Hurricanes and Tornadoes
HURRICANES
Formation of a Hurricane

- Hurricanes form over tropical waters.
- The hurricanes that affect the eastern coast of the United States form off the western coast of Africa where the water is warm, the air is humid, and the winds converge.
Hurricanes start out as a group of storms that begin to rotate.

Violent seas that send more moisture into the air.

The water vapor rises and winds increase in speed.

If the storm holds itself together for 24 hours, we call it a tropical disturbance.
Tropical Depression

- Tropical cyclones are areas of low pressure that develop over tropical waters.
- Called tropical depressions if wind speeds are more than 25 mph and less than 38 mph for 24 hours.
Tropical Storm

• A tropical depression becomes a tropical storm when its winds rise above 38mph. It is called a tropical storm if the winds are between 39 and 73 mph.
Hurricanes

- A tropical storm becomes a hurricane when its winds exceed 73 mph.
Hurricane Categories

- Category 1 – Winds between 74- 95 mph
- Category 2 – Winds between 96- 110 mph
- Category 3 – Winds between 111-130 mph
- Category 4 – Winds between 131-155 mph
- Category 5 – Winds above 156 mph
Hurricane Facts

- Hurricanes can be very big. They can be seen from outer space.
- The entire formation and life of a hurricane takes days or weeks.
- Because hurricanes seldom travel in straight paths, meteorologists predict several paths.
- Hurricanes usually lose power as they travel over land.
- Hurricanes destroy beaches, buildings, and vegetation.
- Hurricanes bring strong winds, heavy rain, storm surges, flooding, and tornadoes.
Hurricane Protection

• Watch weather forecasts.
• Board up all windows and doors
• Have bottled water, food, batteries, medicine, and important documents
• Call someone and let them know where you are
• Photograph valuables for insurance
• Take care of your pets
Hurricane Isabel
Tornadoes
Other Names for Tornadoes

- Tornado comes from the Spanish word, *tronada*, which means “thunderstorm.” Other names for tornadoes are twisters, dust devils, whirlwinds, waterspouts, and cyclones.
How do they Form?

Tornadoes form from severe thunderstorms. In severe thunderstorms, winds are moving in different directions and at different speeds at different heights. This difference in wind direction and wind speed is called wind shear.
• A strong updraft tilts the wind shear and produces rotation inside the tornado.
• A funnel cloud appears.
Tornado Facts

• Tornadoes are 400-500 feet wide. Tornadoes have winds around 100 miles per hour.
• Tornadoes last only a few minutes.
• Some monster tornadoes are a mile wide, have winds up to 300 mph, last an hour or more, and travel 200 miles.
• Tornadoes occur most often in the spring (April-June)
• Most tornadoes in the US occur along “Tornado Alley,” an area that runs from Texas to Illinois.
Did Dorothy from the *Wizard of Oz* live in “Tornado Alley?”
Tornado Categories

- The Fujita-Pearson Tornado Intensity Scale or F-scale ranks tornadoes by their wind speed.
  - F0 - winds 40-72 mph
  - F1 - winds 73-112 mph
  - F2 - winds 113-157 mph
  - F3 - winds 158-206 mph
  - F4 - winds 207-260 mph
  - F5 - winds > 261 mph
Tornado Precautions

• Go to a basement, if you have one.
• Get in the innermost room of your house. Avoid rooms with windows. Bathrooms are good.
• Crouch with arms above your head.
• If outside, lie in a ditch or get under a bridge.
• If you live in an area with a frequency of tornadoes, listen to forecasts.
1. Which is larger, a hurricane or a tornado?
2. Which moves faster, a hurricane or a tornado?
3. Which lasts longer?
4. Where do hurricanes form?
5. Where do tornadoes form?
6. What do we call the area of the US that has a high occurrence of tornadoes?
7. How long do tornadoes last?
8. How long do hurricanes last?
9. Name two precautions in the event of a tornado.
10. Name two precautions in the event of a hurricane.