Preston High School Geography Department

**THE STORY OF EARTH**

**Part 2**

1. At 460 mya the plates have moved again, and a new continent called Gondwana is formed. The problem with life on land is that the sun is blasting the earth with deadly \_\_\_Radiation\_\_\_\_\_\_\_\_\_\_\_\_\_\_. However there is enough oxygen in the atmosphere that mixes with the sun’s and creates the **Ozone** layer. This shields terrestrial life against the harmful rays of the sun.
2. At 375 mya in the oceans a strange fish called a tiktaalik uses its fins like legs and emerges from the water and join vegetation already there to be the first permanent land animals at 360 mya.
3. Creatures called **arthropods** inhabit the land and look much like insects and lower life forms today.
4. As with life comes death… and all the plant material that dies and decays will build up over hundres of millions of years and with heat from the earths core and pressure from overlaying rock will form **coal.**
5. At 250 million a massive flood basalt eruption occurred in present day Siberia. This begins the **Permian** extinction. The cloud of ash that surrounds the planet causes the greatest mass extinction the world has ever seen. Carbon dioxide levels rise. The atmosphere gets hotter and plants also die.
6. The oceans also heat up and all life dies except for pink **algae** and **methane leaves the ocean and further heats the atmosphere.**
7. At 250 mya we are back where we started with almost no life after the Permian extinction.
8. At 200 mya there is one supercontinent called **Pangea.** After 50 million years the planet’s temperature is stabilizing and this allows a new species to rise and dominate. These are the **dinosaurs**, and they repopulate the earth.
9. At 190 mya the great supercontinent of Pangea **splits apart**. Over the next 10 million years the sea life dies and builds and decays and is eventually buried and is the source of our oil today.
10. Every litre of fuel and every piece of plastic, all our carpets and paint originated here.
11. Plates are moving at a rate of **2.5 cm** per year.
12. At 65 million years ago we see the emergence of mammals, which pose no threat to the dinosaurs. However an asteroid about \_\_\_\_\_\_\_ km across (bigger than Mt. Everest ) is heading toward the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ . At the moment of impact, the back edge is still 11 km above the surface of the water. A plume of dust engulfs the planet, and the earth’s surface heats up to 270 degrees. Plants die and animals starve. The dinosaurs’ 165 million year reign is over.
13. With the dinosaurs out of the way, mammals can now evolve in this new world.

**STORY OF EARTH**

**Part 3**

1. At 47 million years ago we see the beginnings perhaps of the earliest ancestors of **primates** and the earth looks much like it does today. This was also the time that the Himalayas were formed – the highest mountains in the world and they are still growing. The supply the water for almost **half** the world’s population.
2. At 20 million years ago along Africa’s east coast, a great rift opens up and formed a new mountain range which changed the climate. Here where apes that lived in trees, are forced to the ground and due to a need to search for food lead to walking \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. As the earth cooled and sea levels dropped **70,000** years ago, homo sapiens left Africa and migrated to different continents around the globe.
4. At 40,000 years ago the temperatures are colder and we enter an **ice age**. These glaciers scour the planet and at 20,000 they grind to a halt. Because water levels are so low, a land bridge forms between \_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
5. At 14,000 the glaciers melt and form the landscape we see today in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ lakes.
6. The earth will be around for another \_\_\_\_\_\_\_\_\_\_\_\_ billion years.