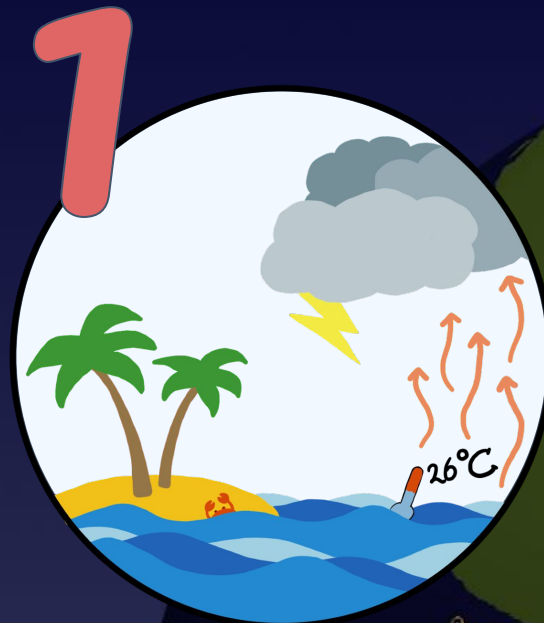


The Formation of Hurricanes

Made by Joy, Kelian, and Meerke

1 Warm Ocean Water Starts It All

When the water in the ocean is warm enough, at least 26° Celsius, the warm water makes the air rise, starting a storm. If the conditions stay right, the storm can grow stronger and turn into a hurricane.



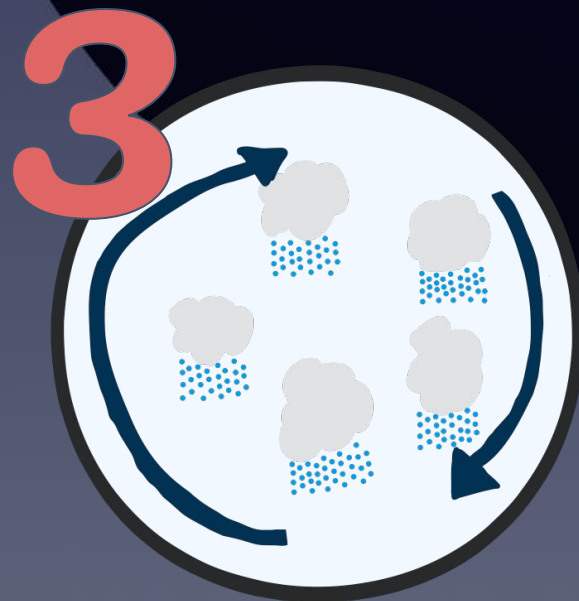
2 Clouds and Heat make the Storm Stronger

As this air rises, it cools and turns into clouds, releasing heat that makes the storm stronger. This creates a cycle where warm, moist air keeps flowing into the storm while cooler, drier air gets pushed out at the top.



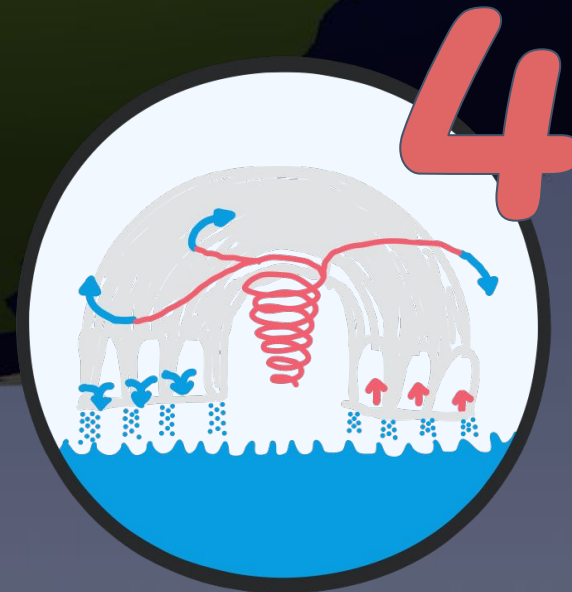
3 Spinning Air Creates the Hurricane Shape

When warm air rises, air from around is pulled in to fill the space. Because the earth is spinning, this moving air starts to swirl, giving the storm a spinning shape.



4 A Storm That Grows

At first, we have a weak storm but if the conditions are just right—little wind, plenty of moisture, and lots of heat from the ocean—the storm can grow stronger.



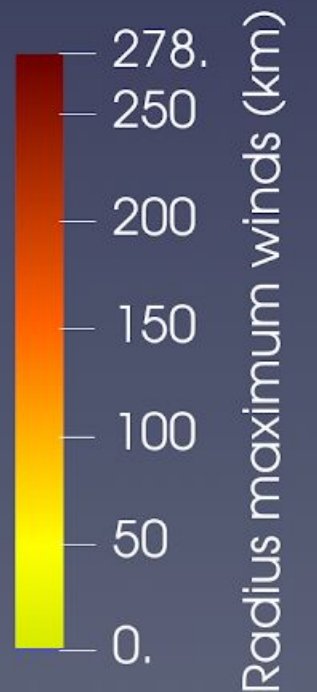
6 A Powerful Hurricane

When everything comes together, the storm turns into a powerful hurricane that can cause a lot of destruction. Understanding how hurricanes form is important so we can predict them and give warnings to protect people and places.



5 From Tropical Storm to Hurricane

As the storm gets stronger, it grows into a tropical storm with winds faster than 62 km/h. If the winds get even faster—119 km/h or more—it becomes a hurricane. The storm can also form a clear, calm "eye" in the middle. If the ocean cools, or dry air or strong winds get in the way, the storm can weaken.



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Scale 1	Minimal
Scale 2	Moderate
Scale 3	Extensive
Scale 4	Extreme
Scale 5	Catastrophic

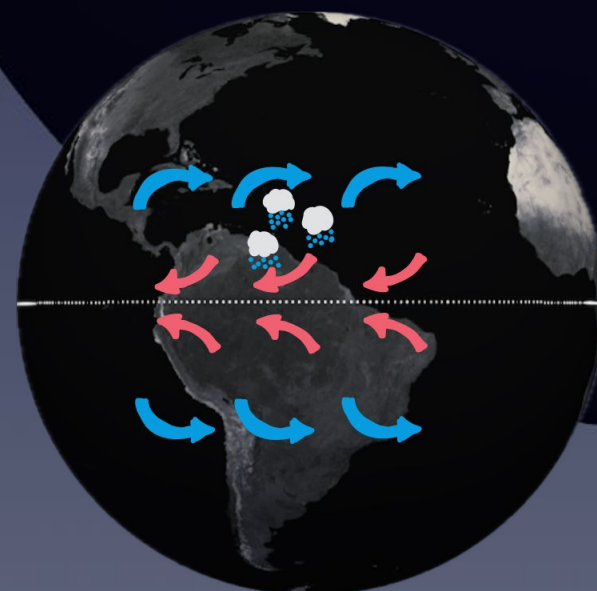
1
Hurricanes form through an interacting process of atmospheric and oceanic conditions. Warm ocean waters above 26° Celsius provide the energy needed for a hurricane to develop, as the heat and moisture from the sea fuel rising air.



2
As this air ascends, it cools and condenses into clouds, releasing heat that drives the system further. This creates a cycle where warm, moist air continuously feeds into the storm while cooler, drier air is expelled at higher altitudes.



3
Over time, the rising air lowers the surface pressure, forming a low-pressure center that draws in more air from the surrounding environment. The Earth's rotation, through the Coriolis effect, causes this air to spin, giving the storm its characteristic rotation.



4
Initially, this system is a weak, disorganized tropical disturbance, but if the conditions are favorable—minimal wind shear, ample moisture, and continued heat from the ocean—it can intensify.



6
However, when everything aligns, the result is a powerful hurricane capable of immense destruction. Understanding this process is vital for predicting storms and issuing timely warnings to safeguard communities.



5
As the system strengthens, it transitions into a tropical storm with winds exceeding 62 km/h. With further organization, it may develop a distinct eye at its center, marking the formation of a mature hurricane once wind speeds reach 119 km/h. This process is fragile, as dry air, wind shear, or cooler waters can disrupt the storm at any stage.

