**Chapter 7**

**Essential Question:  How do storms affect Earth’s air, water, land, and living things?**

**Vocabulary:**

*tropical depression*:   a low-pressure air mass that forms over warm ocean water. It has swirling winds with speeds up to 61 km/hr

*tropical storm:* a low-pressure air mass that forms over warm ocean water. It has swirling winds with speeds greater than 62 km/hr, but less than 119 km/hr.

*hurricane*: a storm created of swirling bands of thunderstorms with wind speeds of at least 119 km/hr.

*storm surge*: a rise in sea level caused by the strong winds of a hurricane.

*tornado:* a rapidly spinning column of air that comes down out of a storm cloud and touches the ground. It is only considered a tornado when it touches the ground.

*vortex*: an area where air or liquid spins in circles (as when it drains in a bathub)

**Key concepts for study:**

* Most hurricanes form over warm ocean water near the equator. Hurricanes get their energy from the warm ocean water.
* The stages of hurricane developement are: tropical depression, tropical storm, hurricane.
* Hurricanes can change the shape of coastlines. They may also produce rainfall which can soak into the ground providing plants with water and filling wells.
* The eye of the hurricane is the area around which the hurricane spins. It is calm in the eye compared to the rest of the hurricane.
* The atmosphere and the ocean work together to produce hurricanes.
* Hurricanes are classified into categories (1-5) based on their wind speed.
* The National Hurricane Center names tropical storms in alphabetical order alternating between male and female names.
* Tornadoes may have the fastest wind speeds on Earth (up to 500 km/hr)
* Tornadoes are classified on the Fujita Scale according to wind speed and the amount of damage they caused (F0 - F5). F5 tornadoes have wind speeds over 419 km/hr, and can cause incredible damage.
* Doppler radar helps meteorologists detect wind speed and direction of possible tornadoes. They can be difficult to forecast because they form and move fast.
* A vortex is easier to see if it picks up dust.
* Basements are the best place to go if your area has a tornado warning. If you are outside, the best thing to do is lie flat in a low area.