**Gravity and Space Study Guide**

**Vocab: Define each word**

Orbit Lunar eclipse angle of incidence

Solar eclipse Rotation lunar cycle

Gravity Electromagnet Neodynmium magnet

Moon

**Answer the following questions**

1. What is orbiting Earth currently?

2. What kind of eclipse shows a “ring of fire”?

3. Why does the moon look red during a lunar eclipse?

4. Why does the Earth have seasons?

5. When is it summer and winter in the Northern Hemisphere?

6. What is the angle of Earths tilt?

7. What seasons are experiences at the equator and at the poles?

8. Why do we see moon phases?

9. What direction does the moon orbit Earth?

10. During the Round and Round lab when we were using the gravity simulator what did each part of the lab represent? (Fabric, center sphere, orbiting spheres)

11. Know what kind of orbits and the uses for

Low Earth orbit satellites-

Geosatellites-

Sun-synchronous satellites-

Geosynchronous satellites-

12. There is a balance between the force of gravity and the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the planets.

13. If the Sun’s gravity wasn’t pulling the planets into orbit, where would the planets go?

14. What does the Sun’s rotation cause?

15. What does the Sun’s revolution cause?

16. Why is the Earth’s magnetic field important?

17. What would happen if Earth’s magnetic field disappeared?

18. Can you see the magnetic field?

19. Where do magnets come from, what minerals are often used and what are they used for?

\*\*you will have to identify all the moon phases\*\*

Written response – How are gravity, mass and orbits related?

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| Question: How do things move in space? |
| Claim: |
| Textual/research evidence:  Include your source |
| Lab evidence:  Include your source |
| Reasoning |