from fossilized \_\_\_\_\_.

- 1) they are made from formerly living things
- 2) Plants
- 3) Animals

## Quarter 2 Week 2

Monday:

a) What are autotrophs, and heterotrophs?

Autotrophs make their own food through photosynthesis

Heterotrophs get energy from eating other organisms, like grass or animals.

b) They are called fossil fuels because remains of dead organisms. Coal comes from fossilized plants, while oil comes from fossilized animals.

There are two questions to make up for last week.

Tuesday:

What is the difference between the particle motion of something at absolute zero, freezing, liquid and gaseous states?

Absolute zero: no particle movement

Freezing: particles vibrate, but cannot separate from each other.

Liquids: Particles flow around each other, but cannot fully separate

Gases: Particles have lots of energy, and can fully separate from the mass of particles.

Wednesday

Describe in words how you can convert feet to meters using fractions.

Use Unit Conversions (the fractions that help you multiply or divide to change the units.)

Thursday

What is static electricity?

Build up of charges on an object.

Quarter 2 Week 3 (Be prepared to write complete ideas)

Monday:

What prefixes mean thousandth (milli), hundredth (centi), tenth (deci), tens (deca), hundreds (hecto), thousands (kilo)?

Tuesday:

Define and give an example of each of the following: conductor (allows electrons to pass through it, like a metal), insulator (does not allow electricity to pass through it, like rubber), resistor (electricity struggles to pass through it, like pencil lead or an electrical stove top).

Wednesday

What is the difference between a chemical and physical change? In both changes, the appearance looks different. In a physical change, the atomic compounds are still the same. When ice becomes water or steam, it looks different, but it is still H<sub>2</sub>O. In a chemical change, the appearance and chemical makeup are completely different.

Thursday

Who is Dmitri Mendeleev?

He observed the trends in a elements and arranged them to form the periodic table.

Quarter 2 Week 4 (Get ready to draw on Friday)

Monday:

What is the importance of protons in an atom?

The number of protons determines the element.

Tuesday:

Name these phase changes: Gas to liquid, liquid to solid, solid to liquid, liquid to gas, solid to gas, gas to solid.

Solid to liquid – Melting

Liquid to Gas – Evaporation

Gas to Liquid – condensation

Liquid to solid – freezing

Solid to gas – sublimation

Gas to solid - deposition

Wednesday

What is the importance of electrons in an atom?

Electrons determine the overall charge of the atom. In a neutral atom, they will be the same number as the positive protons.

Thursday

Using a hose analogy, how would you describe voltage and current?

Voltage is pressure, like the forcefulness of the water coming out of a hose. A fire hose has more push than a drinking fountain. A wall outlet has more (voltage) push than a D-cell battery.

Amperage is related to flow. A 2 inch pipe will let less water out than a 2 foot pipe.

### Quarter 2 Week 6 (Get ready to draw on Friday)

Monday:

What is the difference between a solute and a solvent? Look it up if you don't know. If you don't understand the glossary definition, read the passage about it. Think Barney for the right book.

Solute: the substance that gets dissolved. It is the salt in a salt-and-water situation

Solvent: what does the dissolving. It is the water in a salt-and-water situation

Tuesday:

What is an ion, what about an isotope? Compare each to a neutral atom.

Ion: too many or too few electrons in an atom, compared to the number a neutral atom should have.

Isotope: too many to too few neutrons, compared to the number a neutral atom should have.

Wednesday

Where is the magnetic north pole located?

(Hint: it is not at the rotational pole)

The rotational pole is at the "north pole." The magnetic north pole, where your compass points, is located in Northern Canada.

Thursday

When an electric current flows through a wire it produces what? (Science Explorer, *Electricity and Magnetism* pg. 31, bold)

A magnetic field is produced when electricity flows through a wire.

Friday:

Today we draw a question from the container.

### Quarter 3 Week 1

Week 1 – Write in Complete Ideas (complete sentences)

Monday:

What is the difference between covalent and ionic bonds?

Covalent bonds involve sharing electrons.

Ionic bonds involve giving and taking electrons, when the opposite charges are attracted.

Tuesday:

What are three of the 5 ways of telling that a chemical reaction is happening?

1. Color change
2. Change in temperature
3. Bubbles created
4. Change in properties.
5. A precipitate forms

Wednesday

How can you weaken a magnet? (8<sup>th</sup> grade name two.)

1. Heat the magnet or strike it to disturb the domains.

Thursday

What is it that organic compounds have in common?

They are made of carbon, and are found in living things.

Friday

Time to draw a question!