

WEATHER AND CLIMATE bundle

differentiated passages



WEATHER-RELATED HAZARD SOLUTIONS

differentiated passages

SEASONAL WEATHER CONDITIONS

differentiated passages

WORLD CLIMATES

differentiated passages

Lightning Rods Questions

Describe the problem and solution described in the passage.

490L

Albuquerque International Balloon Fiesta

The Albuquerque International Balloon Fiesta is in October. It takes place at Balloon Fiesta Park in Albuquerque, New Mexico.

Albuquerque International Balloon Festival Questions

Use the grid below to create a graph representing average wind speed in Albuquerque, New Mexico.



Lightning Rods

Lightning is a flash of electricity. It happens during a thunderstorm. Frozen raindrops bump into each other in thunderclouds. This builds up electric charges. Changes from the cloud and the ground connect. A lightning strike occurs. Lightning can also strike objects. It can also strike buildings. Lightning heat can melt metal pipes found in plumbing. Lightning rods give lightning a safe path to the ground. The building is protected.

Equatorial Climate

The equator is a line around the earth. It is imaginary. It is the same distance from the North and South Poles. This line cuts the earth into two parts. Costa Rica in Central America is near the equator. Kenya in Africa is also there. The weather is tropical. These areas have strong sunlight all year. They do not have all four seasons. Some places have one hot season. Others have two seasons, a dry one and a wet one.



Beach in Limon, Costa Rica

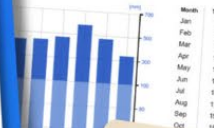
Rainforests are found in regions close to the equator. They have many plants and animals. More kinds of plants are in a rainforest than in other places. Rainforests have half of the world's animal species. They also give about 10% of the world's oxygen. The plants and animals that live in the rainforest are able to live in an equatorial climate.

Monsoons happen in some places near the equator. Wind patterns cause this weather. The winds carry moisture. This moisture is from the ocean. It is released in heavy rains. Monsoons can be good for growing crops. Flooding can cause problems, though.

People living in this area must be ready for the climate. The clothes they wear are appropriate for the weather. The foods they grow are also right for the climate. The activities they do are also right for the climate, too.

Temperature and Precipitation for Paraiso, Cartago, Costa Rica

Location: 1400 m (Climate Class: City Years: 1990-2019)



Month	Temp (°C)	Precip (mm)
Jan	17.4	257.6
Feb	17.4	194.3
Mar	18.2	196.5
Apr	18.8	241.4
May	19.1	504.8
Jun	19.1	498.5
Jul	19.0	436.8
Aug	19.0	443.9
Sep	19.1	472.4
Oct	18.8	583.6
Nov	17.2	173.2
Dec	17.7	17.7



3rd Grade NGSS

ABOUT LEXILE LEVELS



MagiCore is a certified Lexile® Partner. These texts are officially measured and approved by Lexile and MetaMetrics® to ensure appropriate rigor and differentiation for students.

The Lexile Framework® for Reading measures are scientific, quantitative text levels. When the Lexile of a text is measured, specific, measurable attributes of the text are considered, including, but not limited to, word frequency, sentence length, and text cohesion. These are difficult attributes for humans to evaluate, so a computer measures them.

Common Core State Standards uses Lexile level bands as one measure of text complexity. Text complexity ranges ensure students are college and career ready by the end of 12th grade. Lexile measures help educators scaffold and differentiate instruction as well as monitor reading growth.

Grade Band	Lexile® Bands Aligned to Common Core Expectations
K-1	N/A
2-3	420L-820L
4-5	740L-1010L
6-8	1185L-1385L

Keep in mind when using any leveled text that many students will need scaffolding and support to reach text at the high end of their grade band. According to Appendix A of the Common Core Standards, "It is important to recognize that scaffolding often is entirely appropriate. The expectation that scaffolding will occur with particularly challenging texts is built into the Standards' grade-by-grade text complexity expectations, for example. The general movement, however, should be toward decreasing scaffolding and increasing independence both within and across the text complexity bands defined in the Standards."



Seasonal Weather Conditions

3rd grade

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4. Albuquerque International Balloon Fiesta (490L, 810L)
5. Tour de France (470L, 730L)
6. National Cherry Blossom Festival in Washington, D.C. (490L, 810L)
7. Dublin St. Patrick's Day Parade (490L, 740L)

Each passage set includes two differentiated passages on a third-grade level (one at the beginning of the band, one towards the end) and a question set geared towards comprehension and science mastery. The first question is differentiated to include a fill-in-the-blank diagram (lower complexity) or an open-ended diagram (higher complexity).

How to Use This Resource

This resource was created with the NGSS Science Standards in mind. It includes seven differentiated passages aligned to the following standard:

3-ESS2-1: Seasonal Weather Conditions

Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. (Patterns)

Clarification Statement: Examples of data could include average temperature, precipitation, and wind direction.

Assessment Boundary: Assessment of graphical displays is limited to pictographs and bar graphs. Assessment does not include climate change.

Here are some suggestions for using these passages:

- Use as independent work after you have taught an overview of this standard. Assign the different levels based on the passage students can read and comprehend independently.
- Use as a reading center to reinforce key comprehension and science concepts at the same time!
- Use as a homework or review packet.
- Use as an intervention for students who need to revisit science concepts.



The New York City Marathon

Many people enjoy running. Runners may enter a **marathon**. A marathon is a running race. It covers a distance of 26 miles and 385 yards. This race is not run on a track. It's run on city streets instead. The New York City Marathon is run in the United States. This race is held every November.



New York City

The first New York City Marathon was held in 1970. It only cost \$1 to enter. The route took runners through Manhattan's Central Park. This marathon had grown too big for the park by 1976. It was moved to begin at Staten Island and end in Manhattan. The New York City Marathon has been run almost every year. It has only been cancelled twice. Hurricane Sandy shut it down in 2012. COVID-19 stopped it in 2020.



Runners in the New York City Marathon

Many big moments have happened in this marathon. People have set records for running in it. The marathon made it onto television in 1981. The first wheelchair division was added in 2000. The number of finishers was more than 50,000 in 2013.

Weather plays a part in a marathon. Sunny and dry weather is best. **Temperatures** between 50°F and 60°F are perfect. The New York City Marathon was first run in September. It was then moved to October. Early November finally became the right time. That month had less high **humidity**. This keeps athletes from running in unsafe temperatures.

Average Monthly Weather
New York City, New York, United States

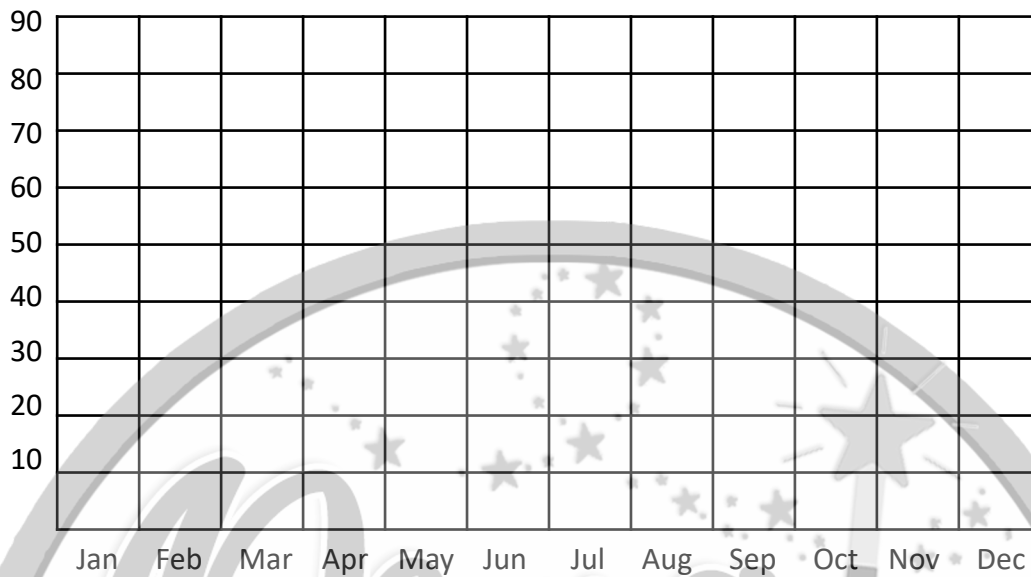
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Average High Temp in °F	39°F	43°F	52°F	64°F	72°F	80°F	84°F	84°F	76°F	64°F	55°F	44°F
Average Rainfall in inches	3.8	3.3	4.4	4.3	4.4	4.3	4.6	4.5	4.4	4.2	4.1	4.2
Average Snowfall in inches	8.4	9.2	4.1	0.5	0	0	0	0	0	0.1	0.5	3.9

(Source: NOAA)

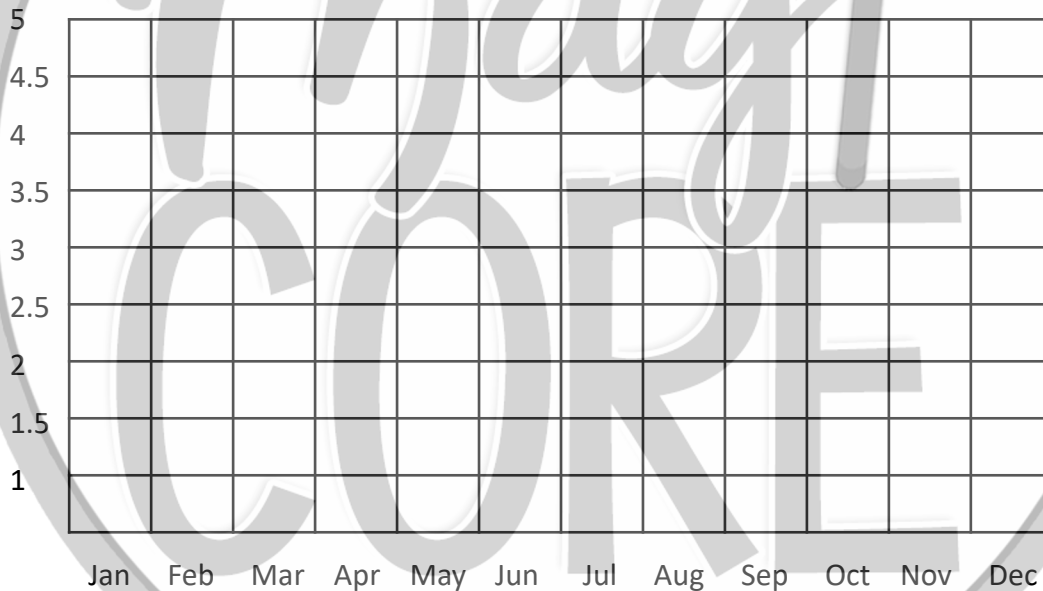
The New York City Marathon has been run in **precipitation**. There have even been race days with gusty winds. The runners won't be stopped by the weather, though. They've got their eyes on the finish line.

New York City Marathon Questions

1. Use the grid below to create a graph representing average high temperature in New York City.



2. Use the grid below to create a graph representing average rainfall (in inches) in New York City.



3. Based on your graphs, is November the best choice for the New York City Marathon? Why or why not? Use evidence from your graphs.

4. If the New York City Marathon had to be moved, which month would you suggest it be moved to? Use evidence from your graphs.

Uttarayan International Kite Festival

Uttarayan means “when the sun starts its northward journey.” It marks the end of the winter **season** for India. The sun returns to warm the northern **hemisphere**. Uttarayan is celebrated on January 14th with a *patang*, or kite-flying, festival in India. Gujarat, a state in northwestern India, is known for its Uttarayan International Kite Festival. This festival began in 1989.



Children and adults get involved in the kite festival. After winter, people believe the bright sunshine of Uttarayan brings good health. The festival is a great way to enjoy the weather outside. Special foods such as *laddu* are served. Laddu is a ball-shaped sweet made from flour, sugar, and shortening. Families buy or make their own kites. Kite flying starts early in the morning and goes into the night. This festival is a time for socializing. People gather on the flat roofs of houses and buildings. They have friendly kite competitions. The skies are full of kites in every color, every size, and every shape. The festival brings master kite flyers from all over the world. At night, bright white kites and thousands of paper lanterns fill the dark sky.

Each Uttarayan season, more than 10 million kites are sold in Ahmedabad, Gujarat's largest city. Kites like big, open spaces and wind for flying. When the wind has to go around objects in its path, such as buildings and trees, it gets bumpy, or **turbulent**. This kind of wind isn't good for flying kites. The amount of wind you need depends on the kite you have. Heavy

kites need more wind. Other kites are designed for light wind. Most kites need average **wind speeds** between 4 and 10 miles per hour. Kites can often be adjusted for different wind conditions. An experienced kite flyer always watches the wind.

Average Monthly Weather
Gujarat, India

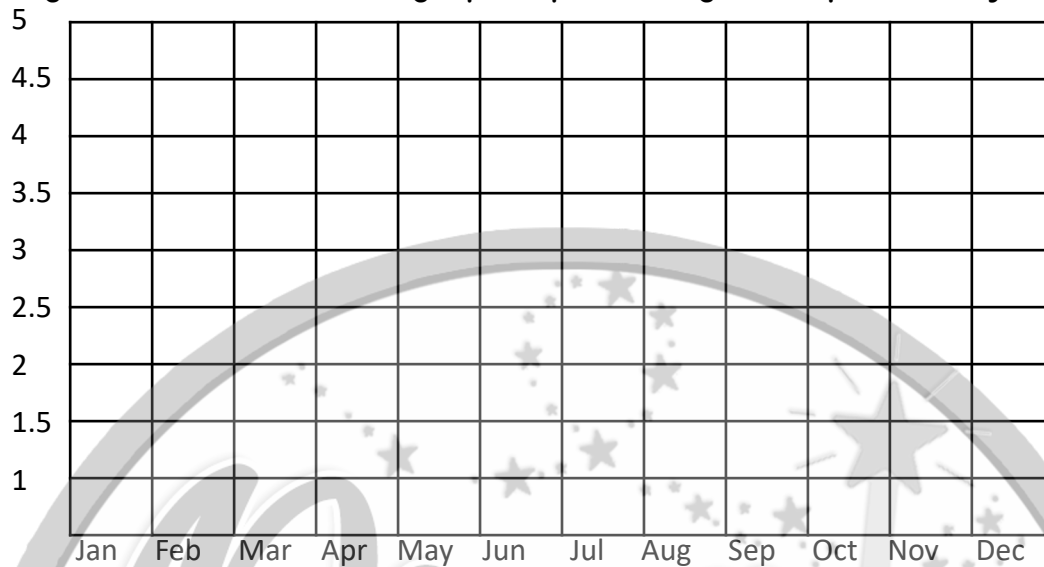
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Average Wind Speed in miles per hour	2.4	2.1	2.2	2.8	4.5	4.7	4.4	3.9	2.7	1.7	1.7	2.0
Average Temp in °F	69°F	73°F	81°F	88°F	91°F	89°F	83°F	81°F	82°F	82°F	77°F	71°F
Average Precipitation in inches	0	0	0	0	0	2.9	12.1	9.5	4.3	0.7	0.1	0
Average Hours of Sun	9.7	10.2	10.8	11.4	11.3	9.5	7.1	6.2	8.0	10.1	9.9	9.6

(Source: climate-data.org)

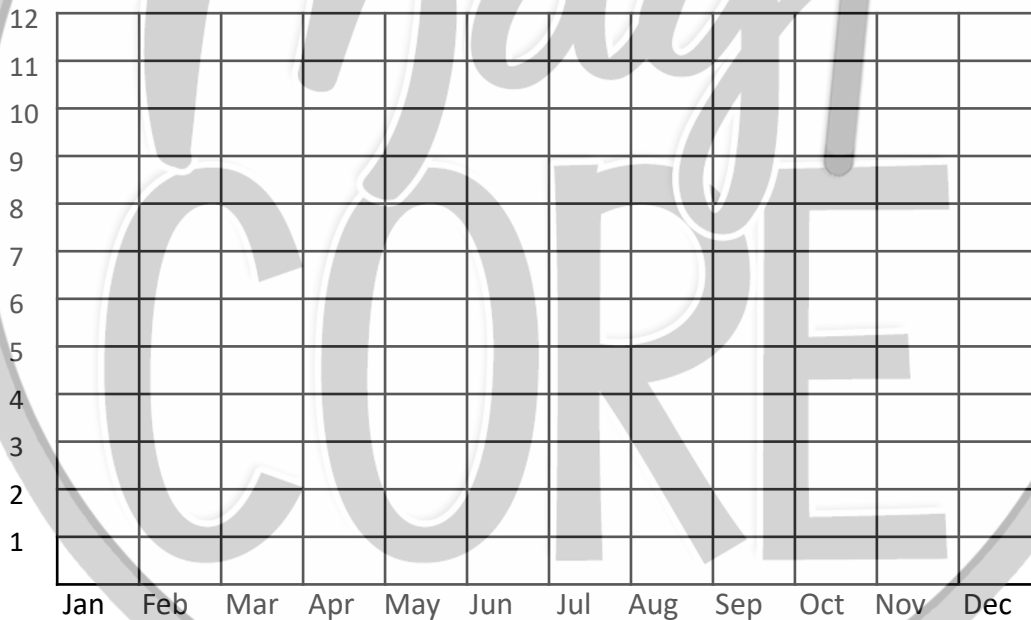
The Uttarayan International Kite Festival is a happy time for Indians. It brings people together to have fun outdoors as the season changes.

Uttarayan International Kite Festival Questions

1. Use the grid below to create a graph representing wind speed in Gujarat, India.



2. Use the grid below to create a graph representing average rainfall (in inches) in Gujarat, India.



3. Based on your graphs, why do you think they picked January 14th for the kite festival? Use evidence from your graphs.

4. If the Uttarayan Kite Festival had to be moved, would August be a good choice for the festival? Use evidence from your graphs.

Tour de France

The Tour de France is over 100 years old. The first Tour de France took place in 1903. It is the world's longest cycle race. Athletes travel over 2,200 miles. The race is 23 days long. It happens in July. The route is a little different each year. The race doesn't just take place in France, either. It has also traveled through nearby countries. It always ends in Paris, France.



Each day of the Tour de France is called a "stage." The stages can last up to 6 hours. There is a total of 21 stages. Riders get two days to rest. The race goes over flat land. It also goes through mountains. Some parts of the race are downhill. Riders move fast on those parts. Others are hard climbs for miles. The winner of the Tour de France has the fastest time for all the stages together.

Weather affects the Tour de France. Some of the start locations are not close. The weather could change along the route. Rain is the biggest threat. This **precipitation** can make roads slick. That is dangerous for cyclists. Hot, **humid** weather makes pedaling up a mountain a struggle. **Crosswinds** can separate teammates.

Average Monthly Weather

Paris, France

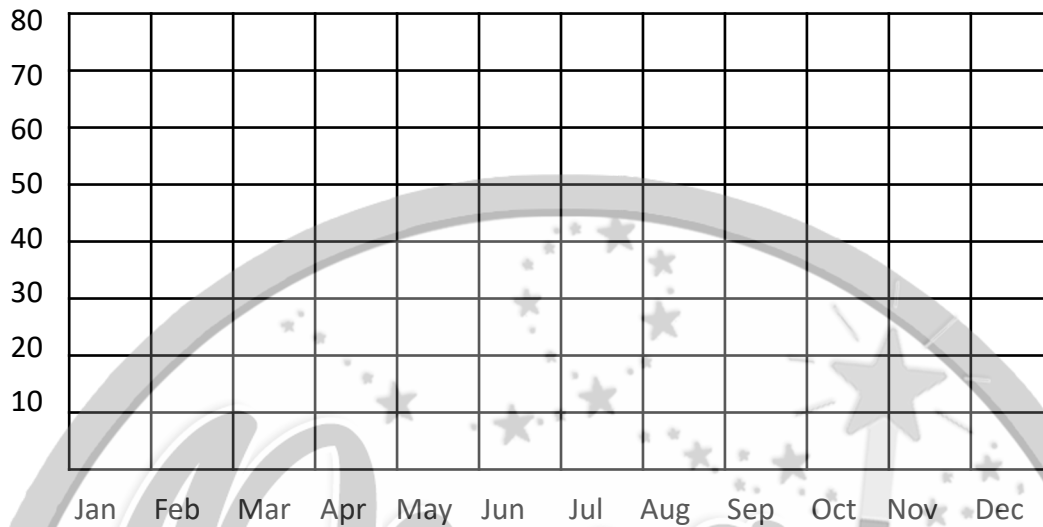
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Average Wind Speed in miles per hour	11.5	11.2	10.7	9.9	9.1	8.7	8.4	8.1	8.9	9.8	10.3	11.1
Average High Temp in °F	46°F	48°F	55°F	62°F	68°F	74°F	78°F	78°F	71°F	63°F	52°F	47°F
Average Rainfall in inches	2.2	2	2.1	2.2	2.7	2.5	2.4	2.4	2	2.6	2.5	2.8
Average Humidity %	85%	81%	76%	71%	71%	68%	65%	66%	71%	79%	86%	86%

(Source: NOAA and climate-data.org)

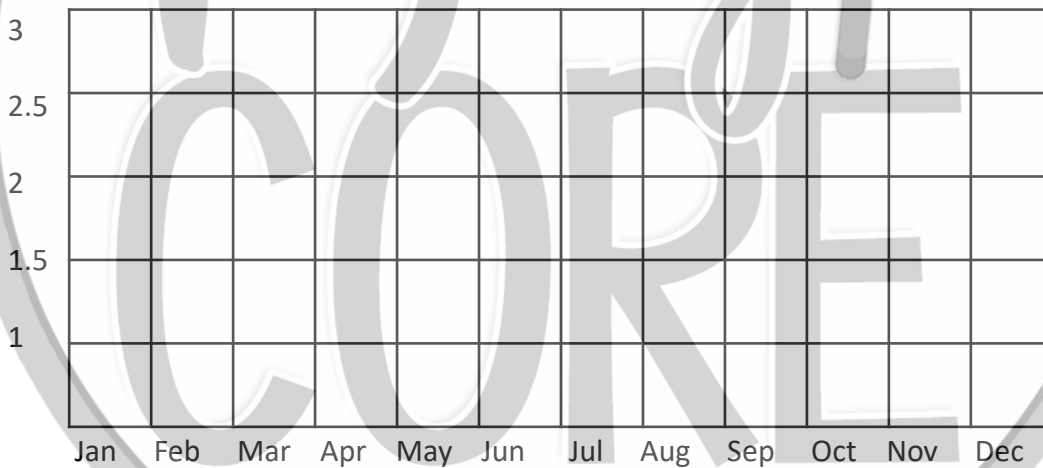
Riding in the Tour de France takes strength. It is one of the most difficult athletic events in the world. Cyclists push their bodies to win.

Tour de France Questions

- Use the grid below to create a graph representing average high temperature in Paris, France.



- Use the grid below to create a graph representing average rainfall (in inches) in Paris, France.



- Based on your graphs, why do you think they picked July for the Tour de France? Use evidence from your graphs.

- If the Tour de France had to be moved, would September be a good month to move it to? Use evidence from your graphs.

World Climates

3rd grade

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4. Polar Climate (480L, 720L)
5. Marine West Coast Climate (490L, 790L)
6. Mid-continental Climate (470L, 800L)
7. Highland Climate (490L, 800L)
8. Temperate Climate (490L, 790L)
9. Essay Template

Each passage set includes two differentiated passages on a third-grade level (one at the beginning of the band, one towards the end) and a question set geared towards comprehension and science mastery. The first question is differentiated to include a fill-in-the-blank diagram (lower complexity) or an open-ended diagram (higher complexity).

How to Use This Resource

This resource was created with the NGSS Science Standards in mind. It includes seven differentiated passages aligned to the following standard:

3-ESS2-2: World Climates

Obtain and combine information to describe climates in different regions of the world.
(Patterns)

Clarification Statement: None

Assessment Boundary: None

Here are some suggestions for using these passages:

- Use as independent work after you have taught an overview of this standard. Assign the different levels based on the passage students can read and comprehend independently.
- Use as a reading center to reinforce key comprehension and science concepts at the same time!
- Use as a homework or review packet.
- Use as an intervention for students who need to revisit science concepts.



Climate Patterns

Use this chart to take notes on each climate type. You will use these notes to write an essay at the end of this resource.

Climate	Average Temperature	Average Precipitation	Description of Climate
Equatorial Climate			
Polar Climate			
Marine West Coast Climate			
Mid-Continental Climate			
Highland Climate			
Temperate Climate			

Equatorial Climate

The **equator** is a line around the earth. It is imaginary. It is the same distance from the North and South Poles. This line cuts the earth into two parts. Costa Rica in Central America is near the equator. Kenya in Africa is also there. The **weather** is **tropical**. These areas have strong sunlight all year. They do not have all four **seasons**. Some places have one hot season. Others have two seasons, a dry one and a wet one.



Beach in Limon, Costa Rica

Rainforests are found in **regions** close to the equator. They have many plants and animals. More kinds of plants are in a rainforest than in other places. Rainforests have half of the world's animal species. They also give about 40% of the world's oxygen. The plants and animals that live in the rainforest are able to live in an **equatorial climate**.



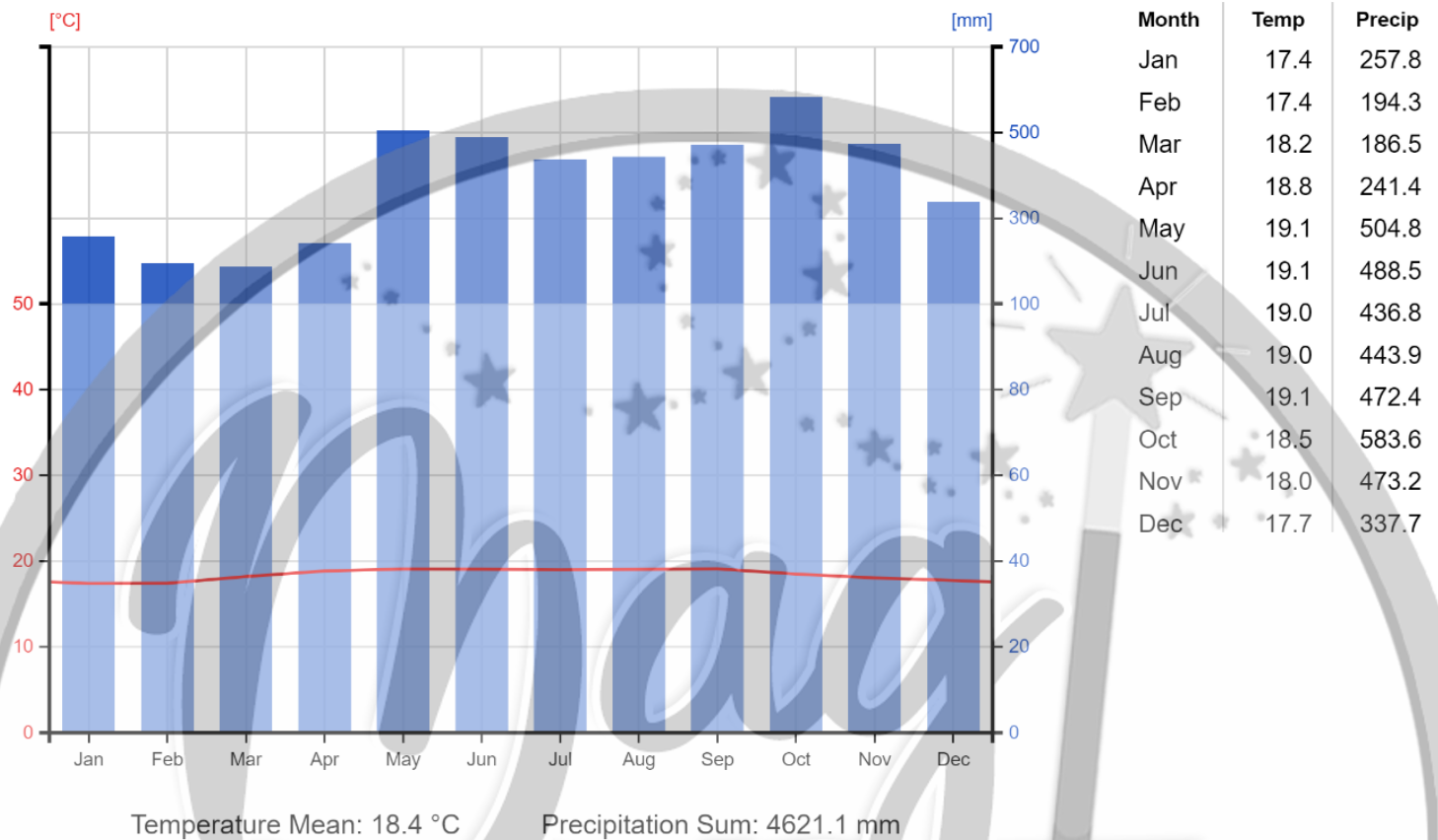
Palm tree during monsoon

Monsoons happen in some places near the equator. Wind **patterns** cause this weather. The winds carry moisture. This moisture is from the ocean. It is released in heavy rains. Monsoons can be good for growing crops. Flooding can cause problems, though.

People living in this area must be ready for the climate. The clothes they wear are appropriate for the weather. The foods they grow are also right for the climate. The activities they do depend on the climate, too.

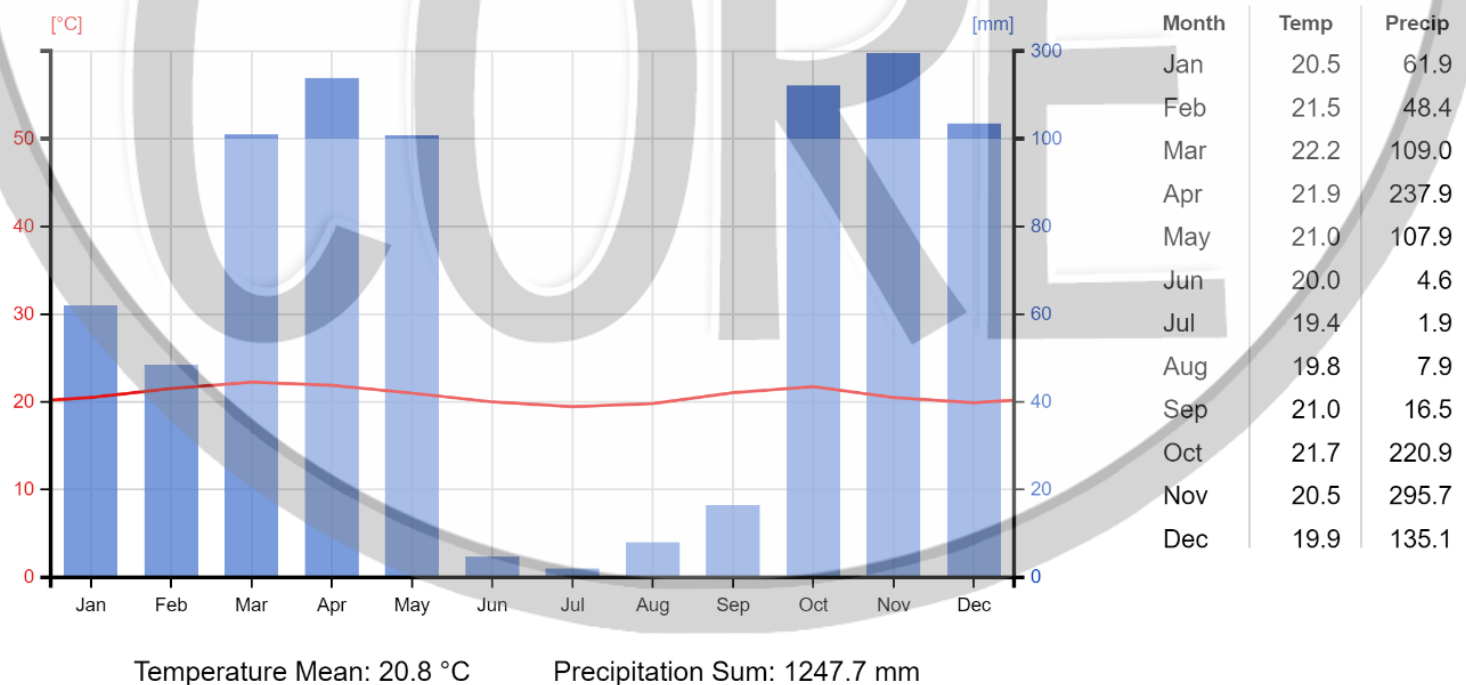
Average Monthly Temperature and Precipitation for Paraíso, Cartago, Costa Rica

9.749N, 83.753W | Elevation: 1400 m | Climate Class: Cfb | Years: 1990-2019



Average Monthly Temperature and Precipitation for Ruiri, Meru, Kenya

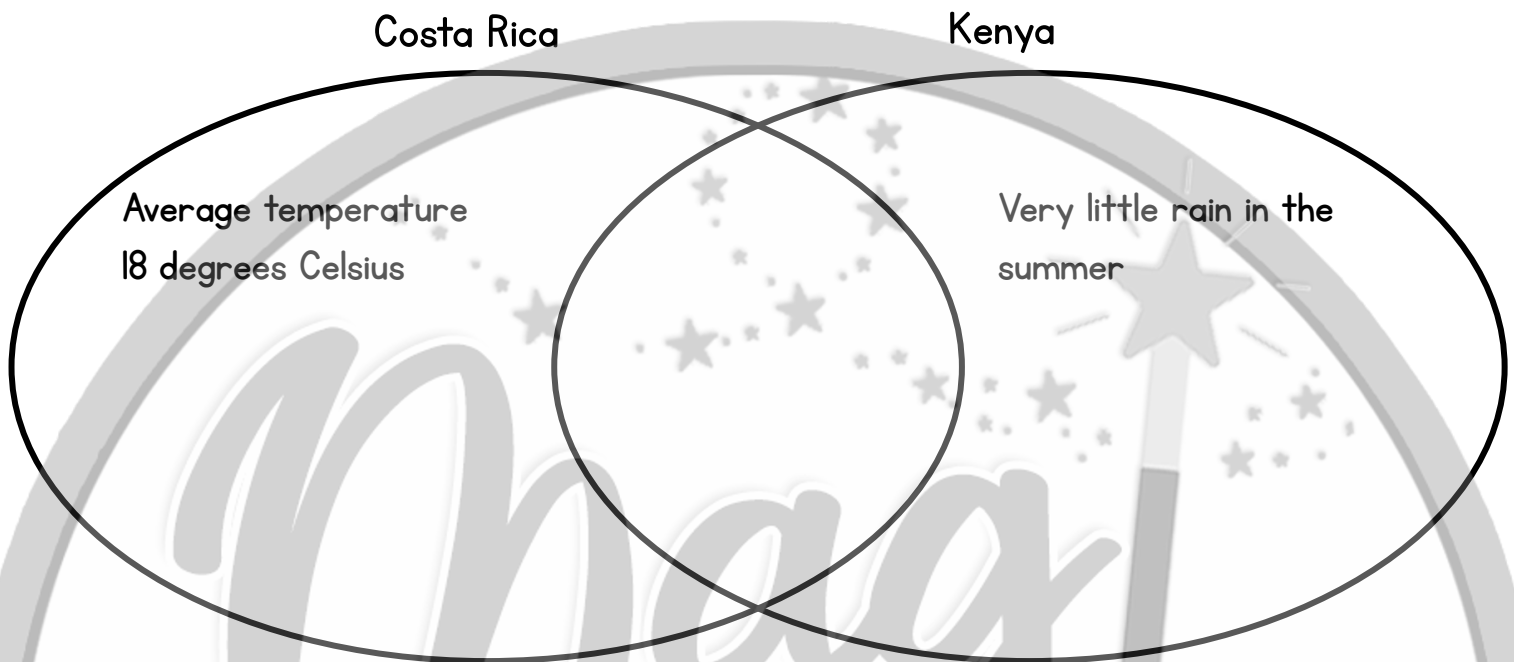
0.024N, 37.906E | Elevation: 863 m | Climate Class: A | Years: 1990-2019



(Note: Red line is temperature. Blue bar is precipitation.)

Equatorial Climate Questions

1. Use the Venn Diagram to compare the climates in the 2 regions presented in the graph.



2. Describe the location of equatorial climates.

3. Based on the information in the text, how would you prepare to visit this type of climate? What would you need to bring with you?

Mid-Continental Climate

Mid-continental climates are found **inland**.

They are not near oceans. Quebec City in Canada is part of this zone. All four **seasons** happen here.

The animals that live in this climate zone **adapt** to the weather. Antelope are found here. They grow long fur in the winter. They shed these coats in the summer. Small mammals include squirrels and raccoons. They eat nuts and insects. Reptiles and frogs live here, too. Many birds **migrate** to another climate in winter.



Quebec City in winter

Plants in the mid-continental climate zone can handle the seasons. Oak trees are in this **region**. They can live through different temperatures. Most shrubs and grasses do well here, as well.

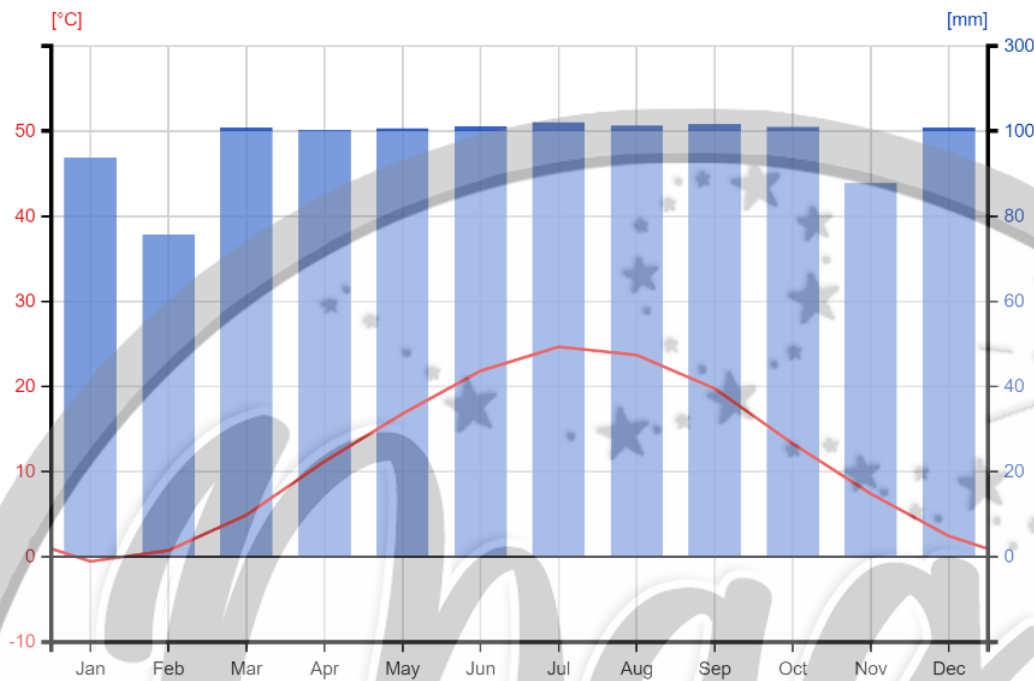
People live in mid-continental climates. T-shirts are worn in the summer. Jackets are needed in the winter. Houses have heat in the colder months. They often have air conditioning for the warmer months. Tornadoes and blizzards can happen in this climate area. People usually enjoy the different seasons, though.



Oak trees with leaves in summer

Average Monthly Temperature and Precipitation for New York City, New York, United States

40.7N, 74.006W | Climate Class: Cfa | Years: 1990-2019

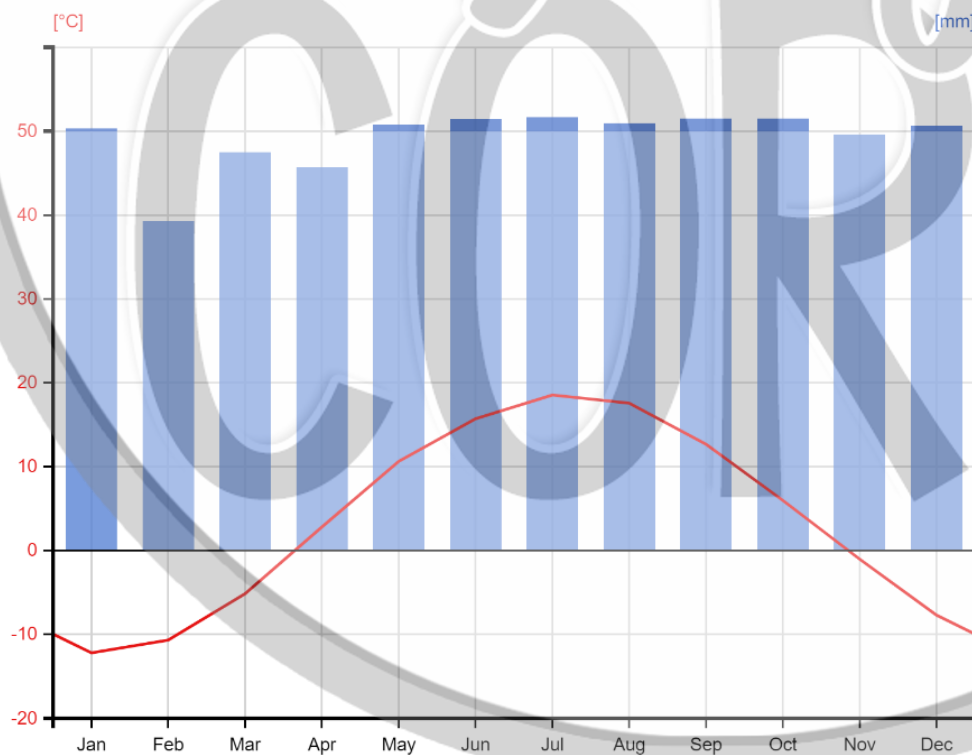


Temperature Mean: 12.2 °C

Precipitation Sum: 1252.6 mm

Average Monthly Temperature and Precipitation for Québec, Quebec, Canada

46.814N, 71.208W | Elevation: 52 m | Climate Class: Dfb | Years: 1990-2019



Temperature Mean: 3.9 °C

Precipitation Sum: 1339 mm

(Note: Red line is temperature. Blue bar is precipitation.)

Mid-Continental Climate Questions

1. Use the Venn Diagram to compare the climates in the 2 regions presented in the graph.

New York City

Quebec

Precipitation is
high all year

2. Describe the location of mid-continental climates.

3. Based on the information in the text, how would you prepare to visit this type of climate? What would you need to bring with you?

Temperate Climate



Temperate forest in the fall

Temperate climates have many animals. Owls and rabbits live here. Birds like seagulls make this their home, too. Moose and bears can be found in forests. Turtles and many insects live in this zone, as well. Its climate is good for plant growth, too. Trees fill the forests. Wildflowers are also common.

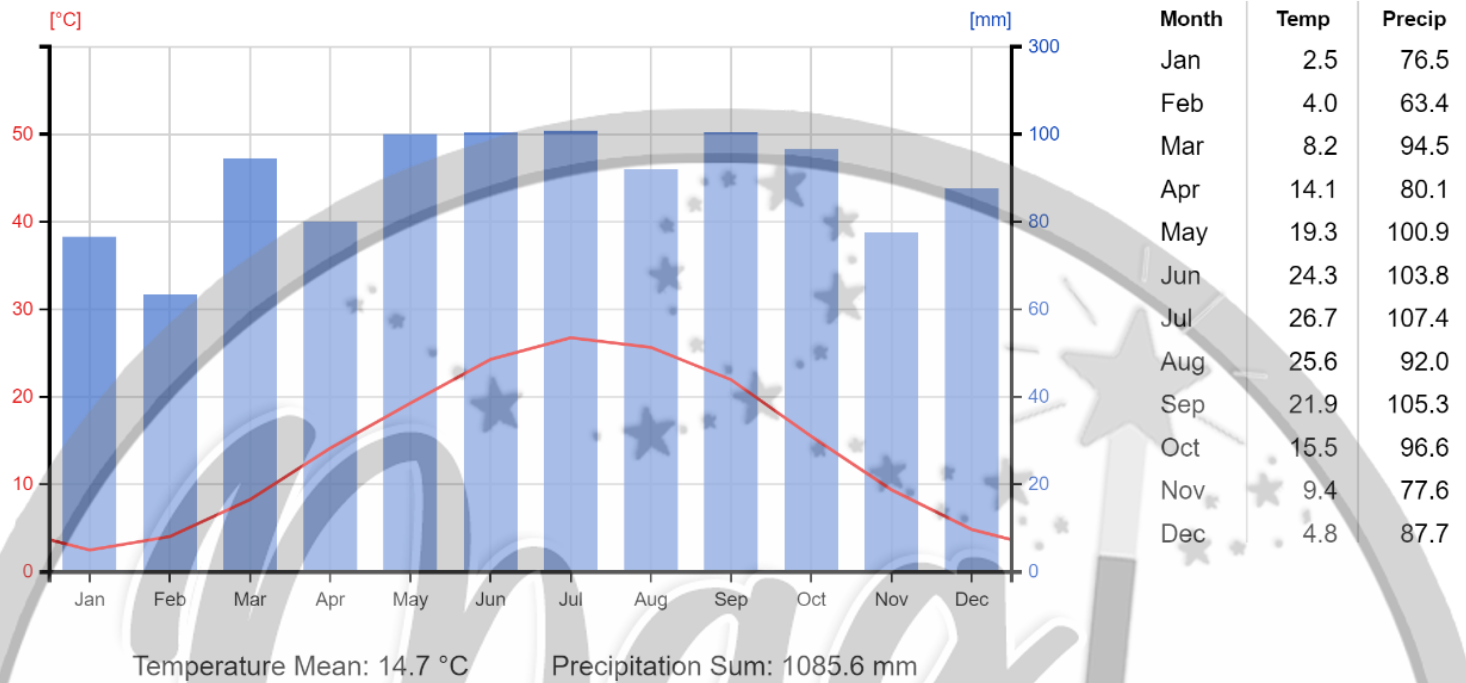
Most of the world's people live in this climate zone. Cities have been built here. City life affects climate. Cities are warmer than the areas around them.



Washington, D.C.

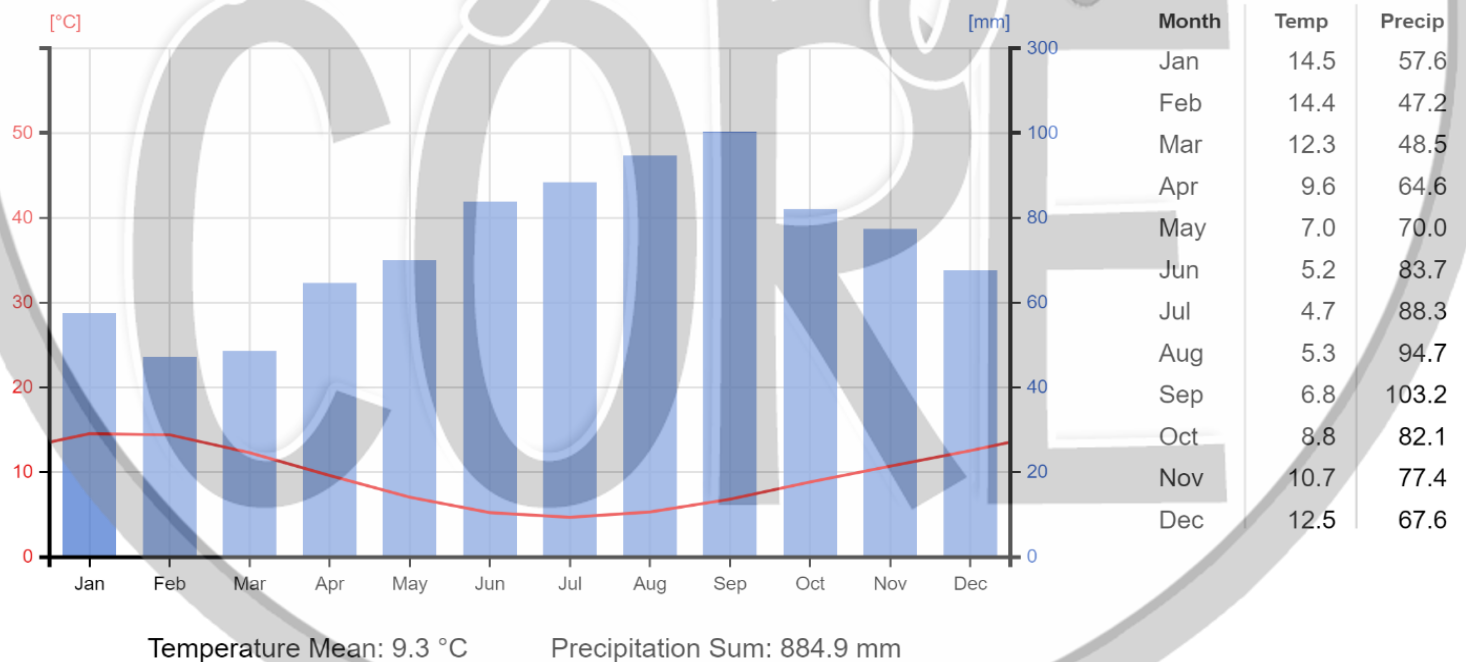
Average Monthly Temperature and Precipitation for Washington, Washington, D.C., United States

38.907N, 77.037W | Elevation: 29 m | Climate Class: Cfa | Years: 1990-2019



Average Monthly Temperature and Precipitation for Miena, Tasmania, Australia

42.041S, 146.809E | Elevation: 905 m | Climate Class: Cfb | Years: 1990-2019



(Note: Red line is temperature. Blue bar is precipitation.)

Temperate Climate Questions

1. Use the Venn Diagram to compare the climates in the 2 regions presented in the graph.

Washington, D.C.

Tasmania, Australia

Temperature is
highest in July

Temperature is lowest
in July

2. Describe the location of temperate climates.

3. Based on the information in the text, how would you prepare to visit this type of climate? What would you need to bring with you?

Weather-Related Hazard Solution

3rd grade

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4. Levees (500L, 820L)
5. Stilt Houses (490L, 730L)
6. Tuned Mass Dampers (490L, 750L)
7. Tornado Proof Homes (490L, 760L)

Each passage set includes two differentiated passages on a third-grade level (one at the beginning of the band, one towards the end) and a question set geared towards comprehension and science mastery. The first question is differentiated to include a fill-in-the-blank diagram (lower complexity) or an open-ended diagram (higher complexity).

How to Use This Resource

This resource was created with the NGSS Science Standards in mind. It includes seven differentiated passages aligned to the following standard:

3-ESS3-1: Weather-Related Hazard Solution

Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard. (Cause and Effect)

Clarification Statement: Examples of design solutions to weather-related hazards could include barriers to prevent flooding, wind-resistant roofs, and lightning rods.

Assessment Boundary: None

Here are some suggestions for using these passages:

- Use as independent work after you have taught an overview of this standard. Assign the different levels based on the passage students can read and comprehend independently.
- Use as a reading center to reinforce key comprehension and science concepts at the same time!
- Use as a homework or review packet.
- Use as an intervention for students who need to revisit science concepts.



Amphibious Homes

The most common natural **hazard** is flooding. Water flows onto the land. It covers places that are usually dry. Storms often cause floods.

Floods can bring lots of damage. Homes can be destroyed. People are often moved to safer places. Drowning is possible. Diseases can also spread. This happens when extra water just sits on the land. It's often hard to get help to people in flooded areas.



Flooded house

We can't get rid of floods. We can be better prepared for them, though. Scientists study patterns in **weather** and **climate**. They are able to find areas in danger of flooding.

One **solution** is building **amphibious** homes. These homes rest on the ground. They rise up when there is a flood. The house floats like a boat. The house lowers back to the land once the waters are gone. These homes cost more than regular houses. It's worth the extra money for people living in flood areas.



There are a few bad sides to these homes. Owners don't have control over the house rising. The house may not stay level when it rises. The system that makes the house float must also be checked often. These homes are still a smart solution.

The number of floods is growing. They are getting stronger, too. Building different kinds of homes is one way to help. Living in areas where floods occur would be less risky.

Amphibious Homes Questions

1. Use the chart below to describe the problem and solution described in the article.

Problem	Solution
The most common natural hazard is flooding. It can damage and even destroy homes.	

2. What kinds of areas would benefit from these types of homes? What data do scientists need to track? Describe the weather there.

3. What are the downsides to this solution? Do you think the solution is effective at solving the problem? Why or why not? Give examples from the text to support your answer.

Lightning Rods

According to the National Weather Service, more than 23 million cloud-to-ground lightning strikes occur in the United States each year. Lightning is a flash of electricity that happens during a thunderstorm. Frozen raindrops bump into each other in thunderclouds. This builds up electric charges.

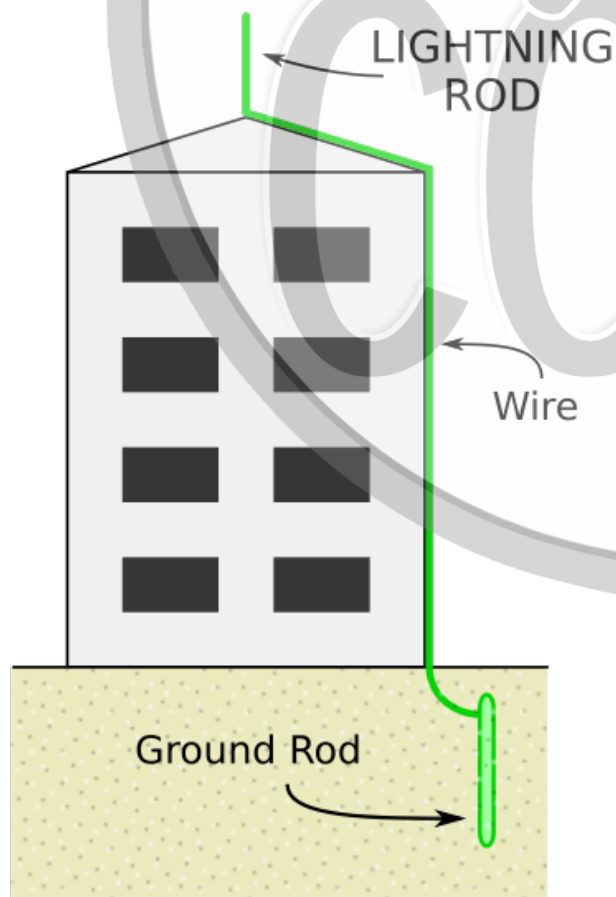
Positive charges form at the top of the cloud.

Negative charges form at the bottom. A positive charge also builds up on the ground beneath the cloud. When charges from the cloud and the ground connect, a lightning strike occurs. It travels at the speed of light (186,000 miles per second). Lightning usually strikes the tallest object, but this isn't always the case. Lightning can also strike the same spot more than once.



Lightning Strike

One hazard of concern is lightning striking buildings. Lightning heats the air it passes through to 50,000°F. That temperature is hotter than the surface of the sun! This means a bolt of lightning can cause a fire when it strikes a building. It can flow through metal pipes found in plumbing. Lightning can also travel through electrical wires. A power surge from a lightning strike has millions of **volts**. It's capable of frying expensive electronic equipment with that much power.



Lightning Rod Diagram

Lightning rods are one **solution** to prevent damage caused by a lightning strike. Lightning rods are metal rods attached to the tops of buildings. They are made of metals that **conduct** electricity such as copper. These rods are connected to a wire system. That wire system runs all the way to the ground. Lightning rods don't stop lightning strikes. Instead, they give the lightning a safe route to travel. The ground absorbs the powerful electric charge. The building is protected from a direct lightning strike and the dangers it can bring.

Lightning rods must be installed by professionals. Incorrectly grounded rods can bring risks beyond those caused by lightning strikes. This solution can also be costly. Lightning rods can be customized to specific buildings, though. They also don't take up much space. That makes them an attractive option for protecting against lightning strikes.

Lightning Rods Questions

1. Use the chart below to describe the problem and solution described in the article.

Problem	Solution

2. What kinds of areas would benefit from this solution? What data do scientists need to track? Describe the weather there.

3. What are the downsides to this solution? Do you think the solution is effective at solving the problem? Why or why not? Give examples from the text to support your answer.

Levees

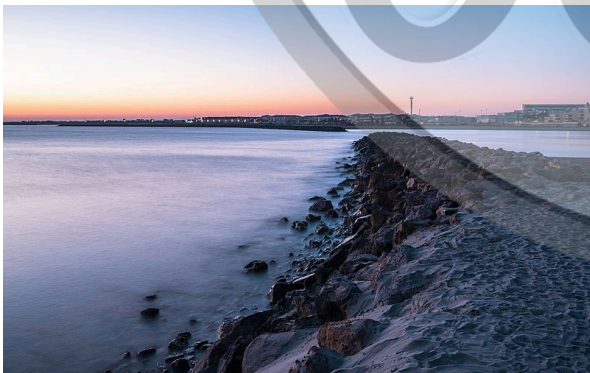
Hurricanes are powerful storms. They have high winds. Warm, moist air rises over the water. Cooler air then takes its place. Storm clouds form as the air circles over the water. They grow until a hurricane forms. Wind speeds can be between 75 to 200 miles per hour.



Aerial view of a hurricane

Rain, winds, and waves come with a hurricane. **Storm surges** can be the most damaging part. A storm surge pushes water onto the land. It causes flooding. Flooding destroys buildings. It ruins animal habitats. It kills people and wildlife. Beaches get worn down. Most of the problems during a hurricane happen due to flooding.

Hurricanes are predictable. **Meteorologists** warn people. These people can then prepare. They can leave the area before the hurricane hits. This doesn't save their homes, though. **Levees** are one **solution**. They have worked in the Netherlands. They held back the North Sea. Builders want to bring levees to the United States.



Levee at a beach in France

A levee is a wall. It keeps water from going where it isn't wanted. A levee keeps storm surges from dumping water onto the coast. Natural levees are made of earth. Banks along the water hold it back. Levees made by people are built by piling up soil, sand, or rocks. They may also be made of wood or plastic. Sometimes metal or concrete is used.

Levees do a good job of protecting the coast... when they work. Flooding can still occur if they break. The water may then head on a more dangerous path. The best systems use levees with other structures such as gates.

Levees Questions

1. Use the chart below to describe the problem and solution described in the article.

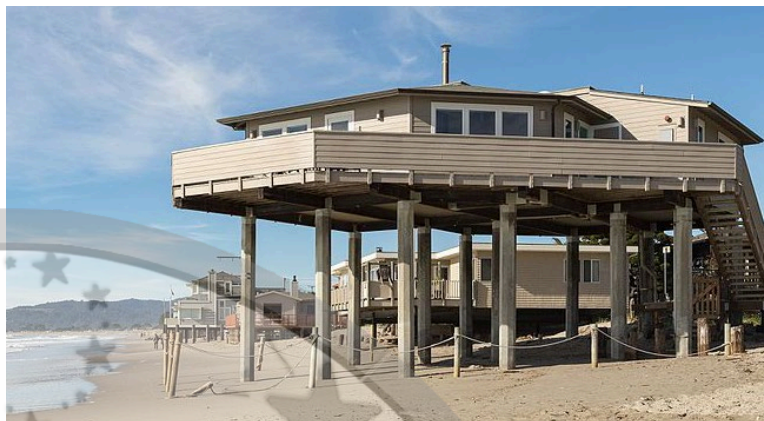
Problem	Solution
Hurricanes can cause storm surges and flooding that destroys homes and habitats.	

2. What kinds of areas would benefit from this solution? What data do scientists need to track? Describe the weather there.

3. What are the downsides to this solution? Do you think the solution is effective at solving the problem? Why or why not? Give examples from the text to support your answer.

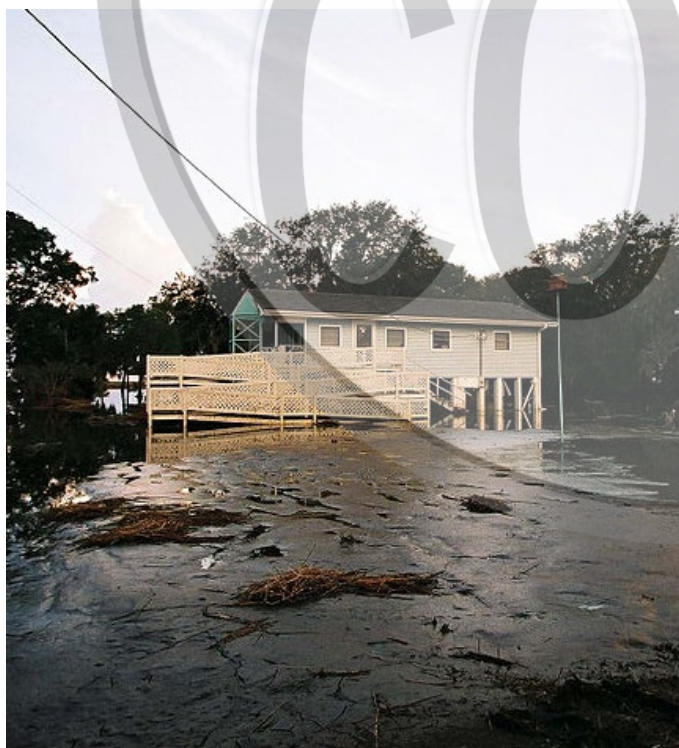
Stilt Houses

Many people can't resist living near the ocean. They love looking at the water. The sound of the waves relaxes them. The climate is perfect for enjoying the beach. This makes people want to build homes near the water. The only trouble is that sometimes the coasts can be dangerous.



Stilt house on beach in California

Storms such as **hurricanes** often beat up the coastline. Rains pound the land. Winds rip through the area. Waves crash onto the shore. They send water gushing where people have built their lives. These storms cause destruction when they hit. Areas get damaged by the wind, rain, and flooding. Human and animal lives are often lost. Hurricanes can be predicted. They can't be stopped, though. What people can do instead is plan.



House that avoided hurricane damage
because of stilts

One **solution** is building **stilt** houses. These homes are raised off the ground. The house is built on top of support stakes called piles. These are made from wood. The wood is **resistant** to water. They are driven right into the water or land. Concrete is often poured around the piles for added support. A deck is made on top of the piles. The house is built on the deck. Stilt houses usually rest 10-12 feet off the ground. This allows for high tide. They are designed to avoid water damage.

Stilt houses have many **benefits**. They are easy to construct. These houses can be built in places where other houses can't. Being higher off the ground keeps the house safe from more than just flooding. Unwanted animals are kept out. Air can flow under the house. This keeps the house cooler in hot climates. It also allows the house to take wind gusts. A stilt house is up higher. It can offer owners a better view.

Professionals must be hired to build these homes. Support problems might happen if they aren't built correctly. The right materials also need to be used. These will prevent water damage and cracking. The heights of the pilings must be right, too. Stilt houses are one way for people to enjoy living on the coast.

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Stilt Houses Questions

1. Use the chart below to describe the problem and solution described in the article.

Problem	Solution
Houses on the beach have to stand up to wind, waves, and flooding from storms.	

2. What kinds of areas would benefit from this solution? What data do scientists need to track? Describe the weather there.

3. What are the downsides to this solution? Do you think the solution is effective at solving the problem? Why or why not? Give examples from the text to support your answer.

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