

Mini-Lesson: Monsoon Thunderstorms

Author
Grade Level(s)
Duration in Minutes

Cheri Stegall
6-8
30

Overview

In this mini-lesson, students will learn about the weather phenomenon that occurs in Arizona called a monsoon thunderstorm.

National Geography Standards

Element 3: Physical Systems

7. The physical processes that shape the patterns of Earth's surface.

Materials

- What a Monsoon Storm Looks Like in Arizona (1.48)
https://www.youtube.com/watch?v=y_nGpZ-6Bjk
- Basics of the Arizona Monsoon and Desert Meteorology <https://sgsup.asu.edu/basics-arizona-monsoon-desert-meteorology#:~:text=As%20we%20move%20into%20the,key%20to%20the%20Arizona%20monsoon>
- Dust Storms <https://ein.az.gov/hazards/dust-storms#:~:text=Thunderstorms%20frequently%20produce%20strong%20winds,desert%20landscape%20at%20any%20time>
- Monsoon Thunderstorms worksheet and Answer Key
- Optional: Southwestern United States: Topography and Rivers map
http://geoalliance.asu.edu/sites/default/files/maps/SouthwestTopo_BW.pdf

Procedures

1. Begin a discussion of storms and ask students to share their personal experiences with storms.
2. Elaborate on any experiences shared by the students when recalling monsoon thunderstorms occurring in Arizona. Optional: Project Southwestern United States: Topography and Rivers map
http://geoalliance.asu.edu/sites/default/files/maps/SouthwestTopo_BW.pdf

3. Project the YouTube video--What a Monsoon Storm Looks Like in Arizona (1.48)
https://www.youtube.com/watch?v=y_nGpZ-6Bjk
4. Distribute the Monsoon Thunderstorm worksheet and group students if desired. Instruct students to circle the best answers as they are found in the following readings.
5. Project and read through the information pages from the Arizona Emergency Information Network <https://ein.az.gov/hazards/dust-storms#:~:text=Thunderstorms%20frequently%20produce%20strong%20winds,desert%20landscape%20at%20any%20time> and Arizona State University's School of Geographical Sciences and Urban Planning <https://sgsup.asu.edu/basics-arizona-monsoon-desert-meteorology#:~:text=As%20we%20move%20into%20the,key%20to%20the%20Arizona%20monsoon>
6. Go over the correct answers using the provided Answer Key.

Assessment

Students will grade their work for the correct answers. It is up to the teacher to decide if the score should be recorded for a grade.

Sources

What a Monsoon Storm Looks Like in Arizona (1.48)
https://www.youtube.com/watch?v=y_nGpZ-6Bjk

Arizona State University School of Geographical Sciences and Urban Planning
<https://sgsup.asu.edu/basics-arizona-monsoon-desert-meteorology#:~:text=As%20we%20move%20into%20the,key%20to%20the%20Arizona%20monsoon>

Arizona Emergency Information Network
<https://ein.az.gov/hazards/dust-storms#:~:text=Thunderstorms%20frequently%20produce%20strong%20winds,desert%20landscape%20at%20any%20time>

Name _____

Monsoon Thunderstorms

A weather phenomenon that occurs in the southwest part of the United States, specifically in Arizona, is called a monsoon thunderstorm. How much do you know about these weather occurrences? **Circle** the answer(s) that makes the following statements correct.

1. The word monsoon means _____.
 - a. rain
 - b. typhoon
 - c. season or wind shift
2. Monsoon thunderstorms occur during the _____.
 - a. winter
 - b. summer
 - c. fall
3. During the winter, the winds in Arizona are from the _____.
 - a. west or northwest
 - b. east or southeast
4. In the summer, the winds in Arizona are from the _____.
 - a. north or northwest
 - b. south or southeast
5. Two keys to the monsoon thunderstorm are the summer wind shift and the _____,
 - a. daytime heating
 - b. evening cooling
6. Monsoon thunderstorms are powered by (choose 2) ____ and _____.
 - a. strong moisture influx
 - b. extreme heat islands
 - c. intense surface heating
7. The three basic stages of monsoon thunderstorms are _____.
 - a. updraft cumulus stage, mature stage, and dissipating stage
 - b. dissipating stage, updraft cumulus stage, and mature stage
 - c. mature stage, dissipating stage, and updraft cumulus stage
8. The average life cycle of a monsoon thunderstorm is _____.
 - a. 10 to 20 minutes
 - b. 20 to 30 minutes
 - c. 30 to 40 minutes
9. What is the correct terminology for these storms?
 - a. monsoons
 - b. dust storms
 - c. monsoon thunderstorms
 - d. thunderstorms

Answer Key

1. **c** - season or wind shift
2. **b** - summer
3. **a** - west or northwest
4. **b** - south or southeast
5. **a** - daytime heating
6. **a** and **c** - intense surface heating and strong moisture influx
7. **a** - updraft cumulus stage, mature stage, dissipating stage
8. **c** - 30 to 40 minutes
9. **c** - monsoon thunderstorms