Classwork Packet – 8th Grade Science

Part One: Define the following terms.

1. Chemical Reaction
2. Physical Reaction
3. Proton
4. Neutron
5. Electron
6. Nucleus
7. Atomic mass
8. Atomic number
9. Products
10. Reactants
11. Inertia
12. Acceleration
13. Speed
14. Velocity
15. Topographic map
16. Divergent boundary
17. Convergent boundary
18. Transform boundary
19. Light year
20. Planet
21. Star
22. Nebula
23. Galaxy
24. Electromagnetic spectrum
25. Wavelength
26. Frequency
27. Visible light
28. Convection
29. Conduction
30. Biotic
31. Abiotic
32. Autotroph
33. Heterotroph
34. Producer
35. Consumer
36. Decomposer

Part Two: Solve the following problems.

1. An element has an atomic number of 6. How many protons does this element have?
2. An element has an atomic number of 10. How many electrons does this element have?
3. An element has 12 protons and 12 neutrons. What is the atomic mass of this element?
4. An element has an atomic mass of 63 and an atomic number of 29. How many neutrons does this element have?
5. An element has an atomic mass of 200 and the element also has 80 protons. How many neutrons does this element have?
6. An object with a mass of 25 kg accelerates at a rate of 2 m/s2, how much force was needed to cause the object to move?
7. An object accelerates at a rate of 2 m/s2 once a force of 10 N was applied to it, what is the mass of the object?
8. A 15 kg object is moved by a force of 3N. At which rate does the object accelerate?
9. A person rides their bike for 15 miles, takes a water break, and then rides their bike for another 15 miles. The entire trip takes the person 3 hours. What was their average speed?
10. A person walks at a speed of 2 miles per hour for 6 hours, what was their total distance traveled?

Part Three: Complete the following.

1. Draw a picture illustrating a convergent boundary.
2. What types of land features are formed at a convergent boundary?
3. Draw a picture illustrating a divergent boundary.
4. What types of land features are formed at a divergent boundary?
5. Draw a picture illustrating a transform boundary.
6. What types of features are formed at a transform boundary?
7. Explain how tectonic plates demonstrate Newton’s Laws of Motion.
8. What do topographical maps illustrate?
9. What are the lines on a topographical map called?
10. What is the distance between two lines on a topographical map called?

Part Four: Complete the following.

1. Draw the lunar cycle.
2. How long is a lunar cycle?
3. What is a spring tide?
4. When do spring tides occur?
5. What is a neap tide?
6. When do neap tides occur?
7. What is the closet star to earth?
8. List the colors of the visible light spectrum in order.
9. Define rotation of the earth.
10. Define revolution of the earth.

Part Five: Answer the following.

1. Define Parasitism
2. Define Mutualism
3. Define Commensalism
4. Draw an energy pyramid and fill in each of the levels
5. Where do producers get their energy?
6. How much energy is passed on to each level?
7. List the events of primary succession in order from rock to climax community.
8. What must happen in order for secondary succession to occur?
9. List the events of secondary succession in order.
10. Why doesn’t secondary succession take as long as primary succession?