Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_ Hour: \_\_\_\_\_\_\_\_

Integrated Science Semester 1 Final Study Guide

Unit 1: Nature of Science

1. List the steps in order for the scientific method:

 1. Define Problem/ Ask Question\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 2. Form a hypothesis.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 3. Perform an experiment.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 4. Collect and analyze data.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 5. Form a conculsion.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Know the difference between quantitative observations and qualitative observations.  Quantitative observations must include numbers\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. Ex. of quantitative: The block has a density of 14.3 g/mL.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Ex. of qualitative: The block is very dense.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Know the difference between an inference and observation.

 a) Observation: Something noted based on senses (hearing, sight, sound, touch, smell, taste, etc.\_\_\_\_\_\_\_\_\_

 b) Inference: Conclusion or opinion based on observations.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 c) You walk into the science classroom and observe that there are several laboratory materials

 out on the desks. What can you infer? We are going to do a lab today.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Be able to distinguish between independent variables and dependent variables. Independent \_\_\_\_\_\_\_\_\_\_\_\_\_ variables are the ones that the scientists change and the dependent\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ variables are the ones that are the result and are measured.
2. Look at the following experiments and list the independent variable (IV) and the dependent variable (DV) for each.

 a) How does daily flossing affect the number of cavities that a person acquires?

 IV: Daily Flossing\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DV: number of cavities a person acquires\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. How does the number of hours of sleep a student gets each night affect his/her performance in math class?

 IV: number of hours of sleep\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DV: performance in math class\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 c) How does using technology in the classroom affect a student’s participation in class?

 IV: use of technology\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DV: participation in class\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. You are testing which type of bouncy ball has the highest bounce. Name 3 things that should remain constant

during your experiment. Answers may vary. Floor surface, temperature, height from which ball is dropped, etc.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Measurements should include a number\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and a unit\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

  8.  The meter\_\_\_\_\_\_\_\_\_ is the metric base unit for length. To measure length, you could use a ruler\_\_\_\_\_\_\_\_\_\_\_.

1. Matter is defined as anything that has mass and takes up space\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. The gram\_\_\_\_\_\_\_\_\_\_\_\_ is the metric base unit for mass. To measure mass, you could use a triple beam balance\_\_\_\_\_\_\_\_.
3. The difference between mass and weight is that weight\_\_\_\_\_\_\_\_\_\_\_\_\_ depends on gravity and mass\_\_\_\_\_\_\_\_\_ does not.
4. Volume is a measure of how much space an object takes up\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and units could include cubic centimeters, milliliters, etc.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
5. 3 ways that you could measure volume are:

 a) For a liquid: pour liquid into a graduated cylinder\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 b) For a regularly shaped solid: use a formula Ex. measure and multiply the length, width and height of

 a rectangular solid\_\_\_\_\_\_\_\_\_

 c) Irregularly shaped solid: use water displacement\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 11. Be able to distinguish between metric and customary (English) units. Look at the units below

 and circle the metric units:

 inch centimeter quart ounce gram

 milliliter teaspoon kilometer pound meter

 mile liter gallon foot milligram

  12. What does it mean when measurements are precise? The measurements are close in value.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What does it mean when measurements are accurate? The measurements are close to the accepted value.
2. A student measures and records the length of a ramp 4 times. Her measurements are: 23.2 m, 23.1 m, 23.2 m and 23.2 m. The actual length of the ramp is 232.2m. Are the measurements precise? yes\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Are they accurate? no\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Define hypothesis: An educated guess or testable prediction about the outcome of an experiment.\_\_\_\_\_\_\_\_\_\_\_
4. You want to conduct an experiment to determine how bringing your favorite science teacher chocolate ;) affects her mood. What would be a good control for this experiment? Your teacher’s mood without chocolate\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Why do we use the metric staircase? To make unit conversions within the metric system.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Label the metric staircase:

kilo, hecto, deka, base, deci, centi, milli



1. 173.6 kg = 173,600\_\_\_\_\_\_\_\_\_\_ g
2. 8.02 cm = 80.2\_\_\_\_\_\_\_ mm
3. 93.1 L = 93,100\_\_\_\_\_\_\_\_\_ mL
4. Label the graph using the following choices:
	* + Independent Variable
		+ Dependent Variable
		+ x-axis
		+ y-axis

Dependent variable (y-axis)

 Independent variable (x-axis)

Unit 2 Review: Matter

1. Name the phase changes below:
	1. Gas to liquid: condensing\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. Liquid to gas: vaporizing\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. Liquid to solid: freezing\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	4. Solid to liquid: melting\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. In which of the three states of matter are particles moving the fastest? gas\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The slowest? solid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. A plastic toy floats in a tub of water. What can you say about the density of the toy compared to the density of water? The density of the toy is less dense than the density of the water.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Density is a ratio of mass\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to volume \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. Two atoms represent the same element if they have the same number of protons\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. You have 100 kg of cotton balls and 100 kg of rocks. Which has the greatest:
	1. Mass: They have equal masses.\_\_\_\_\_\_
	2. Volume: Cotton balls\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. Density: Rocks\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. An object with a mass of 84 grams takes up 20 cm3 of space. What is its density? 4.2 g/cm3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Mendeleev created this to organize all of the known elements in the universe: Periodic table\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. The reactivity of an element is most related to the number of valence electrons that atom has.\_\_\_\_\_\_\_\_\_\_\_.
8. An atom wants to be stable. How does this relate to the valence electrons present? If the atom has a full outer shell of electrons (usually 8), it will be stable, if it does not it will not be stable. It will interact with other atoms in order to get a full outer shell.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Unit 3 Review: Space

1. The branch of science that deals with celestial objects, space and the physical universe is known as astronomy\_\_\_.
2. The Big Bang Theory is the most accepted theory about how the universe was formed\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. Explain the Big Bang Theory: About 14 billion years ago all of what eventually became matter and energy was contained as a single, hot, dense point and in an instant began to expand.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Why is the Big Bang Theory called a theory and not a law? It is the best explanation for the evidence that we have. It may be modified as learn more about our universe.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. What is the age of the universe? Nearly 14 billion years old (13.7 byo)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. What was Hubble’s evidence that the universe is expanding? When we look at faraway stars and galaxies, their light appears to be red-shifted.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. A galaxy that is moving away from Earth will show what color shift in the light spectrum? red\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. In red shift, the wavelengths of light become longer\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (shorter ***or*** longer) and this indicates that the wave source and the observer are getting farther away\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (closer to ***or*** farther away from) each other.
9. What type of Galaxy is the Milky Way galaxy? Spiral\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
10. What do all stars start as? Nebula\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
11. Explain why our sun appears larger than other stars. It is closer than all other stars.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
12. The hotter the star, the bluer\_\_\_\_\_\_\_\_\_\_\_\_\_ the color.
13. In the life cycle of stars, what phase is a star in when it starts to fuse hydrogen atoms and release light as a result? Main sequence\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
14. In the life cycle of stars, what phase will the sun end up as? White dwarf, then eventually black dwarf\_\_\_\_\_\_\_\_
15. Why do massive star have shorter life spans than average stars? They burn through their fuel faster.\_\_\_\_\_\_\_\_\_
16. In what phase of a star’s life cycle will heavier elements like gold and iron form? supernova\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
17. What stage are most stars in? main sequence\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
18. During which phase does the core of a massive star have so much gravity that even light cannot escape? Black hole\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
19. What is it called when a massive star explodes and releases large amounts of energy? supernova\_\_\_\_\_\_\_\_\_\_\_\_

Unit 4 Review: Earth Science

1. Compared to the Big Bang, when did the solar system form? About 10 billion years after the Big Bang. \_\_\_\_\_\_\_\_
2. Scientists estimate the age of the Earth to be about 4 billion years old\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. Name the correct order of Earth’s 4 major layers starting from the inside and going outwards.

a. inner core

b. outer core

c. mantle

d. crust

1. Which combined layers make up the lithosphere? Crust and upper mantle\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Into how many of Earth’s layers have scientists been able to drill? One – just the crust\_\_\_\_\_\_\_ About how many miles down have they gone? About 9 miles\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Which of Earth’s layers is responsible for Earth’s magnetic field? Outer core\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Which of Earth’s layers has the highest density? Inner core\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Scientists have constructed models of the interior of the Earth. Where have they obtained information to build the models? Data from earthquakes and volcanoes\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Which of Earth’s layers is the thinnest? The crust\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. Lithospheric plates move slowly in response to movements in the mantle. What are these movements that are the driving force behind plate tectonics called? Convection currents\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. Where is the source of heat that drives convection currents in the mantle? The core\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. Why do most major earthquakes in the United States occur in California and Alaska? They are located near plate boundaries.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
10. What is the theory that helps to explain the causes of both earthquakes and volcanoes? Theory of Plate Tectonics\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
11. What does the plate boundary in the Atlantic Ocean form? Mid-Atlantic ridges\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
12. A tsunami, also often referred to as a tidal wave, is a large and sudden rushing of water from the ocean onto islands and into the coastal areas. What seismic event causes a tsunami? Earthquakes\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
13. Which is more dense the lithosphere or the asthenosphere? Asthenosphere. The less dense lithosphere “floats” on top of the more dense asthenosphere.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
14. Where are the youngest rocks on the ocean floor typically found? Near the mid-ocean ridges.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
15. Compare ocean crust to continental crust. Which is older? continental\_\_\_\_\_ Which is thinner? oceanic\_\_\_\_\_\_\_
16. Complete the table.

|  |  |  |
| --- | --- | --- |
| Plate Boundaries | Arrows | Features |
| Transform | Past each other |  |
| Convergent | Towards each other | trenches |
| Divergent | Away from each other | Mid-ocean ridges |

Unit 5 Review: Climate Change

1. The layer of gas that surrounds Earth is called the atmosphere \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. About 80% of the gas in the atmosphere is nitrogen\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. What gas in Earth’s atmosphere protects Earth from harmful ultraviolet (UV) radiation? ozone\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. What is the primary source of heat on Earth? Electromagnetic radiation from the sun \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. What keeps Earth’s atmosphere in place? Earth’s gravity\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. In which layer of the atmosphere does weather take place? troposphere\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. As you get higher in the atmosphere, what happens to the air pressure and air density? Air pressure and air density both decrease.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. List 4 benefits of Earth’s atmosphere: 1.) It keeps a relatively stable temperature that is need to sustain life. 2.) It provides oxygen for us to breathe. 3.) It protects us from harmful UV radiation from the sun. 4.) It protects us from meteors\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. What’s the difference between weather and climate? Weather is the current state of the atmosphere. Climate is the long-term average of weather for a particular region.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
10. What are greenhouse gases and what human activities contribute to greenhouse gases? Greenhouse gases are gases found in Earth’s atmosphere that trap infrared radiation (heat) from escaping. Examples are carbon dioxide, water vapor, methane, nitrous oxide, etc. Human activities that cause an increase greenhouse gases to the environment are large-scale agriculture, deforestation, and burning of fossil fuels.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
11. What are some effects of global warming? Increased global temperatures, rising sea levels, melting ice caps, loss of habitat for some species of plants and animals, more intense storms, etc.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_
12. What can **YOU** do to limit greenhouse gas emission? Use less electricity, eat less meat, carpool or take mass transportation when possible, turn appliances off when you are not using them, etc.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_