**1. What are the Earth’s seasons caused by**

The tilt of the Earth’s axis

**2. Why is summer warmer than winter?**

Because the northern hemisphere is closer to the Sun during the summer, and during the winter it gets further away.

**3. What is one of Einstein’s realizations?**

You can't measure the speed of an object by itself, it has to be measured relative to something else

**4. How far away is the sun?**

93,026,724 miles

**5. When is the earth closest to the sun?**

During Perihelion

**7. In miles, how fast is the earth spinning around its axis?**

1040 miles/hr

**8. Draw the diagram of the earth and label the different sections (not the different plates, but the different layers of the Earth and if you can't figure out how to include a drawing, just describe it in words).**

The page that I’m supposed to submit the assignment said to explain in words.

At the bottom we have the Lower Mantle which is semi-rigid. Next we have the Upper Mantle, or Asthenosphere which is flowing. Then we have the Upper Mantle which is rigid, and then we have the crust. The oceanic crust is thinner, because of the ocean above it. The Continental crust is thicker because it goes down just as deep, but comes up further than the ocean.

**9. How do tectonic plates move?**

They drift on the soft mantle

**10. Do they ever change shape?**

Yes.

**11. What causes sea level to change?**

As the temperature on the Earth, poles rather melt or freeze, exposing or hiding different parts of the crust.

**12. What are the names of the earth’s major plates?**

Eurasian Plate, Australian-Indian Plate, Philippine plate, Pacific Plate, Juan de Fuca plate, Nazca plate, cocos plate, North American, Caribbean plate, South America plate, African plate, Arabian Plate, Antarctic Plate, Scotia Plate

**13. What does the movement of the earth’s plates cause?**

Earthquakes, volcanoes, oceanic trenches, mountain range formation, and others

**14. Which is older the continental crust or the oceanic crust?**

Continental

**15. How fast are the plates moving?**

1-10cm/year

**16. The top layer of the earth’s surface is called what?**

The crust

**17. Why do you think the oceanic crust is more active than the continental crust?**

It is thinner and denser

**18. What happens in seafloor spreading (causes and effects)?**

Two oceanic plates moving away from each other, resulting in formation of new oceanic crust.

**19. What causes mountain ranges?**

When two plates collide and are push upwards

**20. Draw a diagram and explain divergent plate movement: seafloor spreading (make sure to**

**draw the diagram with the 2 round shapes with the arrows). If you can't figure out how to include a drawing, you can just describe divergent plate movement.**

The page that I’m supposed to submit the assignment said to explain in words.

When two touching oceanic plates start moving away from each other, magma comes up and turns into rock and makes new crust.

**21. Draw a diagram and explain convergent plate movement. If you can't figure out how to include a drawing, you can just describe convergent plate movement.**

When two plates move towards each other and collide, they can do 3 different things.

A) If one plate is oceanic, it gets forced under the continental plate.

B) If two oceanic plates collide, one gets forced under, and magma comes up, making volcanoes in the vicinity.

C) When two continental plate collide, they are forced upward making mountain ranges. The Himalayas are two different plates hitting each other, and they are still moving towards each other, making them taller and taller each year. (Not much taller though)

**22. What is subduction?**

When and oceanic and continental plate hit, the oceanic plate gets forced under.

**23. What do two colliding oceanic plates form?**

Volcanoes

**24. What do two colliding continental plates form?**

Mountain Ranges

**25. Draw a diagram of lateral slipping plate movement and explain what it is or if you can't figure out how to include a picture, describe lateral slipping movement with words.  What does this type of movement create?**

The page that I’m supposed to submit the assignment said to explain in words.

When to plates are moving sideways against each other, it makes friction, the plates build up pressure and when this pressure is released, the plates jerk apart. This is an Earthquake

**26. What was Pangaea? Explain the theory of what happened to it.**

A gigantic super continent, made up of all of today’s continents. The continents/plates drifted apart slowly and has formed into what it is today

**27. Tell me two things about the earth’s core.**

Made up of iron and nickel, may be 13,000°F (hotter than the surface of the sun)

**28. In miles, how thick is the mantle?**

100-250km deep

**29. Oceans cover what percent of the earth’s surface?**

About 70%

**30. Think about this one. You will not find it on the computer. If the oceans contain 97% of the earth’s total water supply, what percent left is fresh, drinkable water?**

Realistically, about 1%. Because there is water that is not ocean water, but it’s not drinkable, nor fresh. Take the Great Salt Lake for example.

**31. How do oceans affect weather and temperature of the earth?**

The absorb solar radiation and the ocean currents distribute it around the world.

**32. What causes ocean waves?**

Wind on the surface of the ocean, and earthquakes, volcanic eruptions, and landslides.

**33. In what direction do waves move?**

Vertically

**34. Why are oceans salty?**

The pickup salt particles from rivers and stuff, all of it gets taken to the ocean, it does not however, go with the water when it’s evaporated.

**35. Where is the saltiest water in the world?**

The Red Sea and the Persian Gulf.

**36. What is the largest and smallest ocean?**

The Pacific and the Arctic

**37. Name three large seas (not oceans, but seas).**

South China Sea, Caribbean Sea, Mediterranean Sea

**38. What causes tides?**

The gravitational pull of the moon

**39. What is the water cycle?**

Evaporation, Condensation, Precipitation, Accumulation/Transpiration

**40. Where does this cycle get its energy?**

The Sun

**41. What is ground water?**

It’s water that’s trapped between rock or clay layers.

**42. What does the earth’s atmosphere do?**

It insulates Earth from extreme temperatures. Keeps Heat in, and blocks too much from coming in.

**43. How thick is the atmosphere?**

300 miles

**44. What happens to the oxygen level as you climb a mountain?**

It gets thinner

**45. What is the greenhouse effect?**

It is an increase in the temperature of a planet as heat energy from sunlight is trapped in the atmosphere.

**46. Why is the sky blue?**

The light shines throw the gas molecules in the atmosphere. The thickness of it determines the color. The sun has to shin through more when it’s on the horizon. This is why the sky looks red/orange in the evening.

**47. What should you never do?**

Stare directly into the sun