The anatomy of a hurricane

How thunderstorm can evolve into hurricane

- **Thunderstorm cluster**
  - Individual thunderstorms form as warm, moist air rises and cold air falls.
  - They begin to merge into a cluster, often reaching 100 to 300 miles in diameter.

- **Warm air**
  - As warm, moist air rises, condensation intensifies, rising air is trapped and forms rainbands.
  - Spinning, the thunderstorm cluster forms one center of low pressure and vertical flow.

- **Inflow**
  - Cold air hits cold air. They begin to drift and spread out in all directions, forming rainbands.
  - Spinning, the thunderstorm cluster forms one center of low pressure and vertical flow.

- **Eye**
  - Winds at least 74 mph
  - Hurricane warning
  - Gale warning
  - Hurricane watch
  - Storm warning
  - Small craft warning
  - Hurricane warning
  - Hurricane watch

- **Eye wall**
  - Hurricane winds reach 111 to 155 mph
  - Category 3
  - 131-155 mph
  - Category 4
  - 155+ mph
  - Category 5
  - 96-110 mph
  - Category 1
  - 11-39 mph
  - Category 5

- **Rip current hazard**
  - Rip currents are powerful underwater currents that can pull swimmers out to sea.
  - They occur in areas of the ocean where the water is shallow and fast-moving.
  - Rip currents can be dangerous, and swimmers should be aware of them and follow safety guidelines.

- **Atlantic hurricane tracking chart**
  - Hurricane coordinates are listed by latitude (horizontal lines) and longitude (vertical lines).
  - The red lines on the chart represent approximate distances from the Treasure Coast.
  - The scale is accurate along the equator.
  - Elsewhere on the map, scale increases toward the poles.

- **Hurricane cross-section**
  - Hurricane winds reach 74 mph and the storm is reclassified as a hurricane.
  - Average diameter is 300 miles.

- **Hurricane warning**
  - A watch is issued when a hurricane is expected to hit an area within 24 hours.
  - The watch is canceled when a hurricane is expected to be in an area within 36 hours.

- **Hurricane watch**
  - A warning is issued when a hurricane is expected to hit an area within 72 hours.
  - The warning is canceled when a hurricane is expected to be in an area within 48 hours.

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