Wind-Related Weather

This text is from the U.S. National Oceanic and Atmospheric Administration: National Weather Service.

... [T]here are significant types of weather that are related to wind. These forms of weather include:

Well-Developed Dust/Sand Whirls

[A well-developed dust, or sand whirls, is] an ensemble of particles of dust or sand, sometimes accompanied by small litter. [It is] raised from the ground in the form of a whirling column of varying height with a small diameter and an approximately vertical axis. [It is commonly] called a "dust devil."

Squall

A [squall is a] strong wind characterized by a sudden onset in which the wind speed increases at least 18 mph (16 knots, 30 km/h) and is sustained at 25 mph (22 knots, 41 km/h) or more for at least one minute. [Squalls often] occur from thunderstorms, where the term "squall line" originates. But the term 'squall' only refers to the wind speed increase and not any other associated weather. In the image, the low arcing clouds are not the squall line but mark the approximate location of the squall.

Tornado

A [tornado is a] violent, rotating column of air touching the ground.

Funnel Cloud

A [funnel cloud is a] violent, rotating column of air which **does not** touch the [ground or water] surface.

Waterspout

A [waterspout is a] violent, rotating column of air that forms over a body of water, and touches the water surface. If it does not touch the water surface, then it is called a funnel cloud.

Sand Storm

[A sand storm is] particles of sand carried aloft by a strong wind. The sand particles are mostly confined to the lowest ten feet, and rarely rise more than fifty feet above the ground.

Dust Storm

[A dust storm is] a severe weather condition characterized by strong winds and dust-filled air over an extensive area.

Name: _____ **Date:** _____

1. What type of strong wind often occurs from thunderstorms?

A. a sand storm

B. a sand whirl

C. a squall

D. a waterspout

2. The text describes different types of weather forms related to wind. How does the text describe a sand storm?

A. a rotating, violent column of air with sand

B. a rotating, violent column of air over a body of water

C. a sudden increase of wind speed sustained over a minute

D. strong winds with sand particles that lift off the ground

3. Read these sentences from the text.

"A [tornado is a] violent, rotating column of air touching the ground.

A [funnel cloud is a] violent, rotating column of air which does not touch the [ground or water] surface."

What conclusion can you draw from this evidence?

A. The difference between these two forms of weather are tornadoes make contact with the ground and funnel clouds do not.

B. Tornadoes and funnel clouds are two terms that describe the exact same form of weather.

C. Tornadoes and funnel clouds do not involve wind and happen very frequently over many different areas.

D. Funnel clouds are much more violent and have much stronger rotating winds than tornadoes.

4. Imagine you saw a rotating column of air touching the ocean's surface. What is most likely developing in that area?

A. a tornado

B. a waterspout

C. a sand storm

D. a sand whirl

5. What is the main idea of this text?

A. Wind plays a role in various weather conditions with unique characteristics.

B. Dust storms are characterized by strong winds and dusty air over a large area.

C. People use nicknames for wind-related weather, including the term "dust devil."

D. A tornado is a violent, rotating column of air that touches the ground.