

# What's the Weather?

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**Grade Level** K  
**Duration** 3 class periods

## National Standards

### GEOGRAPHY STANDARDS

#### Element Two: Places and Regions

4 The physical and human characteristics of places

### NEXT GENERATION OF SCIENCE STANDARDS

#### K. Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment

**K-ESS2-2** Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.

#### K.Weather and Climate

**K-ESS2-1** Use and share observations of local weather conditions to describe patterns over time.

#### K.Earth and Human Activity

**K-ESS-3** Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to severe weather.

## Common Core Standards

### ELA COMMON CORE

#### Reading

#### Key Ideas and Details

**RI.K.2** With prompting and support, identify the main topic and retell key details of a text.

**RI.K.3** With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.

#### Writing:

#### Text Types and Purposes

**W.K.1** Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book (e.g., My favorite book is . . .).

### MATHEMATICS COMMON CORE STANDARDS

**K.CC.B.5** Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

**K.CC.C6** Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. (Include groups with up to ten objects)

## Other Arizona Standards

### SOCIAL STUDIES STANDARDS

#### Strand 4 Geography

#### Concept 3: Physical Systems

#### Science Strand 6

**Concept 3** Understand the characteristics of weather and how it affects people.

### SCIENCE

#### STANDARDS:

#### Strand 6 Earth and Space Science

#### Concept 3: Changes in the Earth and Sky

**PO 1.** Identify the following aspects of weather:

- temperature
- wind
- precipitation
- storms

**PO 2.** Describe observable changes in weather.

**PO 3.** Give examples of how the weather affects people's daily activities.



SIOP Elements		
<b>Preparation</b> Adapting content <b>Linking to background</b> <b>Linking to past learning</b> Strategies used	<b>Scaffolding</b> <b>Modeling</b> Guided practice Independent practice <b>Comprehensible input</b>	<b>Grouping Option</b> Whole class <b>Small groups</b> Partners Independent
<b>Integrating Processes</b> Reading Writing Speaking Listening	<b>Application</b> Hands on <b>Meaningful</b> <b>Linked to objectives</b> <b>Promotes engagement</b>	<b>Assessment</b> <b>Individual</b> Group Written Oral

TESOL Standard(s)
<b>Goal 2, Standard 1</b> <b>To use English to achieve academically in all content areas: Students will use English to interact in the classroom</b> <ul style="list-style-type: none"> <li>following oral and written directions, implicit and explicit</li> <li>participating in full class, group, and pair discussions</li> </ul> <b>Goal 2, Standard 3</b> <b>To use English to achieve academically in all content areas: Students will use appropriate learning strategies to construct and apply academic knowledge</b> <ul style="list-style-type: none"> <li>actively connecting new information to information previously learned</li> <li>recognizing the need for and seeking assistance appropriately from others (e.g., teachers, peers, specialists, community members)</li> <li>imitating the behaviors of native English speakers to complete tasks successfully</li> </ul>

Arizona English Language Proficiency Standards
<b>Stage I</b> <b>Speaking and Listening</b> <b>Delivery of Oral Communications</b> <b>Standard 2: The student will express orally his or her own thinking and ideas.</b> B-7: responding to social interactions, courtesies, and personal information questions using complete sentences with instructional support. <b>Reading</b> <b>Comprehending Text</b> <b>Standard 3: The student will analyze text for expression, enjoyment, and response to other related content areas.</b> B-3: answering comprehension questions to respond to text heard or read. B-5: participating in teacher guided discussions to restate facts from text read aloud.

## Overview

This unit of study allows students to investigate how temperature relates to weather and how different

types of weather effects what we wear and the things we do.

# What's the Weather?

## Purpose

In this lesson students will learn that different locations around the state experience different kinds of weather. This lesson includes strategies for diverse learners (ELLs).

## Key Vocabulary

**Environment:** area around a human, animal, plant, or object

**Weather:** all of the things that occur in the air (rain, snow, wind, heat)

**Natural:** made by nature

**Temperature:** how cold or hot something is

## Materials

### Session one:

- Weather PowerPoint
- Photos or bag of clothes (realia) that reflect a variety of weather conditions examples: jacket (windbreaker), shorts, bathing suit, heavy coat, gloves/mittens, etc.
- Vocabulary cards
- Weather Writing
- Weather Sorting (Page 1 and Page 2)
- Books about weather for read-alouds (see Suggested Book List)

### Session Two:

- Thermometers
- Temperature Recording Sheet
- Ice
- Water
- Clear plastic 16 oz cups
- Chart paper

### Session Three

- Arizona map
- Arizona Rain Data
- Bag of Skittles candies
- Doc cam or overhead projector
- Large labels for Phoenix, Tucson, Flagstaff
- Snack cups or snack bags

## Objectives

The student will be able to:

1. understand and describe different types of weather: heat, snow, and rain.

2. describe how temperature relates to weather.

3. represent weather patterns in Arizona on a map and compare weather patterns.

## Procedures

*Background Knowledge: Students have previously been introduced to maps and globes. They understand the difference between maps and globes and understand the purpose of a map. Students know the difference between hot and cold.*

### SESSION ONE

#### Engage

1. Have the students raise their hand if they've ever been in snow or rain. Ask for volunteers to tell how it feels. **(Preparation: Linking to background)** Show the YouTube video to build vocabulary <http://www.youtube.com/watch?v=CVuKr5y9AbY>

Show the Weather PowerPoint. Discuss the vocabulary and characteristics of different kinds of weather.

2. Show the items in the bag of clothes (or photos) representing different types of weather. Have students help you sort them into weather piles as they identify what type of weather (rain, snow, heat) each piece is best suited. Ask "why" questions as students describe in which pile each piece should be placed. **(Application: Promotes engagement)**

#### Explore

3. Introduce weather vocabulary cards. Read one or two informational texts about weather. (See Suggested Book List) **(Integrating Processes: Reading, Listening)**

4. Facilitate a discussion between students around the information learned from the books. **(Application: Meaningful, Promotes Engagement; Integrating Processes: Speaking, Listening)**

5. Have students complete the Weather Sorting (Pages 1 and 2) and the Weather Writing. **(Integrating Processes: Writing; Assessment: Individual)**

### SESSION TWO



## What's the Weather?

### Explain

1. Review the information learned during the last session. Ask students if they know what temperature means. Facilitate a short discussion on hot and cold and thermometers. Demonstrate how thermometers are used to measure weather.

**(Scaffolding: Modeling; Preparation: Linking to past learning)**

2. Provide for each group of four students: one cup of plain tap water, one cup of ice water and four thermometers. Instruct each group of students to measure the temperature of the tap water and the ice water. Take the students outside and have each group place a thermometer in direct sunlight and one in a shaded area. **(Grouping Option: Small groups; Application: Hands-on)**

3. Have each group record the temperatures on the recording sheet. Record temperature data on chart paper for each group. **(Scaffolding: Comprehensible Input)**

4. Facilitate discussion applying what has been learned to the concept of weather. **(Application: Linked to objectives)**

### SESSION THREE

#### Elaborate

1. Review information learned in the two prior sessions. **(Preparation: Linking to past learning)**

2. Facilitate discussion that connects the concept of weather and Arizona. Show students a copy of the Arizona map. Explain that Arizona has a variety of weather patterns across the state.

3. Tell students that they will be graphing weather in Arizona on their own map. (You can do this as guided practice in the beginning of the year, or it can be done as an independent assignment when the students are more capable) **(Application: Meaningful)**

4. Use a doc cam or overhead with teacher made transparency to demonstrate how the activity is to be completed stressing the color Skittle that corresponds to each type of weather (rain, snow, heat). Using the January 2012 Arizona Weather Data page, read each day's weather for all three locations. Read them one at a time while holding up the city/symbol sign. Hold up the color Skittle that corresponds with each piece of data. Demonstrate placing the Skittle in the correct location. (e.g., Place the correctly correspond color of Skittle on the city of

Flagstaff for the recorded weather information on day One. As the students recognize the pattern in the data and the procedures, begin giving them responsibility and ownership of the lesson. (e.g., Teacher – “Flagstaff had rain. What color Skittle are you going to use?” or after you have read a few Flagstaff, snow data, say, “Flagstaff had.....?” and have the students predict what you're going to say.) In this way the activity becomes more exciting and challenging for them. **(Application: Hands on, Meaningful, Linked to objectives, Promotes Engagement)**

5. Once all the data has been graphed on the map using Skittles candies, transfer the information by recording it on the rain, sun and snow graphs. **(Application: Hands on, Meaningful, Linked to objectives, Promotes Engagement)**

6. Have students compare the graphed information. Ask which city has the most rain? Which city has the most snow? Which city has the least amount of rain? Which city has the least amount of snow? On the Arizona map, have students color the icons: use green for rain, yellow for sunny days, and blue for snow. **(Assessment: Individual)**

## Assessment

### Evaluate

To be considered mastery, students will score:

- 90% or higher on the Weather Sorting Page 2 for a geography, reading, and science grade.
- 80% or higher on the Weather Recording Graph for a geography, math, and science grade.
- 80% or higher on the Temperature Recording Sheet for a geography and science grade.
- 100% on Weather Writing (one word answer must make sense) for a writing grade.
- 75% or higher on an oral test over the lesson vocabulary for a reading grade.

## Extensions

Introduce the water cycle and create a class terrarium so students can observe the water cycle. Connect the observations to what students know about rain.

## Sources

Arizona Map from Arizona Geographic Alliance  
<http://geoalliance.asu.edu/azga/>



## What's the Weather?

Clker.com ClipArt

Microsoft ClipArt

YouTube Video to build vocabulary

<http://www.youtube.com/watch?v=CVuKr5y9AbY>



**Education Studies Department**  
Teachers of Language Learners Learning Community (TL<sup>3</sup>C)

