**Lunar Eclipse**

Today in Science Class, Mr. Smith taught us about lunar eclipses.

Things I learned:

* A lunar eclipse is when the moon passes into the earth’s shadow.
* These happen about once a year.
* For this to happen, the moon has to be in a particular phase.
* This can only happen on a full moon.
* It is rare because the orbit of the moon is tilted 5.2 degrees off of the ecliptic orbit.
* If the moon was right on the ecliptic, there would be a lunar eclipse every full moon and a solar eclipse every new moon.
* The two points of the moon’s orbit that are exactly on the earth’s orbit are called nodes.
* The shadows that we are used to seeing are really dark, but around the edge of them are fuzzy grey shadows.
* The dark shadow’s real name is called the umbral shadow.
* The fuzzy grey shadow’s proper name is the penumbral shadow.
* If you are in an umbra shadow, you cannot see the light source at all.
* If you are a penumbra shadow, you can see the light source a little bit.
* If the moon passes completely into the umbra shadow of the earth, it is called a total eclipse.
* If the moon is partly in the umbra shadow of the earth, it is called a partial eclipse.

