TORNADO COMPREHENSION

Learn more about tornadoes then, answer the questions below.

Tornadoes are one of the most powerful and destructive weather phenomena. They form when warm, moist air near the ground rises and meets cooler, drier air above. This encounter often occurs in regions where different air masses collide, particularly in areas like the United States' Tornado Alley. The warm air rising through the cooler layers causes instability in the atmosphere.

As the warm, moist air continues to rise, it may start to rotate if winds at different altitudes blow in different directions or speeds, a phenomenon known as wind shear. This rotation can become more pronounced and organised, leading to the creation of a supercell—a large thunderstorm characterised by a rotating updraft called a mesocyclone. Under the right conditions, the rotating mesocyclone tightens and intensifies, eventually stretching towards the ground to form a tornado.

Tornadoes vary greatly in size and intensity, classified by the Enhanced Fujita Scale, which ranges from EF0 (weakest) to EF5 (most destructive). These storms can cause immense damage to structures, uproot trees, and hurl objects and debris at lethal speeds.

1. What are the primary atmospheric conditions necessary for the development of a tornado?

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2. What is a supercell?

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3. How does a mesocyclone contribute to tornado formation?

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4. What scale is used to classify the intensity of tornadoes, and what is the range?

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5. Why is Tornado Alley particularly prone to tornadoes?

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Uses comprehension strategies to expand content knowledge.

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