Inspiring Greatness

ISD

INDEPENDENCE SCHOOL DISTRICT

High School Science Virtual Learning

Earth Science

Tornadoes

April 29, 2020

High School Earth Science
Lesson: April 29, 2020

Objective/Learning Target:

Students will be able to identify the hazards associated with supercell thunderstorms and how tornadoes are produced.

Let's Get Started:

Watch this video:

Link to Video

Questions:

1. Where are supercell thunderstorms most frequently found?
2. What are three classifications of supercell thunderstorms?

Let's Get Started: Answer Key

1. Question 1- tornado alley in the US
2. Question 2 - low precipitation, classic, high precipitation

Lesson Activity: Supercell Thunderstorms

Directions: Read - *"Types of Thunderstorms "* from the National Weather System "*JetStream*"

Link to page

Complete the guided reading questions on the following slide.

1. Which type of thunderstorm cell is the weakest?
2. Which type of thunderstorm cell produces most tornadoes?
3. Which type of supercell thunderstorm is most common?
4. In which part of a supercell thunderstorm does a tornado usually form?

Lesson Activity: Tornadoes

Directions: Read "Tornadoes" from the National Weather System "*JetStream*"

Link to Page

Complete the guided reading questions on the following slide.

1. About how many tornadoes strike the US each year?
2. What is the average number of yearly tornadoes in Missouri?
3. What shape does the mesocyclone in the supercell form when viewed on radar?
4. How do scientists determine the EF rating of a tornado and its wind speed?

Answers

1. Which type of thunderstorm cell is the weakest? Ordinary cell
2. Which type of thunderstorm cell produces most tornadoes? Supercell
3. Which type of supercell thunderstorm is most common? Classic
4. In which part of a supercell thunderstorm does a tornado usually form? Wall Cloud

1. About how many tornadoes strike the US each year? 1300
2. What is the average number of yearly tornadoes in Missouri? 39
3. What shape does the mesocyclone in the supercell form when viewed on radar? hook
4. How do scientists determine the EF rating of a tornado and its wind speed? estimate tornado wind speeds based on damage left behind by a tornado

Extensions:

1. **Video "How Do Tornadoes Form?"** Link to Video

Can tornadoes be created in the laboratory to study how they form?

What force do scientists believe triggers the formation of a tornado?

A more subtle trigger to the tornado is the formation of several small _____ near ground level that merge together to form the actual tornado.

2. **Activity "Rate Tornado Damage"** Link to Activity

(requires Adobe Flash Player)

Extension Answers

Can tornadoes be created in the laboratory to study how they form? no

What force do scientists believe triggers the formation of a tornado? downdrafts

A more subtle trigger to the tornado is the formation of several small vortices near ground level that merge together to form the actual tornado.