How the Earth Was Made – Birth of the Earth

1. Geologists discovered \_\_\_\_\_\_\_\_\_\_\_ are older than any rocks on Earth.
2. Our solar system 4.5 billion years ago our Sun was surround by a large cloud of \_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_.
3. On the International Space Station \_\_\_\_\_\_\_\_\_\_ was poured into a plastic bag and particles began to stick to each other by static electric charges.
4. Particles aggregated into the size of boulders and then houses. When it was \_\_\_\_\_\_\_\_ mile across the gravity would pull other objects into it.
5. \_\_\_\_\_\_\_\_\_\_\_\_size increased with every impact. It only took about 30 million years to reach present size.
6. Below the surface the Earth is separated into the crust, mantle, and then inner and outer \_\_\_\_\_\_\_\_.
7. The gravitational pull of the Earth dragged the denser \_\_\_\_\_\_\_ \_\_and \_\_\_\_\_\_\_\_\_\_ into the core separating the rest into layers.
8. In 1897, physicist Earnest Rutherford figured out measuring \_\_\_\_\_\_\_\_\_\_\_\_\_ decay could accurately date the age of rocks.
9. In 1953, Patterson came to Meteor Crater in Arizona and examined one of pieces of the meteorite and dated the samples to be \_\_\_\_\_\_\_\_\_\_\_ billion years old.
10. Modern radiometric dating techniques date the age as four billion \_\_\_\_\_\_\_\_\_\_ million years old.
11. In 1974 Bill Hartmann suggested another \_\_\_\_\_\_\_\_\_\_ about the size of Mars crashed into Earth.
12. Moon rock studied by scientists showed there is much less \_\_\_\_\_\_\_\_ than on Earth. The moon is made out of rock of what is on the crust and outer mantle of the Earth.
13. Within a few \_\_\_\_\_\_\_\_\_\_\_\_\_\_ years this material clumped together to form the Moon.
14. On the northeast shores of Hudson Bay, Canada, Jonathan O’Neill studied amphibolites which were radiometrically dated to be \_\_\_\_\_\_\_ billion years ago. The closes anyone has come to finding the oldest crust.
15. Evidence in the amphibolites suggest they were formed deep \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ which proved the Earth had a crust and \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
16. In the same ancient rock sequence, banded iron formations made of up alternating silicate and magnetite. One can use a \_\_\_\_\_\_\_\_\_\_\_\_\_ to identify the minerals.
17. A meteorite which fell in 1998 contained grains of table salt and has minute droplets of \_\_\_\_\_\_\_\_\_\_ in it.
18. The age of the salt is \_\_\_\_\_\_\_\_\_\_\_\_\_billion years old.
19. Without \_\_\_\_\_\_\_\_\_\_\_ there would be no coal, oil, or gas.
20. Geologists analyzed samples of the meteorite in Allende, Mexico contained \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_.
21. 3.5 billion years ago there we no \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
22. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ are a clue to how the atmosphere filled with oxygen.