

Extreme Temperatures

Death Valley National Park

Distance Learning, Post-Virtual Trip
90 minutes

Essential Question

Why is it important to learn about and to predict the weather?

Standards

Next Generation Science Standards

- K-ESS2-1 Use and share observations of local weather conditions to describe patterns over time.
- K-ESS3-2 Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.
- 3-ESS2-2 Obtain and combine information to describe climates in different regions of the world.

Common Core Standards

- 3-5.W.1 Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
- 3-5.W.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- 3-5.W.3 Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
- 3-5.W.4 With guidance and support from adults, produce writing in which the development and organization are appropriate to task, purpose, and audience.
- 3.W.7 Conduct short research projects that build knowledge about a topic.
- 4-5.W.7 Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.

- 3.SL.5 Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details.
- 4.SL.5 Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes.
- 5.SL.5 Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes.

Objectives

Students will be able to:

- Evaluate poor and favorable weather conditions of an area.
- Plan and write a letter that tells others about their research.
- Illustrate and present research findings to peers.
- Defend and justify claims for the usefulness of trip planning items under certain weather conditions.

Death Valley National Park is known as the land of extremes: one of the hottest, driest, and lowest places on Earth. The park drops 282 feet below sea level (-86m) and rises to 11,049 feet (3,368m) above sea level. Geographically, it is in a rain shadow, which means the park experiences the orographic effect leading to extreme temperatures and a dry, barren landscape. These factors are the ingredients to a recipe for an area with extreme temperatures.

Teacher Background Information

None.

Materials

- Web-enabled laptop or computer for each student
- Internet connection
- Lined paper
- Pencil
- Heavy paper for art canvas
- Scrap paper
- Assortment of old magazines
- Scissors
- Glue
- Tape
- Colored pencils
- Markers
- Crayons
- Paint
- Paint brushes

Procedure

Anticipatory Set

Ask students, "How did today's weather influence your plans for the day?"

Have them discuss with a partner. After five minutes of partner discussion, ask for volunteers to share.

Inform students they will plan a trip with friends or family members to their favorite destination.

Planning a Trip

Students will research and present the conditions of their chosen location. Topics students should conduct research on include:

- Destination and why it was selected
- Time of year for their visit
- Weather conditions of the area (poor and favorable)
- Activities to do
- What to bring

Have students write a letter to a friend or family member on how they can prepare for their upcoming trip using the information they researched.

After writing their letter, have students create a piece of art (collage, drawing, painting, etc.) that illustrates elements from their letter. Students should be able to defend components in their artwork with evidence and/or reasoning based on their research during their presentation.

Extension Questions

- How would students' plans change if weather conditions worsened/improved?
- What extreme weather conditions can students expect at their destination?

Vocabulary

None.

Assessment

See separate rubric document.

References

None.