



Weather

Unit Summary

After taking on the role of meteorologists, students explore the causes of weather. Student groups are assigned various cities across the globe that experience different types of weather. They gather background information on the causes and locations of their phenomenon, use the *Seeing Reason Tool* to identify the effects of their phenomenon on the given area, and make informed decisions about safety during weather phenomena. Student groups present their findings to the class and individually write a report on a weather phenomenon.

Curriculum-Framing Questions

- **Essential Question**
Why is it important to be prepared?
- **Unit Questions**
How does weather affect us?
Why is it important to monitor the weather?
Why do we need to prepare for natural disasters?
- **Content Questions**
What are the characteristics of weather phenomena?
How is the risk from common phenomena influenced by location/region?
What changes in weather are indicators of climate change?

Assessment Processes

View how a variety of student-centered [assessments](#) are used in the Weather Unit Plan. These assessments help students and teachers set goals; monitor student progress; provide feedback; assess thinking, processes, performances, and products; and reflect on learning throughout the learning cycle.

Instructional Procedures

Set the Stage

Prior to beginning this project, establish an understanding of basic principles of weather. Be sure that students understand the difference between weather and climate and are able to identify conditions that create or control weather. Make sure to discuss how global patterns of atmospheric movement influence local weather and the major effect that oceans have on climate. Discuss how water in the ocean holds a large amount of heat which creates weather phenomena. This can be done through a series of labs, lectures, readings, videos, and discussions. Establish a science journal for students to keep track of key scientific concepts as well as note any questions to revisit.

Invite a local meteorologist to speak with the class or visit a local news station to watch a meteorologist in action.

Introduce the Project

Ask students the Essential Question, *Why is it important to be prepared?* Elicit student responses and engage in discussion about being prepared for anything. These can be from every day occurrences to worldwide events. Lead the discussion towards weather-related incidences.

Pose the Content Question, *What are the characteristics of weather phenomena?* Begin a class discussion on the definition of weather phenomena and examples of phenomena that will be covered in class.

Pose the Unit Question: *Why is it important to monitor the weather?* Ask students to respond to the question in their

At a Glance

Grade Level: 5-8

Subject: Earth and Space Science

Topics: Weather, Community

Higher-Order Thinking

Skills: Cause and Effect, Analysis

Key Learnings: Weather Phenomena, Severe Storms, Natural Hazards, Disaster Preparedness

Time Needed: 1 month of daily 45 minute lessons

Things You Need

[Assessment](#)

[Standards](#)

[Resources](#)

science journals. Then, elicit students' initial responses to the question. Tell students that this question will be revisited throughout the unit.

To define the scope and roles of this project give students the [Weather Project Overview](#).

Students assume the role of meteorologists for this project. To make sure students understand what a meteorologist does, provide time to explore online resources and share prior knowledge about meteorologists. Make sure to focus on how meteorologists use technology to gather data, enhance accuracy, and analyze and quantify results of their investigations. Instruct students to write any notes or questions they have about the job of a meteorologist in their science journals and add any additional thoughts in response to the Unit Question: *Why is it important to monitor the weather?*

As students research, monitor progress by asking probing questions, reading and responding to science journal entries, and conducting one-on-one conferences.

In a whole class discussion pose the following Unit and Content Questions: *How does weather affect us?* and *How is the risk from phenomena influenced by location?* Discuss local weather patterns and potential phenomena risks associated with your region. Then ask students:

- Have you experienced weather phenomena?
- Where were you when these phenomena occurred? Have you lived in other places? If so, did you have weather/ climate that is different than where we live now? How was it different?
- Did weather affect how you lived?

Post a chart of key concepts discussed. Tell students that they will continue to examine and answer these questions in the next activity.

Establish Phenomena and Location

Explain that throughout the world there are many different types of weather phenomena. Identify cities across the world that experience various weather phenomena. Assign each student a location and a weather phenomenon to research, making sure there is more than one student assigned to each location. Place students into teams based on their location and weather phenomenon. Students begin exploring their location as a team. Instruct the teams to identify the city's longitude and latitude and then chart and analyze the temperature averages for the location. Have them hypothesize in their science journals about why the location has the climate that it does.

Introduce Seeing Reason

Before proceeding with the next activity, click [here](#) to set up the Weathering the Weather project in your workspace. Revisit key concepts chart created earlier, and while students are in their location teams pose the following Unit and Content Questions again: *How does weather affect us?* and *How is the risk from common phenomena influenced by location?* Add these new learnings to the chart in response to these questions.

Give each team their log-in information. This is an initial map and teams may not have a lot of factors and relationships defined. At the end of their mapping session have them save a copy of their map in their portfolio. As students individually research their phenomenon, they come together as a team to analyze new information and revisit the team map.

Monitor the students as they are working on their maps. Use the following questions to extend student thinking:

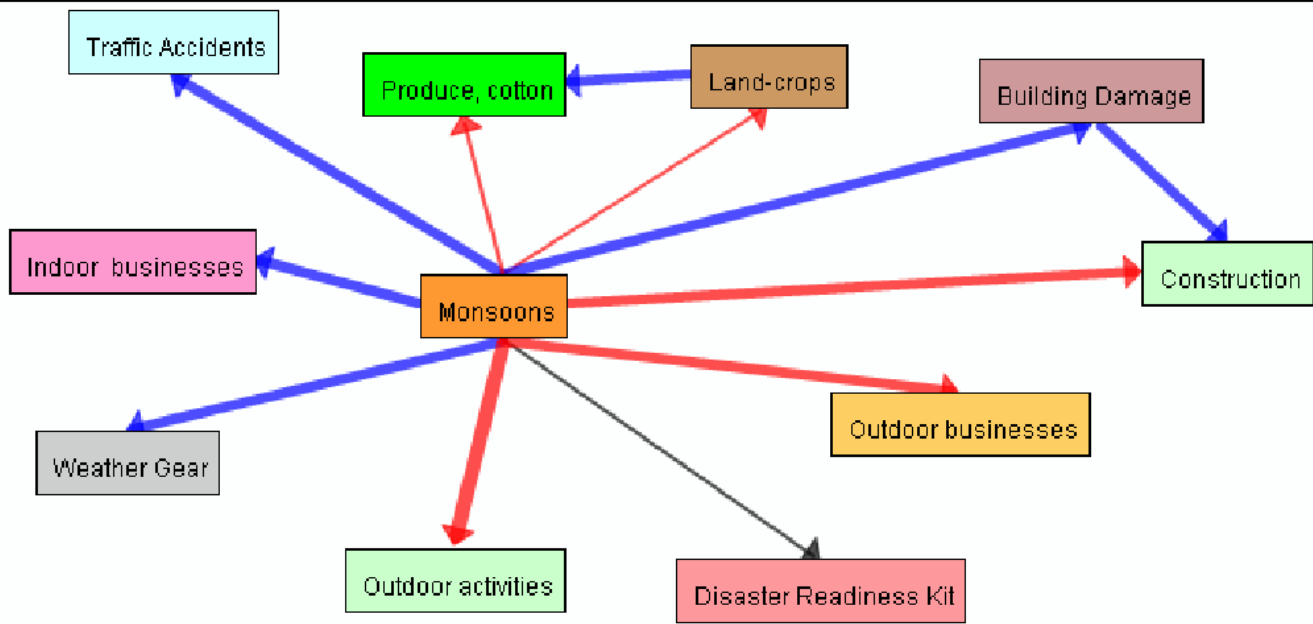
- How have you described your factors?
- What is your evidence for the relationship you show between these factors?
- Why is this important to understand? What causes this to happen?
- Can you explain this relationship further?
- How does it affect this factor?

Examine the Seeing Reason Activity

The *Seeing Reason* space below represents one team's investigation in this project. The map you see is functional. You can roll over the arrows to read relationships between factors, and double-click on factors and arrows to read the team's descriptions.

Project Name: **Weathering the Weather** ([Click here to set up this project in your workspace](#))

Question: **How does weather affect us?**



Share with students the [Weather Project Rubric](#) and discuss the criteria that will be used to assess the project. Allow for questions and make sure that students understand all aspects of the rubric. Provide students with a rich combination of text and Internet resources to use to answer and guide their research. Explain that the [Weather Project Overview](#) and the [Weather Report Format](#) contain the questions that should be researched for the individual report and will aid the group presentation.

Students create a report of their findings. The [Weather Report Format](#) guides their report.

As students research, monitor progress by asking probing questions, reading science journal entries, and conducting one-on-one conferences.

Encourage students to revisit their *Seeing Reason* map and add additional factors or relationships. These relationships show the cause and effect of their phenomenon on people and places as they gather new research. They should have at least four revised maps. Use the comment feature to guide discussion and further exploration of their maps. After each work session remind students to save the team map to their portfolio.

Team Presentation

Students select a presentation format based on the audience who they are presenting to, that has been associated with their location in the [Weather Project Overview](#). The audience assigned such as a group of tourist or business owners makes the real world connection for the students. They may select any type of presentation format (multimedia, poster, play, etc.) to complement their oral presentation. Share with students the [sample group presentation](#) to foster a discussion on expectations and quality work. Give each group the [Weather Group Checklist](#) for organizing their presentation.

Conclude the Lesson

After the group presentations give each team the opportunity to revisit their *Seeing Reason* map to clarify any factors or relationships based on insight from maps they saw during team presentations.

Be sure to end the final activity with a comprehensive debriefing session that revisits the Unit Questions. Then as a final journal entry pose the Essential Question: *Why is it important to be prepared?*

Give students the opportunity to express any relevant observations they may wish to make.

Prerequisite Skills

- Basic word processing and desktop publishing skills.
- Basic understanding of using the Internet to research information.

Differentiated Instruction

Resource Student

- Locate and distribute research materials that are appropriate for their reading ability.
- Distribute an outline for students to complete to help organize their research and report work.
- Assign students to work in pairs to create a report instead of individually.
- Use word processing software features such as dictation or text to speech capabilities to assist in editing student work.

Gifted Student

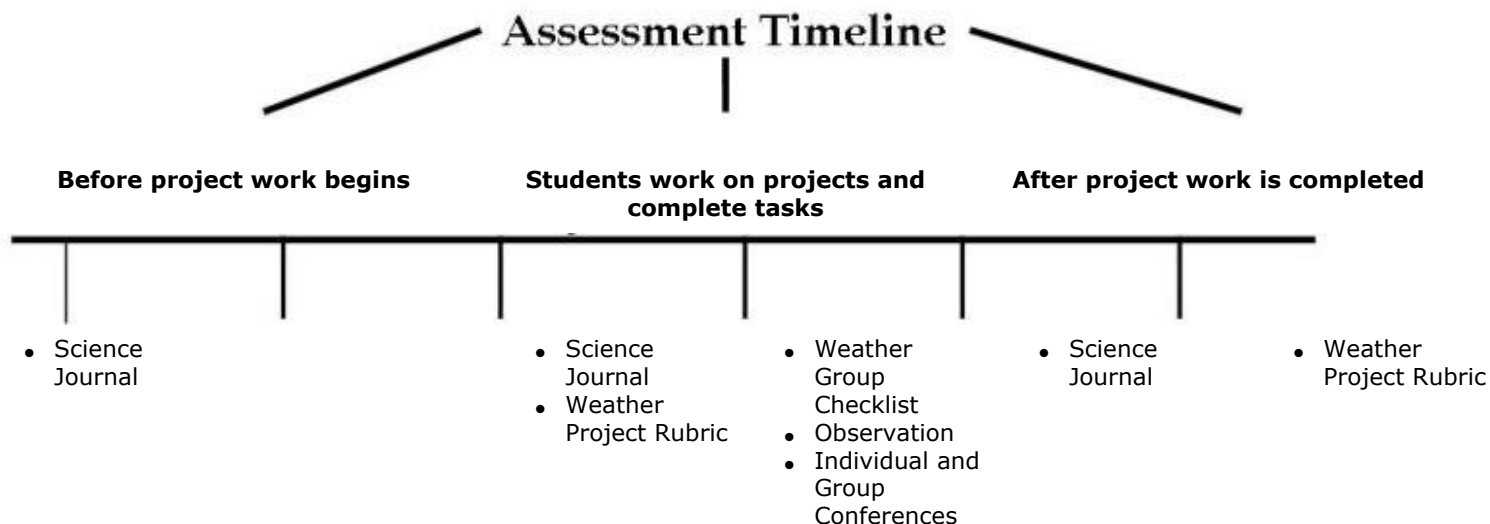
- Have students collect, graph, and draw conclusions based on data related to their phenomenon such as (causalities, cost relating to damage, severity, people effected, or number of occurrences over time).
- Have students research what contingency plans local government has in place should a natural disaster hit the region.
- Have students write a sample public service announcement to inform residents of an impending threat related their phenomenon.
- Have students create a Web-based weather survey form to collect data from people in other regions to find out how the weather affects them or to determine how prepared they are to weather the weather.

English Language Learner

- Allow the student to complete work in their first language and then have it translated into English later.
- Have a more proficient bilingual student help the English language learner.
- Use the talking text feature in word processing software to assist in editing the student work.

Seeing Reason Tool: Weather Assessment Plan

Assessment Plan



Students reflect and respond in their science journal throughout the unit. The teacher reviews the journal entries to check for understanding, monitor progress, and clarify concepts. Students use the [Weather Project Rubric](#) to help guide their learning, stay on track, and self-assess their progress. The teacher uses questioning strategies throughout the unit to help students develop their higher-order-thinking skills and process content. The teacher holds individual and team group conferences to help monitor progress and answer any questions. Students use the [Weather Group Checklist](#) to plan and self-asses their group presentation. The teacher uses the [Weather Project Rubric](#) to assess their final work.

Seeing Reason Tool: Weather Content Standards and Objectives

Targeted Content Standards and Benchmarks

National Science Education Standards (NSES) Grades 5-8

Science as Inquiry

Content Standard A

- Technology used to gather data enhances accuracy and allows scientists to analyze and quantify results of investigations.

Earth and Space Science

Content Standard D

- Global patterns of atmospheric movement influence local weather. Oceans have a major effect on climate, because water in the oceans holds a large amount of heat.

Science in Personal and Social Perspectives

Content Standard F

- Students should understand the risks associated with natural hazards.

Student Objectives

Student will be able to:

- Use technology to conduct research on assigned weather phenomenon
- Write a detailed report on a weather phenomenon
- Identify weather patterns that cause phenomena and describe them
- Analyze the risks caused by natural hazards
- Identify the effects that phenomena have on an area using Seeing Reason
- Create a group presentation on a weather phenomenon

Seeing Reason Tool: Weather Resources

Materials and Resources

Printed Materials

- Encyclopedias
- Variety of research books at different reading levels for each phenomena

Internet Resources

This is only a partial list of Internet resources related to general weather for students.

- Nation Master
www.nationmaster.com/graph-T/geo_nat_haz*
Listing of natural hazards by location
- Dan's Wild Weather Page
www.wildwildweather.com/*
Resources for kids compiled by a meteorologist that address a variety of weather topics
- University of Illinois
[http://ww2010.atmos.uiuc.edu/\(Gh\)/guides/mtr/home.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/home.rxml)*
Meteorology Guide
- National Weather Service Forecast Office
www.srh.noaa.gov/oun/severewx/safety.html*
Severe Weather Safety Guide
- National Oceanic & Atmospheric Administration
www.noaa.gov/*
General information about weather and storms
- Annenberg/CPB Learner.org
www.learner.org/exhibits/weather/storms.html*
Weather what forces affect our weather?
- National Sever Storms Laboratory
www.nssl.noaa.gov/edu/*
Questions and guides to the how, what, where and why of storms
- World Meteorological Organization
<http://www.wmo.ch/index-en.html>*
Official Weather Forecasts and Warnings
- Atmospheric Science Data Center
<http://eosweb.larc.nasa.gov/EDDOCS/meteorol.html>*
Explanation what a meteorologist does
- Joanne Simpson
www.grandtimes.com/simpson.html*
A closer look at the meteorologist Joanne Simpson
- Roger Daley
www.science.ca/scientists/scientistprofile.php?pID=6*
A closer look at the meteorologist Roger Daley

Technology – Hardware

- Scanner for gathering images from research texts
- Computer with Internet connection for researching Web resources

Technology – Software

- Word processing software to complete outlines
- Multimedia Software (optional for group presentation)
- Desktop Publishing Software (optional for group presentation)

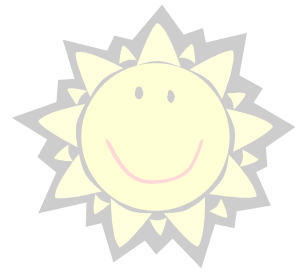
WEATHER INDIVIDUAL REPORT RUBRIC

Name:

Date:

	4	3	2	1
Knowledge about Weather Phenomenon	<p>I give detailed, descriptive answers for all the assigned research questions based on research.</p> <p>I demonstrate a thorough knowledge of a weather phenomenon.</p> <p>I am an expert who can answer questions with certainty and cite or direct the audience to a specific source.</p> <p>I demonstrate in-depth understanding of relevant concepts.</p> <p>I offer unique interpretations or extensions (generalizations, applications, analogies).</p>	<p>I answer all the assigned research questions using research.</p> <p>I demonstrate adequate knowledge of a weather phenomenon,</p> <p>I can answer a majority of the questions from the audience and direct the audience to a source.</p> <p>I demonstrate understanding of major concepts.</p> <p>I offer expected interpretations or extensions.</p>	<p>Most of my research questions are answered based on research.</p> <p>I demonstrate some knowledge of a weather phenomenon</p> <p>I am able to answer some questions from the audience.</p> <p>There are gaps in my conceptual understanding.</p> <p>I offer few or no interpretations or extensions.</p>	<p>I could not answer many of the assigned research questions or I do not have the right information.</p> <p>I demonstrate little or no knowledge of a weather phenomenon.</p> <p>I do not attempt to share information with the audience.</p> <p>I do not have conceptual understanding.</p> <p>I offer no interpretations or extensions.</p>
Writing	<p>My writing has a strong thesis statement that is meaningful, important, and supported by research.</p> <p>My writing shows</p>	<p>My writing has a thesis statement that is supported by research.</p> <p>My writing shows appropriate tone, voice,</p>	<p>My writing does not have a clear thesis statement nor is it supported by research.</p> <p>My writing attempts to use</p>	<p>My thesis is unclear.</p> <p>My writing is generic and inappropriate for the intended audience.</p>

	<p>sophisticated tone, voice, and sense of audience.</p> <p>My writing uses strong language that is interesting and powerful.</p> <p>My sentences flow together naturally and are varied in length and structure to enhance meaning.</p> <p>My writing contains surprising or unusual elements that enhance the communication of the content.</p>	<p>and sense of audience.</p> <p>My writing uses language that is interesting and engaging.</p> <p>My sentences vary and flow together naturally.</p>	<p>appropriate tone, voice, and sense of audience.</p> <p>My writing uses language that is predictable.</p> <p>My sentences show little variety.</p>	<p>My writing is predictable.</p> <p>I use only simple sentences that lack variety.</p>
Mechanics	<p>My report contains no spelling, grammatical, or typing errors.</p>	<p>My report has a few spelling, grammatical, or typing errors that do not distract the reader from the content.</p>	<p>I have many spelling and grammatical errors that question the content of the report.</p>	<p>I have multiple errors in both spelling and grammar that distract the reader from the content of the report.</p>
Sources	<p>My content is supported by reference to a variety of reliable sources.</p> <p>My sources are properly cited within the report.</p>	<p>My content is supported by reliable sources.</p> <p>Most of my sources are properly cited within the report.</p>	<p>My content is supported by too few or unreliable sources.</p> <p>My sources are often cited improperly.</p>	<p>My content is supported by a single source or by unreliable sources.</p> <p>My sources are not cited correctly.</p>



WEATHER TEAM PRESENTATION CHECKLIST

Use the following checklist to help plan your team presentation:	Check	Comments
We have identified our weather phenomenon.		
We have explained with detail what causes our phenomenon to occur.		
We have made connections to other global areas that experience our weather phenomenon.		
We have provided recommendations to safely survive our weather phenomenon.		
We have clearly stated the effects of our weather phenomenon on humans, land, and businesses.		
We have included our <i>Seeing Reason</i> map.		
We have forecasted where our weather phenomenon is likely to occur next.		
We have added interesting facts and trivia about our weather phenomenon.		
We have cited all our sources.		
We have included graphics, illustrations, or charts that will help others understand our weather phenomenon.		
We have proofread our work for mechanical errors.		
Our team presentation is designed for our assigned audience.		
All team members contributed to the presentation.		

Weather

Project Overview

Introduction/Background Information

Activity 1

Task: Think about a time when you were frightened by the weather. What happened? Did you know that this weather condition was going to happen ahead of time? How did you know? Were you prepared? Was there any damage? Respond to these questions in your science journal and then be prepared to share your experience with the class.

Activity 2

Overview: Soon you will be asked to take on the role of a meteorologist. A meteorologist is a person who studies the atmosphere. Two famous meteorologists, Joanne Simpson and Roger Daley, contributed to what we know about weather.

Task: In your teams go to the computer and look up what contributions Joanne Simpson and Roger Daley made to weather. What did you find out? Record this information in your science journal.

Beginning Investigations

Overview: In this project you will be taking on the role of a meteorologist. One of your jobs as a meteorologist is to inform the public about weather disturbances and help them make informed decisions regarding their safety in these situations. Your current job has you working one of the following locations:

Location	Weather Condition
London, England	Fog
Calgary, Alberta, Canada	Blizzard/White Out
Port Hedland, Australia	Hurricane
Wichita, Kansas, United States	Tornado
Ethiopia, Africa	Drought
Hong Kong, China	Severe Thunderstorms
Dresden, Germany	Flooding. Flash Flood
St. Moritz, Switzerland	Snow/Hail/Avalanche

Notice that each city has a particular weather phenomenon that occurs in its area. You will be assigned to research and report on one of these cities and its associated weather phenomenon. Other students will also be assigned to the same city. This will allow you to discuss your research and plan a team project together.

Team Project Requirements:

- Show the longitude and latitude of your city on a map.
- Find out what the climate is for this city.
- Generate a team explanation of why this city has a particular climate based on what you have learned regarding the physical characteristics that affect climate.
- Note your findings and discussions in your science journal.
- Create and revise a causal map.

Task: Using your team password go to the [Seeing Reason](#) Web site and complete a map to answer this question: *How does weather affect us?* This task will be ongoing. As you learn new information your team needs to update your map. Don't forget to save copies of your map to your portfolio.

The Research

Overview: Each team will be assigned a particular audience (see chart below) to inform about your local weather phenomenon. In researching your phenomenon you will need to keep in mind how you, in your role as a meteorologist, will inform your audience about an impending weather disturbance and help them make informed decisions regarding their safety in this situation (since they all live in an area where this phenomenon may occur). Your recommendations may someday save one of your viewer's lives.

Keep in mind, that you will conduct research and gather information on your topic in order to complete both an individual report and a team presentation directed at a particular audience. See the chart below for possible assignments.

Phenomenon	Location	Presentation Audience
Fog	London, England	Other meteorologists at a conference
Blizzard/White Out	Calgary, Alberta, Canada	Elementary students
Hurricanes, Typhoons Cyclone	Port Hedland, Australia	Citizens who just moved to this area
Tornado	Wichita, Kansas, United States of America	Mobile home park owners
Drought	Ethiopia, Africa	A group of farmers
Severe Thunderstorms	Hong Kong, China	A group of business owners.
Flooding, Flash Flood	Dresden, Germany	A parent group
Snow/Hail/Avalanche	St. Moritz, Switzerland	Tourists

Individual Task: Each person in your team must answer all of the following questions individually and outline your findings in report form. The report will be assessed using the [Weather Project Rubric](#).

- *What is your phenomenon? **Note:** You need to give a definition of your phenomenon that your viewers will understand.*
- *What are the characteristics of this weather phenomenon?*
- *How does your phenomenon occur? This needs to be as detailed as possible. Explain any scientific vocabulary.*
- *Where else does this phenomenon occur?*
- *What are the relative destructive powers of this type of phenomenon?*
- *How can we weather this weather?*
- *How can we reduce damage resulting from this phenomenon?*
- *How does this form of weather affect us? Include the effects your phenomenon has on humans, land, and business.*
- *Where do you think your phenomenon will strike next?*
- *What safety steps should be taken when one encounters your phenomenon? List all preparations and precautions.*
- *What are some other interesting facts and statistics regarding your phenomenon?*
- *Why do we need to prepare for natural disasters?*

Team Task: Once you have completed your individual research and outlined your findings in report form, meet together as a group. Discuss your answers to the above questions with your group.

Revisit *Seeing Reason* and revise your team map based on your discussion. As you continue to discuss your research findings and develop your team project, keep returning to revisit and revise your causal map. You will be expected to have at least four revised maps by the end of the unit.

Team Presentation

Your presentation can be in any format you choose and must be approved by the teacher. Keep in mind that it is helpful to have something visual to accompany your oral presentation, for example: a Web page, a multimedia presentation, a brochure, a poster, a puppet show, or a dramatic play.

The team presentation must keep in mind the assigned audience. Use the Weather Team Checklist to organize your presentation.

Weather Report Format

Cover page

Title, name, class, date

Introduction

Supply a short introduction informing the reader what the report is about. Include a hook, short background information, and thesis.

Body

This is a detailed explanation of your weather phenomenon and the evidence for your thesis statement. Support ideas with references for different authorities and sources. Include illustrations, diagrams, and tables in the body of your paper.

Answer the following questions:

- *What is your phenomenon?*
- *What are the characteristics common to this weather phenomenon?*
- *How does your phenomenon occur?*
- *Where else does this phenomenon occur?*
- *What is the relative destructive power of this type of phenomenon?*
- *How can we weather this weather?*
- *How can we reduce damage resulting from this phenomenon?*
- *What safety steps should we take when we encounter your phenomenon?*
- *How does this type of weather affect us? Include your Seeing Reason map. Include the effects your phenomenon has on humans, land, and business.*
- *Why do we need to prepare for natural disasters?*

Conclusion

Write a summary of what you learned and why it is important. Consider the Essential Question: *Why is it important to be prepared?* and the Unit Question: *How does weather affect us?* as you summarize your learning and conclude your report.

Bibliography

Include three references with complete bibliographic information in American Psychological Association (APA) format.

Weathering Monsoons

Kelsey, Dylan, and Trevor

Period 1 - Science



Our Goal

- To inform you, the citizens of Phoenix, Arizona, of potential risks associated with monsoons in the greater Phoenix area.
- To give you instructions on what to do if you are caught in a monsoon.
- Finally, to convince all residents to establish and maintain a home disaster preparedness kit. It could save your life!

Monsoons

- What are they?
- How do they affect us?
- Why are we at risk?
- How can we stay safe in a monsoon?
- What else do we know about Monsoons?
- Why is it important to be prepared?

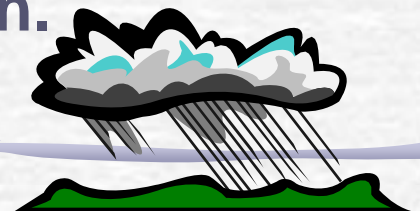
What is a Monsoon?



- A season of high temperatures, high winds, and high moisture, resulting in potentially deadly weather.
- Winds that change direction with the change of season.
- Winds blow in response to differences in temperature between air over the land and air over the sea.
- Widespread torrential rains, and even severe thunderstorms, often accompany the onset of a monsoon.

How Do Monsoons Occur?

- Monsoons are determined by the land and sea temperature differences.
- Monsoons are created by the Earth's tilt in relation to the sun. The rotation of the earth acts upon these winds.
- Large mountain chains and irregular continent shape affect monsoons.
- During winter monsoons, the wind blows from the land to ocean, while in the summer it is the opposite.
- This can cause major climate changes throughout the entire world, depending on the location.



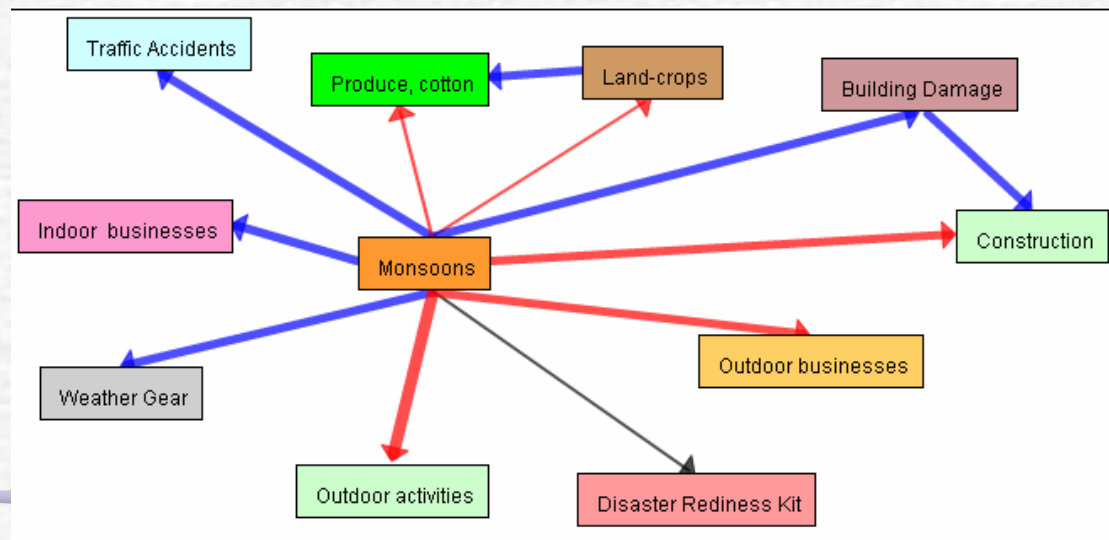
How Do Monsoons Affect Us?

- Brings heavy rain in summer
- Rain can last for days
- Very few breaks may produce floods
- Homes, crops, and businesses may be ruined due to flood



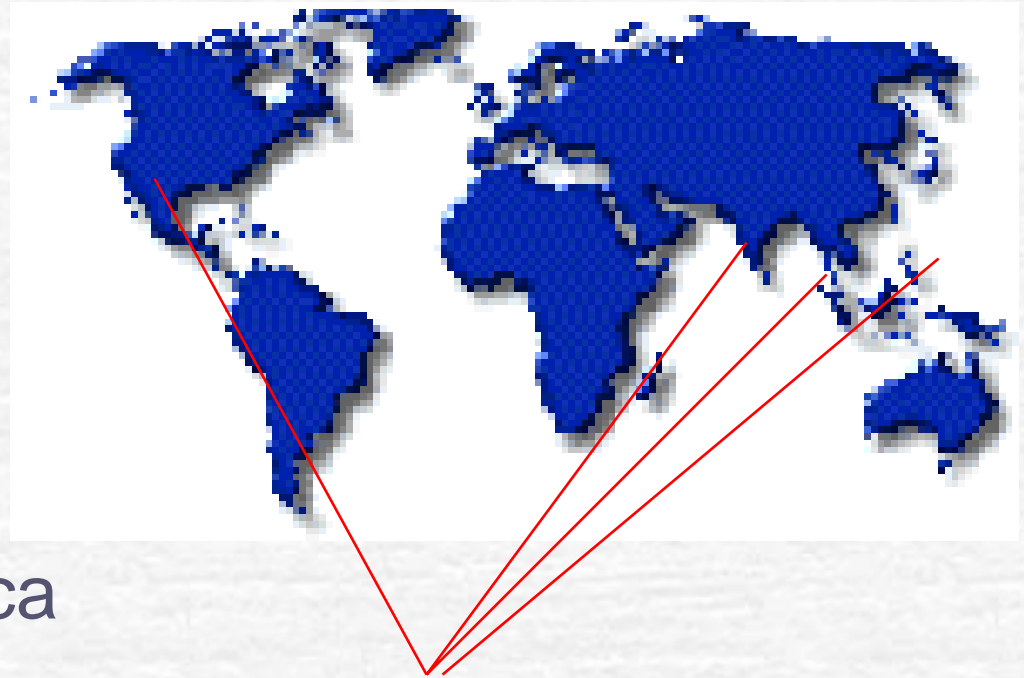
How Do Monsoons Affect Us?

- If the monsoon season is late it may bring about drought.
- Drought effects agricultural output.
- A decrease in agriculture is likely to lead to an increase in prices and higher inflation.
- Inflation effects our ability to purchase things.

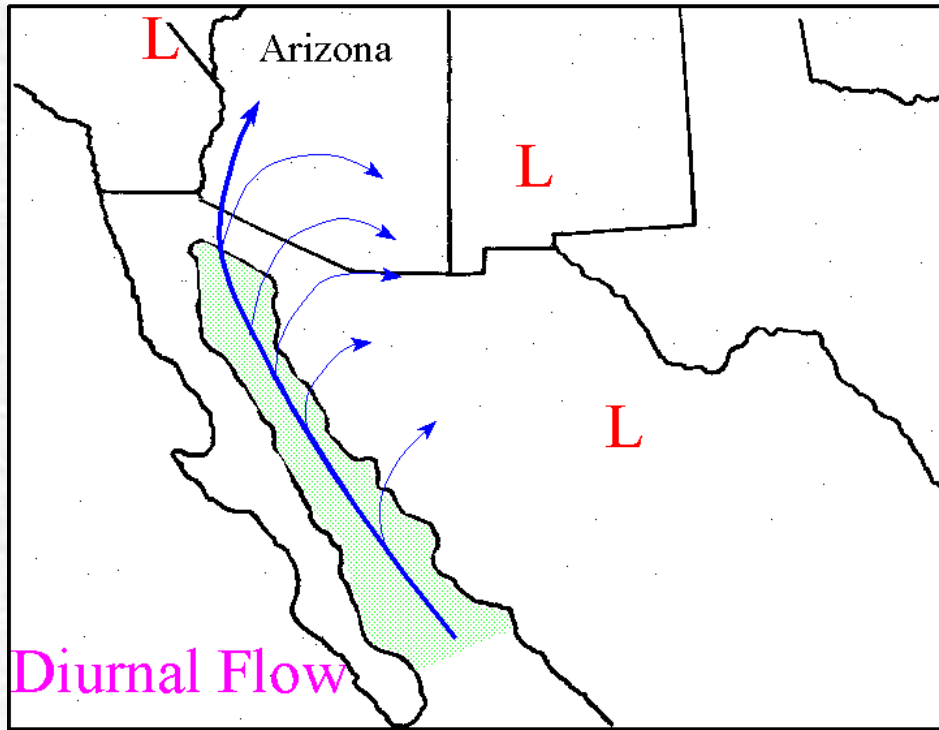


Where do Monsoons Occur?

- Strongest and largest monsoons occur in the eastern hemisphere (southeast Asia and India)
- Also occur in Chile
- Parts of North America



Our Region: Monsoons in Arizona



- The "Gulf Surge" is such an important player in Arizona monsoon weather.
- A Gulf surge is a push of low-level moist and cool air that moves northward over the Gulf of California and into southern Arizona.

Picture from:

<http://images.google.com/imgres?imgurl=http://www.wrh.noaa.gov/images/twc/monsoon/OUTFLOW.GIF&imgrefurl=http://www.wrh.noaa.gov/twc/monsoon/az.php&h=563&w=726&sz=12&tbnid=LF2XGdBf-XgJ:&tbnh=107&tbnw=139&hl=en&start=16&prev=/images%3Fq%3Dmonsoon%252Bgraphic%26svnum%3D10%26hl%3Den%26lr%3D%26sa%3DN>

Climate In Arizona



Phoenix, Arizona

latitude: $31^{\circ}20'N$ to $37^{\circ}N$

longitude $109^{\circ}3'W$ to $114^{\circ}50'W$

Climate: Dry, desert, mild winters
and hot summers

We think that Phoenix has the
climate that it does because of
its elevation, the surrounding
mountains, and the latitude
and longitude of the city.

Picture from:

<http://us.i1.yimg.com/us.yimg.com/i/travel/dg/maps/45/750x7>

50_arizona_m.gif

Why is Arizona At Risk?

- In early July, the winds in Arizona shift in a southern direction. Moisture streams north from the Pacific Ocean and the Gulf of Mexico. This shift produces a huge change in moisture conditions and along with daytime heating, causes the Arizona monsoons.
- Arizona monsoon storms usually start with heavy winds and sometimes result in a wall of dust hundreds of feet high. These dust storms often include thunder and lightning and heavy rain.
- The storm's heavy rains, high winds, and lightning can be very dangerous.
- Wind and lightning can snap utility poles and power lines, and heavy rains can cause flash flooding.

The next Monsoon in Phoenix will be. . .

- Monsoons occur seasonally depending on land and air temperatures.
- Meteorologist can not predict the exact start of the monsoon season nor the strength of the storms they bring.
 - We think that the next Monsoon will be consistent with the average start date and begin on July 9th.

Average Start date	July 7 th
Earliest Start Date	June 19 th (1958)
Latest Start date	July 25 th (1987)

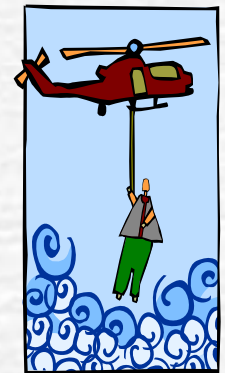
How Can We Stay Safe in a Monsoon?

- Stay tuned to the local weather station during severe storms.
- Turn off all major appliances to protect these machines from voltage fluctuations and help avoid circuit overloads when power returns.
- Stay indoors away from windows.
- Draw blinds and shades over windows to prevent glass from shattering into your home.
- Find a safe haven for your pets.



How Can We Stay Safe in a Monsoon?

- Do not drive in a monsoon – or a street flooded by a monsoon
- Don't shower during a monsoon storm - lightning can pass through metal pipes.
- To avoid being struck by lightning stay away from open fields, high land, trees, poles, other tall objects, bodies of water, and metal objects.
- Don't touch downed power lines or try to move them.
- Stay off the phone unless you need to make an emergency phone call.



Facts about Monsoons

- Although monsoons have the ability to damage, they have become an intricate part of society, changing agricultural patterns and affecting people's lives in many ways.



- Benefit -the floods from the monsoons replenish the nutrients in the soil and provide much needed water to many parts of the world.

Why is it Important to be Prepared?

It is difficult to predict how strong a monsoon season will be so we must be prepared:

- Knowing about the dangers of the storm can keep family members safe.**
- Having a readiness kit can benefit if other disasters strike.**

Works Cited

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