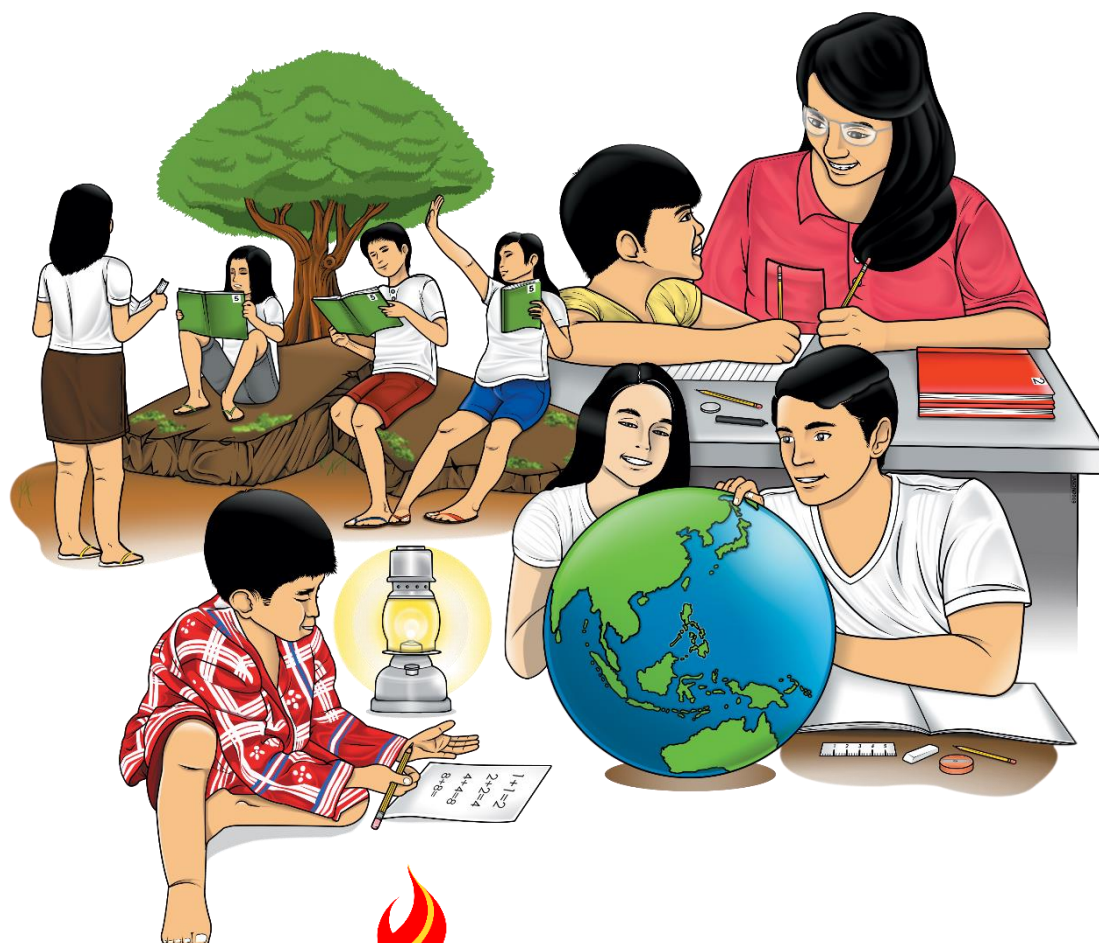


# Science

## Quarter 3 – Module 4: Factors Affecting Climate



**Science – Grade 9**  
**Alternative Delivery Mode**  
**Quarter 3 – Module 4: Factors Affecting Climate**  
**First Edition, 2020**

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Published by the Department of Education  
Secretary: Leonor Magtolis Briones  
Undersecretary: Diosdado M. San Antonio

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**Printed in the Philippines**

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# **Science**

## **Quarter 3 – Module 4: Factors Affecting Climate**

# **Introductory Message**

This Self-Learning Module (SLM) is prepared so that you, our dear learners, can continue your studies and learn while at home. Activities, questions, directions, exercises, and discussions are carefully stated for you to understand each lesson.

Each SLM is composed of different parts. Each part shall guide you step-by-step as you discover and understand the lesson prepared for you.

Pre-tests are provided to measure your prior knowledge on lessons in each SLM. This will tell you if you need to proceed on completing this module or if you need to ask your facilitator or your teacher's assistance for better understanding of the lesson. At the end of each module, you need to answer the post-test to self-check your learning. Answer keys are provided for each activity and test. We trust that you will be honest in using these.

In addition to the material in the main text, Notes to the Teacher are also provided to our facilitators and parents for strategies and reminders on how they can best help you on your home-based learning.

Please use this module with care. Do not put unnecessary marks on any part of this SLM. Use a separate sheet of paper in answering the exercises and tests. And read the instructions carefully before performing each task.

If you have any questions in using this SLM or any difficulty in answering the tasks in this module, do not hesitate to consult your teacher or facilitator.

Thank you.



## ***What I Need to Know***

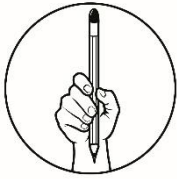
This module was designed and written with you in mind. It is here to help you master the different factors affecting the climate of an area. The scope of this module permits it to be used in many different learning situations. The language used recognizes the diverse vocabulary level of students. The lessons are arranged to follow the standard sequence of the course. But the order in which you read them can be changed to correspond with the textbook you are now using.

The module focuses on achieving this learning competency:

Explain how different factors affect the climate of an area. (S9ES-IIIe-30)

After going through this module, you are expected to:

1. differentiate climate from weather;
2. describe factors that affect climate;
3. explain how latitude, altitude and land topography affect climate; and,
4. explain how ocean surface and circulation directly affect the pattern of climate around the world.



## ***What I Know***

**Directions:** Choose the letter of the best answer. Write the chosen letter on a separate sheet of paper.

1. What do you call the physical attributes, surface shapes and features of a particular area?
  - A. altitude
  - B. latitude
  - C. seismograph
  - D. topography

Use the table to answer question number 2.

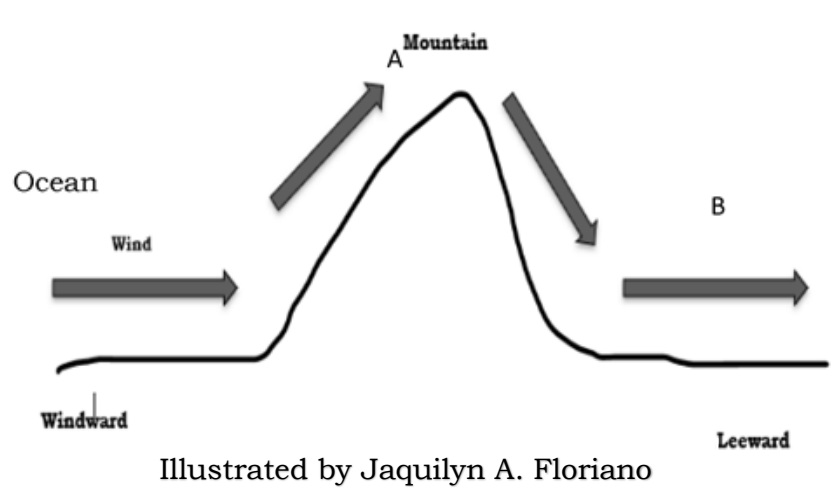
A scientist recorded the following data for different areas:

<b>Areas</b>	<b>Mountain Range</b>	<b>Bodies of Water</b>
A	Present	Present
B	Absent	Present
C	Absent	Present
D	Absent	Absent

2. What is the coldest area?
  - A. A
  - B. B
  - C. C
  - D. D
3. How do oceans affect the climate of an area?
  - A. The solar radiation is absorbed by ocean.
  - B. Ocean currents act much like a conveyor belt.
  - C. The ocean helps to distribute heat around the globe.
  - D. All of the above.

4. Which are the basis of classifying the types of climate of an area?
- A. air pollution, wind, and temperature
  - B. precipitation, temperature, and wind
  - C. topography, wind, and water cycle
  - D. water cycle, wind, and precipitation
5. When moist winds approach a mountain, these often drop rain as winds rise over the mountain and come down on the other side. As the air comes down the leeward side, it warms, expands, and reduces the possibility of precipitation. How does this phenomenon affect the leeward side of the mountain?
- A. The leeward side of the mountain is cooler and wet.
  - B. The leeward side of the mountain is cooler and drier.
  - C. The leeward side of the mountain is warmer and wet.
  - D. The leeward side of the mountain is warmer and drier.
6. During summer, many people visit Baguio because of the cold weather. What do you think makes Baguio cold?
- A. latitude
  - B. altitude
  - C. topography
  - D. distance from the ocean
7. Why do places at the same latitude but different altitudes have different climate?
- A. Different altitudes receive different amounts of precipitation
  - B. Different altitudes receive different amounts of heat
  - C. Places with higher altitudes have lower temperature
  - D. Places with higher altitudes have higher temperature
8. Which of the following **BEST** describes climate?
- A. The weather that occurs in the atmosphere within a day.
  - B. The pattern of weather that occurs in a region over a long period of time.
  - C. The pattern of weather that occurs in a region over a short period of time.
  - D. The disturbance in the atmosphere that happens in a long period of time.
9. Why do mountain climbers bring thick jackets when they go up the mountain?
- A. The temperature increases as the altitude increases.
  - B. The temperature decreases as the altitude increases.
  - C. The altitude increases as the temperature increases.
  - D. The altitude decreases as the temperature increases.

10. A diagram illustrating the movement of an air mass over a mountain is shown. How does the air in A differ from the air in B?



- A. The air at A is drier than at B.  
B. The air at A is colder than at B.  
C. The air at A is moving faster than at B.  
D. The air at A is more polluted than at B.
11. How does the windward side differ from the leeward side of a high land?
- A. The windward receives more precipitation than the leeward.  
B. The windward side receives more heat than the leeward side.  
C. The leeward side has more vegetation than the windward side.  
D. The leeward side receives more precipitation than the windward side.

12-15. Write:

- A – if the statement describes climate.  
B – if the statement describes weather.  
C – if the statement describes both climate and weather.  
D – if the statement is neither supports climate nor weather.

12. It is the day-to-day or short-term condition of the changes in the atmosphere.
13. It is the averaged weather condition of any place over 30 years.
14. It is affected by temperature, pressure, humidity, cloudiness, wind, precipitation, rain, flooding, and ice storms.
15. It is long-term observations of the atmospheric phenomena such as humidity, temperature, the sunshine, wind.



## Factors Affecting Climate

This module was designed and written with you in mind. It is here to help you master the different factors affecting the climate of an area. Climate and weather are related concepts, but distinctly different. In this module however, we will deal with the difference between the two processes in terms of factors that affect different areas. We will use them carefully throughout this module.

Here are some key questions for you to ponder after finishing this module:

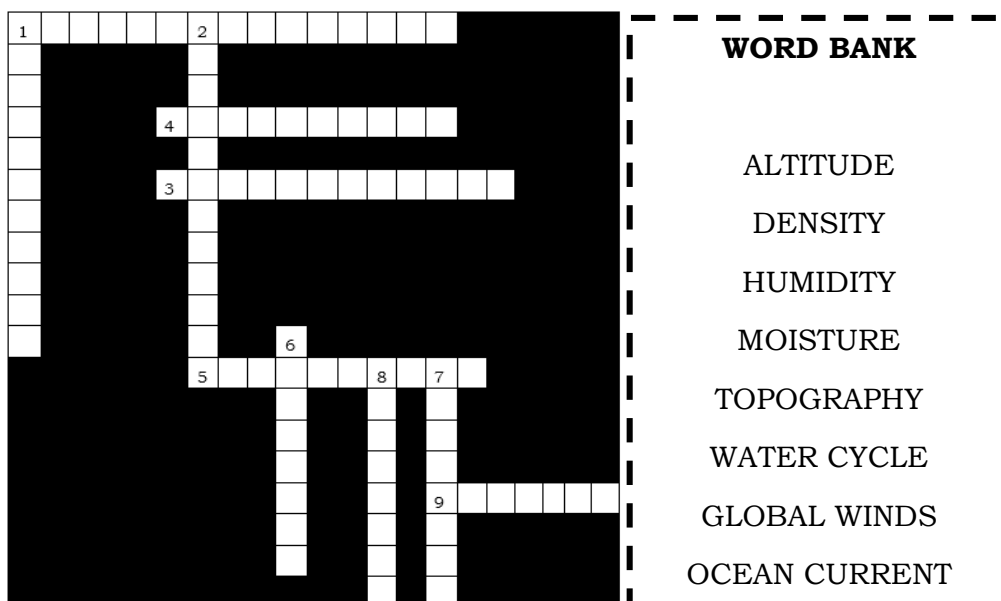
1. What is the difference between climate and weather?
2. What are the common factors affecting climate?
3. How does altitude and land topography affect climate?
4. How does ocean surface and circulation directly affect the pattern of climate around the world?



## What's In

## Building Vocabulary

Use the given word bank to answer the crossword puzzle correctly. Write your answer on a separate sheet of paper.



**Down**

1. the dominant prevailing wind patterns that blow in a fairly constant, steady direction across our earth.
2. . also used to understand how the ocean moves heat around the globe, a critical component of Earth's climate, and for monitoring changes in global sea level.
6. water or other liquid diffused in a small quantity as vapor, within a solid, or condensed on a surface.
7. the concentration of water vapor present in the air.
8. a distance measurement, usually in the vertical or "up" direction, between a reference datum and a point or object.

**Across**

1. a gas that absorbs and emits radiant energy that within the thermal infrared range.
3. the steady flow of surface ocean water in a prevailing direction.
4. also known as the hydrologic cycle or the hydrological cycle, describes the continuous movement of water on, above and below the surface of the Earth.
5. the arrangement of the natural and artificial physical features of an area.
9. it is how tightly or loosely packed a substance is, or to the number of things or people in a certain area.



## ***What's New***

Let us read the news report of Mr. Dexter A. See dated February 07, 2019 in Baguio City Herald Express and answer the questions below.

The weather condition in the country's undisputed Summer Capital continues to get colder with 9.0°C as the coolest temperature recorded this year by the local office of the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) early Wednesday morning, January 30. From the 9.8 °C temperature in the city that was recorded by PAGASA Monday morning of January 28, it slightly improved to 10.6 °C early Tuesday morning, further dipping to 9.2 °C Wednesday early morning before finally settling at 9.

The PAGASA official disclosed that even the warmest temperature in the city ranges from 19 to 22 °C which is much cooler compared to the usual 24 to 26 °C warmest temperature being recorded in the city during the middle of the day. In other highly elevated areas in Benguet, the coldest temperature in Paoay, Atok, Benguet was around 4 °C Wednesday morning while the coldest temperature in Mount Sto. Tomas in Tuba, Benguet was around 6.5 °C.

- a. What is the possible reason for such weather conditions in Baguio City and other highly elevated areas in Benguet?
- b. Do you think it is still possible for Baguio City to experience the city's lowest recorded temperature of 6.3 degrees Celsius which was registered on January 18, 1961? Why?



## What is It

You have probably experienced waking up to a rainy morning but spending the rest of the day sweating because of the sun's glaring heat. Changes in the atmospheric condition over a brief period of time such as a day or a week are **weather**. These changes are part of a larger pattern of atmospheric conditions called **climate**. Climate is the general pattern of the weather that occurs for a region over a number of years. Climate determines what type of houses people build in a particular region, the plants and animals that inhabit in a location, and even the livelihood of the people and community.

Both weather and climate are the result of the interaction of several Earth systems; 1) the movement of moisture in the water cycle that evaporates ocean water into the air where it condenses into travelling clouds or storms that eventually cause rain or snow; 2) the movement of heat that begins at the sun-soaked equator and moves warm air toward the north and south poles; and 3) the movement of the oceans that takes icy-cold water from the poles to the tropics, warming or cooling the air above the water. These factors, including the greenhouse gases in the atmosphere, combine to form the high- and low-pressure systems and the climate of the location you live in. To understand the complex interactions and patterns of weather and climate, scientists collect as much observational data as they can on precipitation, temperatures, humidity, and other atmospheric conditions.

### Different Factors that Affect Climate

There are different factors that affect the climate of a place. These five factors greatly influence the temperature of an area.

**Latitude.** Latitude is the main factor affecting global climate. The further we go from the equator; the temperature drops and the cooler it gets. This is because we know that earth is curved which means that the sun's energy is more concentrated at the equator. This means earth gets hotter at equator and places near equator.



Figure 1: Latitude  
Illustrated by Rogel Rusko  
F. Cadudu-an

**Altitude.** Temperature decreases with increasing altitude at an average rate of  $6.5^{\circ}\text{C}$  for every 1000m increase in altitude, as the atmosphere receives less heat through terrestrial radiation. For this reason, we know that the mountains are always cooler compared to lower places.

The lower layers of atmosphere are denser, have water vapor and dust particles that absorb heat, which is not prevalent in the higher altitude. At higher altitudes, the air is less dense and air molecules are spread out and less likely to collide. Therefore, a higher location in the mountains has lower average temperatures than one at the base of the mountains.



Figure 2: Altitude  
Illustrated by Rogel  
Rusko F. Cadudu-an

Distance from the sea. Land absorbs and releases heat faster than water. This phenomenon has strong effect on the temperature as well as the climate. Seas and oceans are the large bodies of water on Earth, serve as the moderator of climate. In summer, large amount of water evaporates but dries up quickly before it reaches the land because of temperature. Coastal areas are cooler in summer and warmer in winter compared in inland at the same coordinate system. Places located on the coast have moderate temperature as they are affected by land and sea breezes. Land and sea breeze can only be experienced in coastal areas. The continuous movement of air from land to sea or vice versa balance the temperature and climate on Earth. A sea breeze is a wind blowing from body of water toward the land while a land breeze is a wind blowing from the land onto a body of water. This local wind system occurs along coastlines near large bodies of water due to temperature differences between land surface and water surface.

### Diurnal Wind Change in Coastal Area

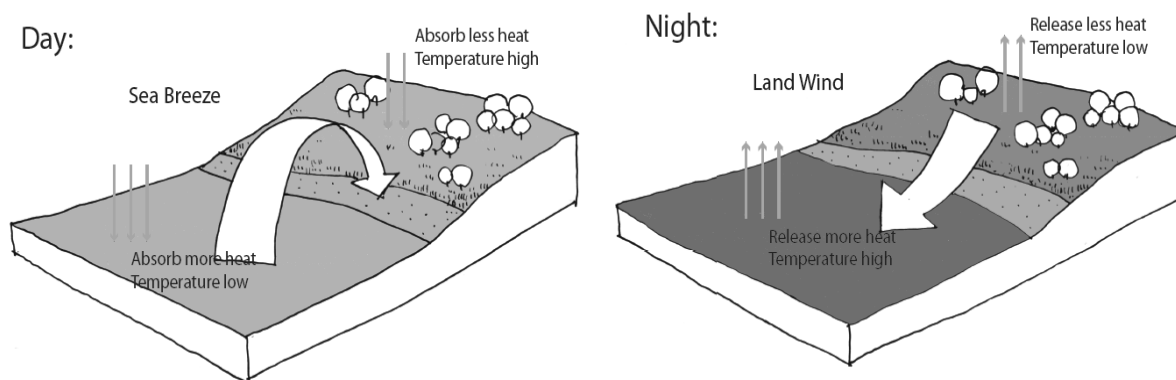


Figure 3: Diurnal Wind Change in Coastal Area

Source: Yue Guan. *Diurnal wind change in coastal area*.

[https://commons.wikimedia.org/wiki/File:Diurnal\\_wind\\_change\\_in\\_coastal\\_area.png](https://commons.wikimedia.org/wiki/File:Diurnal_wind_change_in_coastal_area.png). Creative Commons Attribution-Share Alike 3.0 Unported

During daytime, land surface heats up faster than the surface of ocean. The air above the land is warmer causing it to rise. As the warm air over the land rises, the cooler air over the ocean is blowing toward the land surface to replace the rising warm air. At nighttime, the land surface cools faster than the surface of ocean. Therefore, the warm air over the ocean is rising while the denser and cooler air over the land is blowing toward the ocean to replace the warmer presence air rising.

The effects of land and sea breezes extends inland from the coast. The higher temperature differences between land and sea, the breezes are the stronger. The land breezes and sea breezes resulted in elevated humidity levels, high precipitation, and temperature moderation in coastal areas and nearby lands.

In some places with no distinct summer and winter, these are due to its geographical location and the presence of bodies of water. In places near the coast, summer is cooler and winter is warmer. For example, in Moscow and Glasgow in Russia, winter is moderate in Glasgow than in Moscow because it is near the coast. People in London also experienced the same, even though its latitude is similar with Moscow, because it is closer to the sea. In the Philippines, the climate is tropical with relatively high temperature, high humidity, and abundant rainfall. The surrounding bodies of water and high temperature brings a high relative humidity to the archipelago.

**Prevailing winds.** Prevailing winds are wind directions over a particular location on Earth due to uneven heating from the sun and the rotation of earth on its axis. The equator receives most direct sunlight and greatest concentration of heat resulting to a warm temperature while at the poles, there is a lower concentration of heat resulting to a cold temperature. The warm air in the equator expands, become less dense, and rises. As the air rises, it cools, decreases its pressure, and loses water vapor forming a low-pressure area at the equator. The rising air at the equator does not flow directly to the poles because the Earth rotates on its axis causing an air build up at 30° north or south latitudes. This rotation creates three belts of high-pressure circulations cells: the Hadley cell, Ferrel cell, and Polar cell. The Hadley cell is the air moving toward the equator. It is responsible for the dry climate at 30° latitudes or the tropical and subtropical regions and drives circulation of air north and south of the equator. The Ferrel cell is created when the air between 30° and 60° latitudes meets the cold air from the poles. These winds are called westerlies that characterize weather patterns in the temperate zones. The Polar cell is formed between 60° and 90° latitude. The air cools over the poles and sinks to the Earth's surface. These surface winds in the polar cell are called easterlies. The area where these three circulation cells come together is called intertropical convergence zone. At intertropical convergence zone the trade winds from the northern and southern hemispheres converge.

The Earth's rotation affects the air moving towards its surface, it is deflected by the Coriolis force to the right in the northern hemisphere producing polar easterlies and to the left in the southern hemisphere. The easterlies are created when the winds blow toward the equator and deflected to the west. The westerlies are created when the winds blow toward the pole and deflected to the east.

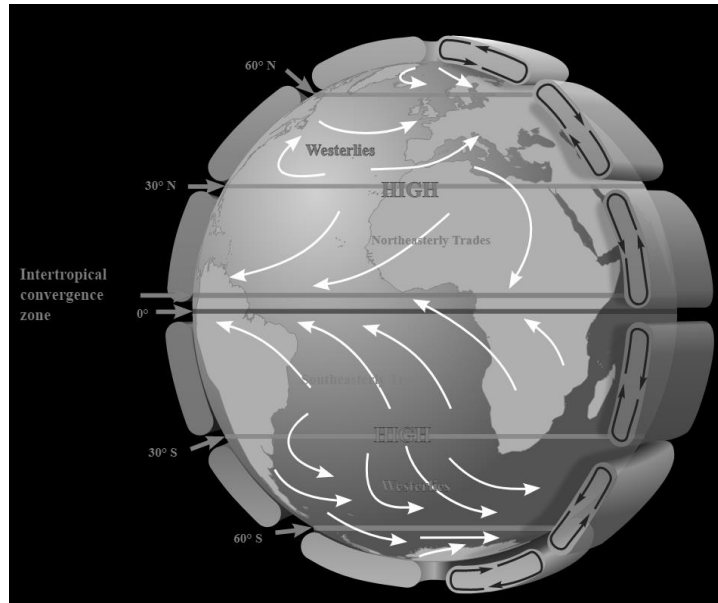


Figure 4: Prevailing Winds

Source: Kaidor, Earth Global Circulation,

[https://commons.wikimedia.org/wiki/File:Earth\\_Global\\_Circulation\\_-\\_en.svg](https://commons.wikimedia.org/wiki/File:Earth_Global_Circulation_-_en.svg).  
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**Ocean currents.** Ocean currents are the continuous and directional movement of ocean created by the wind friction, water density, earth's rotation, solar energy, and gravity variation in different parts of the ocean. The direction of water movement is either horizontal or vertical. The ocean current systems flow clockwise in the northern hemisphere and counterclockwise in the southern hemisphere in circular patterns. The ocean currents transport warm water and precipitation from the equator to the poles and cold water from the poles back to the equator. These regulate the global climate, and uneven distribution of heat reaching earth's surface.

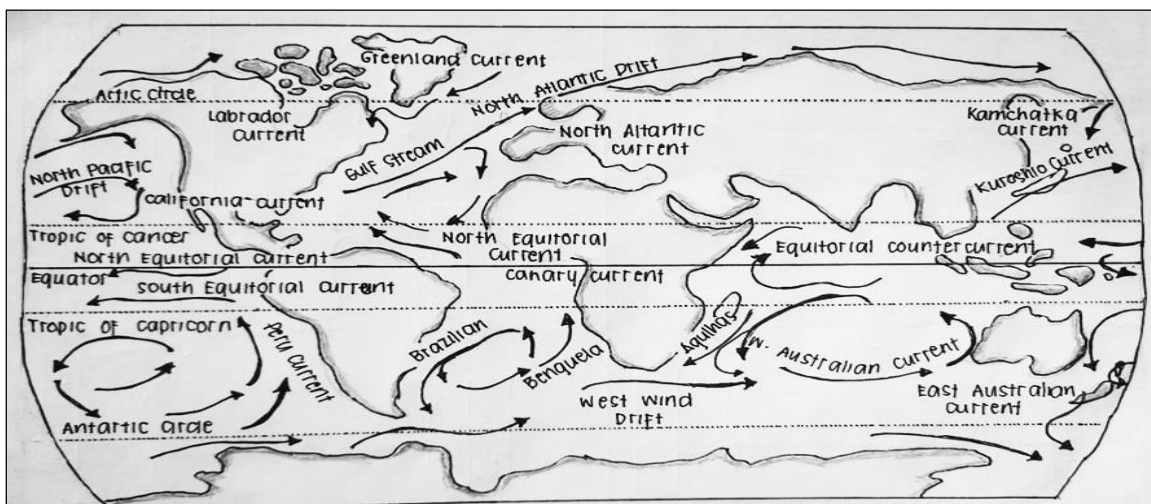


Figure 5: Ocean Currents

Illustrated by Rogel Rusko F. Cadudu-an

**Topography.** The topography of earth's surface is one of the factors that affects weather system and climate. The difference in elevation and mountain ranges determine the distribution of precipitation on earth. The bodies of water shape the climates and create the high- and low-pressure systems that cause weather events.

The mountainous areas tend to have extreme weather because it acts as a barrier to air movements and moisture.

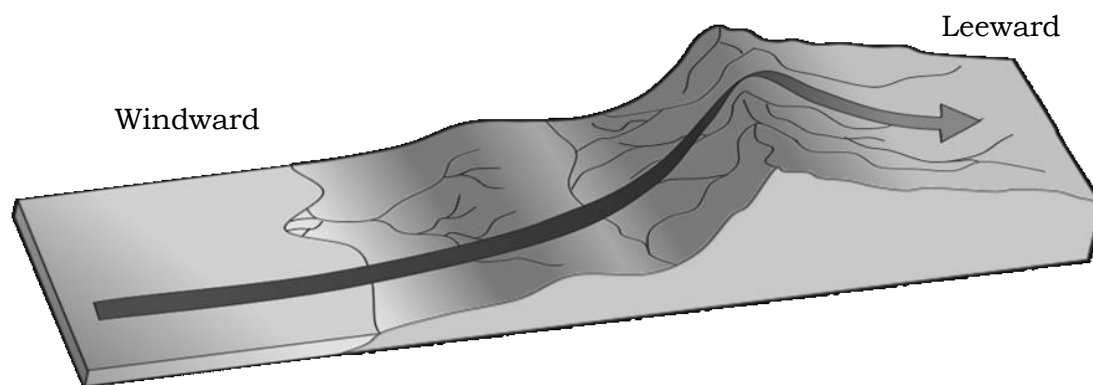
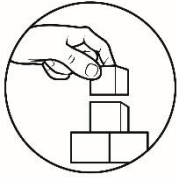


Figure 6: Rain Shadow Effect

Source: Thebiologyprimer, *Rain Shadow Effect caused by Orographic Lift.png*, [https://commons.wikimedia.org/wiki/File:Rain\\_Shadow\\_Effect\\_caused\\_by\\_Orographic\\_Lift.png](https://commons.wikimedia.org/wiki/File:Rain_Shadow_Effect_caused_by_Orographic_Lift.png). Creative Commons CC0 1.0 Universal Public Domain Dedication

The windward side of the mountain faces the wind and receives warm, and moist air. As the wind hits the mountain, the air is forced to move upward along the slope of the mountain and begins to cool due to decrease in atmospheric pressure. The cooling of air results in the formation of clouds and precipitation. Because of this, the windward side of the mountain is cooler and rich in vegetation. The leeward side of the mountain is the opposite side of the windward. The air that goes down the leeward slope has lost its moisture on the windward side resulting to warm air and low relative humidity. As the dry air descends the leeward slope, it expands and reduces the possibility of precipitation forming a rain shadow effect. This side of the mountain is the driest place.

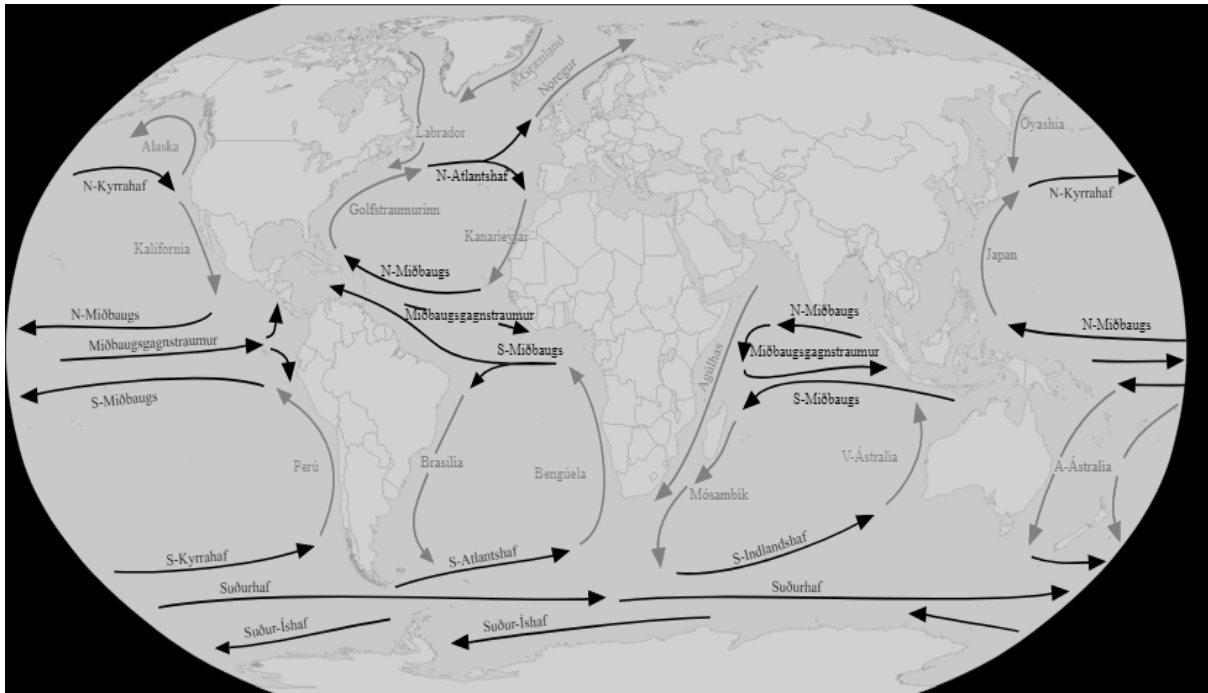




## What's More

### ACTIVITY 1: Identifying Warm & Cold Oceans Currents

Use the illustration of ocean current (red = warm, blue = cold) to answer the question below. Write your answer on a separate sheet of paper.



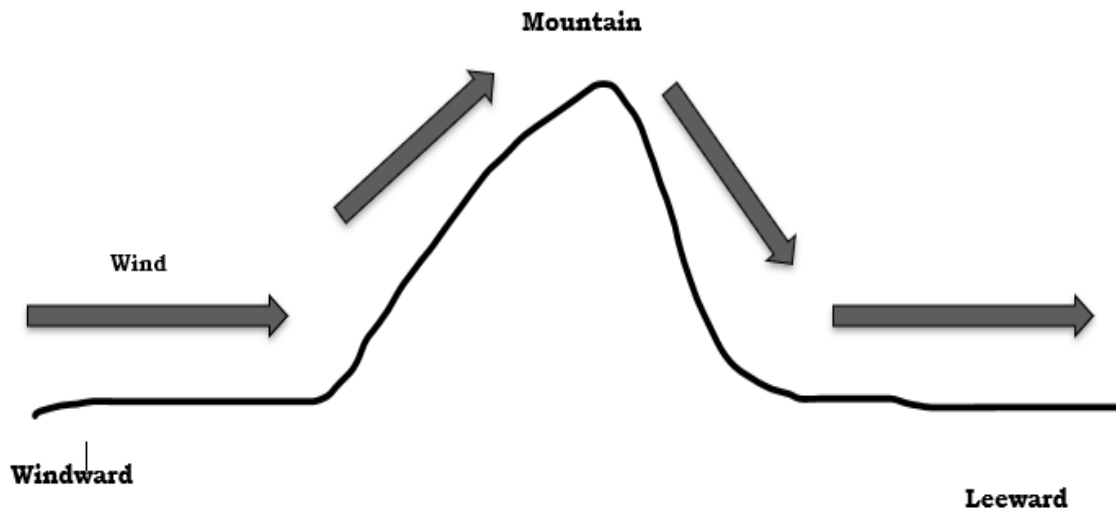
Source: Akigka, *Corrientes-oceanicas-is.svg* ,  
<https://commons.wikimedia.org/wiki/File:Corrientes-oceanicas-is.svg>. Creative Commons Attribution-Share Alike 3.0 Unported.

1. What is the general direction of ocean currents in the Northern Hemisphere?
2. What is the general direction of ocean currents in the Southern Hemisphere?
3. Look at the pattern of cold and warm water currents. What seems to determine if a current carries warm or cold water?
4. What is the effect of cold current water on the continental coastline it bordered?



## ACTIVITY 2: SIDE OF THE MOUNTAIN

Use the illustration of a mountain to answer the questions that follow. Write your answer on a separate sheet of paper.



Illustrated by Jaquilyn A. Floriano

Questions:

1. Which side of the mountain would generally receive more precipitation?
2. Which side of the mountain would generally receive less precipitation?
3. What happens to the air as it comes down the leeward side of the mountain?
4. Which side of the mountain range often produce rain shadow?
5. What happens to the air as it travels up the mountain?

### ACTIVITY 3: WHAT WILL I WEAR?

Use the given illustration to answer the questions below. Write your answer on a separate sheet of paper.



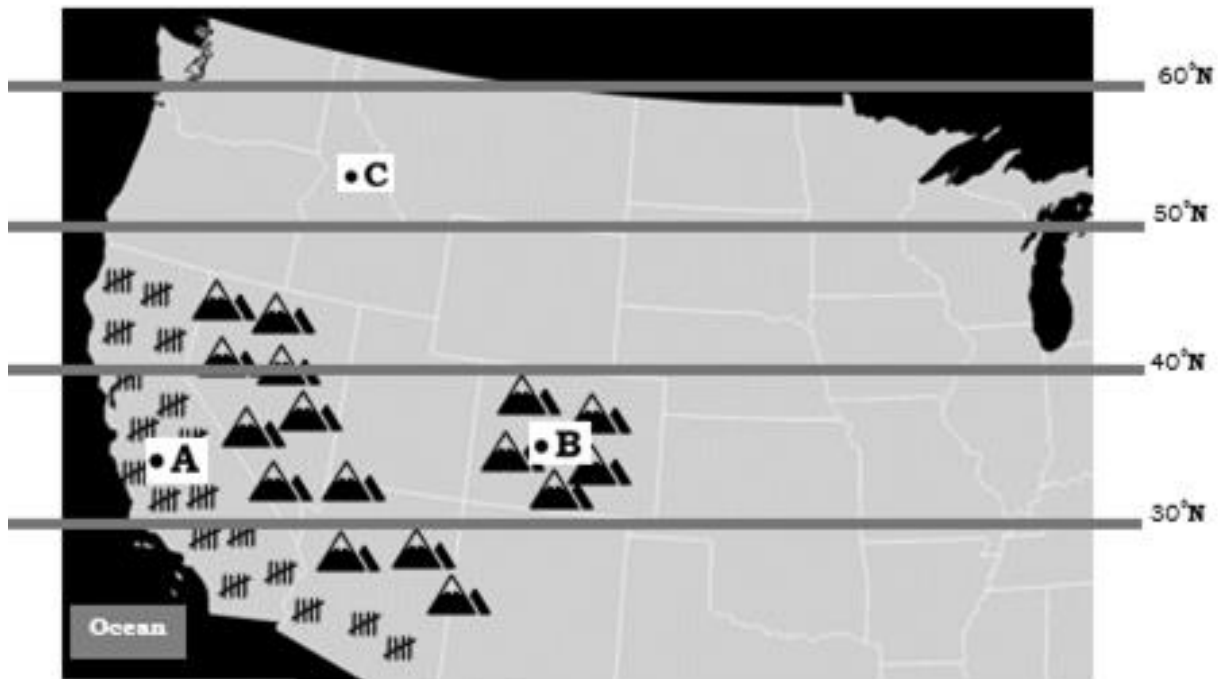
Illustrated by Jaquilyn A. Floriano

#### Questions:

1. Today is sunny. What must I wear?
2. It is raining outside. What must I wear?
3. It is raining outside. What footwear must I wear?

## ACTIVITY 4: ANALYZE THIS!

Analyze the three locations in given map of below and answer the questions that follows. Write the correct answer on a separate sheet of paper.



Source: HeitordpBlank, US Map.svg.

[https://commons.wikimedia.org/wiki/File:Blank\\_US\\_Map\\_\(states\\_only\).svg](https://commons.wikimedia.org/wiki/File:Blank_US_Map_(states_only).svg).

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Illustrated by: Jaquilyn A. Floriano

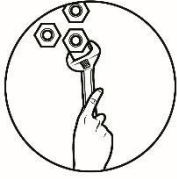
1. Is it possible for location A to have a moist climate than in location B? Why?
2. What causes a possible cold climate in location B?
3. Is a cooler climate possible in location C? Why?
4. How does the body of water affect the climate at location A?



## ***What I Have Learned***

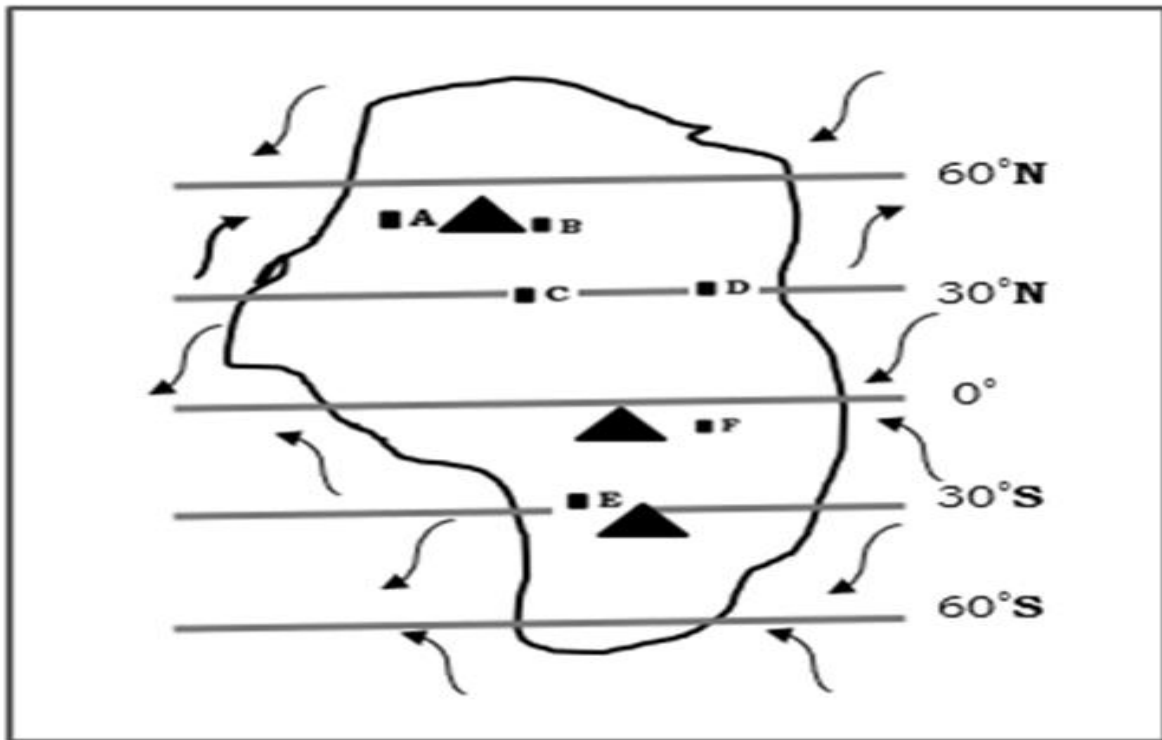
Identify the word that correctly completes each statement. Write your answer on a separate sheet of paper.

1. A short-term variation in atmospheric phenomena which interact and affect the environment and living things on Earth are called \_\_\_\_\_.
2. \_\_\_\_\_ is the long-term average of variations in weather for a particular area.
3. The equator and tropical areas get more \_\_\_\_\_ than areas in the north or south.
4. The more direct sunlight received the \_\_\_\_\_ the climate, which is why the poles are colder than the equator.
5. The higher the elevation of a region, the \_\_\_\_\_ it is.
6. The driving force for surface ocean currents to move is the \_\_\_\_\_.
7. \_\_\_\_\_ is a water or other liquid diffused in a small quantity as vapor, within a solid, or condensed on a surface.
8. \_\_\_\_\_ cause differences in density of ocean water.
9. The air compresses and warms when it \_\_\_\_\_.
10. \_\_\_\_\_ a process that occurs when gasses in Earth's atmosphere trap the Sun's heat.
11. The type of climate of an area primarily depends on its \_\_\_\_\_, precipitation, and wind system.
12. \_\_\_\_\_ can affect the climate of nearby lands. In some areas, mountains block rain, so that one side of a mountain range may be rainy and the other side may be a desert.



## ***What I Can Do***

Use the diagram of imaginary continent on Earth to identify each statement below as either true or false. Write **T** if the statement is true and **F** if it is false. Write the correct answer on a separate sheet of paper.



Illustrated by: Jaquilyn A. Floriano

1. Location F has the same kind of weather all year-round.
2. Location A has a greater annual rainfall because it is on the windward side of the mountain.
3. Location E have a colder yearly climate because it is high in the mountain and as the altitude increases the temperature decreases.
4. There are trade winds between 60 N and 30 N.
5. The climate in location A is cooler than the location D.



## **Assessment**

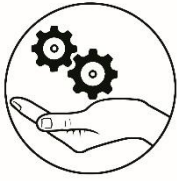
**Directions:** Choose the letter of the best answer. Write the chosen letter on a separate sheet of paper.

1. Which statement BEST describes topography?
  - A. It is the total distance above sea level.
  - B. It is the side of the mountain that experiences floods.
  - C. It is the curve of the earth and the distance from equator.
  - D. It is the physical attribute, surface shapes and features of an area.
2. Which part of the mountain has more vegetation?
  - A. top
  - B. leeward
  - C. sideward
  - D. windward
3. Which BEST describes the leeward side of a mountain?
  - A. The side of the mountain that experiences floods.
  - B. The side of the mountain that receives less precipitate.
  - C. The side of the mountain that receives more precipitate.
  - D. The side of the mountain that experiences more vegetation.
4. How do oceans affect the climate of an area?
  - A. The solar radiation is absorbed by ocean.
  - B. Ocean currents act much like a conveyor belt.
  - C. The ocean helps to distribute heat around the globe.
  - D. All of the above.

5. In a theory, Earth's surface was covered by vast sheets of ice. What do you call these vast sheets of ice?
- A. glaciers
  - B. haze
  - C. ice
  - D. snow
6. Which refers to the angular distance from the equator that greatly affects the climate and weather of an area?
- A. altitude
  - B. elevation
  - C. height
  - D. latitude
7. Why do mountainous areas have generally colder climate than the surrounding land? Because of ...
- A. higher altitude
  - B. higher elevation
  - C. far from the ocean
  - D. far from the lowland
8. What happens to the temperature as you go to the top of a mountain?
- A. does not change
  - B. temperature increases
  - C. temperature decreases
  - D. temperature goes up and down
9. How does higher altitude affect the climate of an area?
- A. The closer you get to the equator, the hotter it gets.
  - B. The higher you go above sea level, the colder it gets.
  - C. The farther you get from the equator, the colder it gets.
  - D. The process by which heat from the sun is trapped near Earth's surface.
10. What region receives the least amount of solar radiation?
- A. equatorial
  - B. polar
  - C. temperate
  - D. tropical

11. Land heats and cools faster than the sea. Therefore, coastal areas have a lower temperature range than those inland. Which factor affects the temperature of an area?
- A. winds
  - B. altitude
  - C. distance from the sea
  - D. elevation from the sea
12. There are areas that are drier and warmer than surrounding flatlands, because of mountains and valleys. What factor affects the climate?
- A. elevation
  - B. latitude
  - C. topography
  - D. vegetation
13. Why does latitude cause differences in temperature?
- A. It is due to climate change.
  - B. It is due to the distances of mountain ranges.
  - C. It is due to the distance from the earth to the mountains.
  - D. It is due to the curve of the earth and distance from equator.
14. Which statement is TRUE about high altitude?
- A. The high-up places such as mountaintops often get snow for most of the year.
  - B. Altitude affects climate in that the higher up you get, the more the temperature drops.
  - C. Altitude affects climate in that the higher up you get, the more the temperature increases.
  - D. Both A and B
15. Which statement supports the idea of leeward and windward sides of the mountain?
- A. Air pressure in leeward is higher than the windward side.
  - B. The two sides of the same mountain have different climates because of the water and air movement.
  - C. The leeward side of the mountain experiences floods while the windward side experiences less precipitate.
  - D. Both A and B





## ***Additional Activities***

Answer the following questions related to the Philippine Climate. Write your answer in a separate sheet of paper.

1. Why does the Philippines have relatively high humidity?

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2. Why does one need to choose warm clothing, sweatshirts, and jackets when planning for a vacation to Baguio City?

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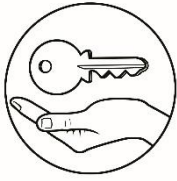
3. Why do rainfall distributions throughout the Philippines vary from one region to another?

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## Answer Key

<p><b>What I Know</b></p> <p>1. D 6. B 11. A 2. A 7. B 12. B 3. D 8. B 13. A 4. B 9. B 14. B 5. C 10. B 15. A</p> <p><b>What's In</b></p> <p>Across</p> <p>1. GREENHOUSE GASES 3. OCEAN SURFACE 4. WATER CYCLE 5. TOPOGRAPHY 9. DENSITY Down</p> <p>1. GLOBAL WINDS 2. OCEAN CURRENT 6. MOISTURE 7. HUMIDITY 8. ALTITUDE</p> <p><b>What's More</b></p> <p><b>ACTIVITY 1: Identifying Warm &amp; Cold Oceans Currents</b></p> <p>1. Clockwise 2. Counterclockwise 3. Warm water comes from the equator and cold water comes from the poles. 4. It brings cooling effect.</p> <p><b>ACTIVITY 2: SIDE OF THE MOUNTAIN</b></p> <p>1. windward 2. leeward 3. it warms and expands 4. leeward side 5. the air cools, condensed, and rain falls</p>	<p><b>ACTIVITY 3: WHAT WILL I WEAR?</b></p> <p>1. short, sando, slippers 2. raincoat, jacket, boots 3. boots</p> <p><b>ACTIVITY 4: ANALYZE THIS!</b></p> <p>1. Yes, because location A is near the ocean. 2. Location C is at higher elevation or in the mountains. 3. Yes, because location C is at higher latitude than Location E. 4. Bodies of water have a moderating effect on climate of nearby landmass because its temperature changes slower than land temperature.</p> <p><b>What I Have Learned</b></p> <p>1. Weather 2. Climate 3. Direct sunlight 4. Warmer 5. Colder 6. Global wind 7. Moisture 8. Deep ocean currents 9. Sinks 10. Greenhouse effect 11. Temperature 12. Mountains</p> <p><b>What I Can Do</b></p> <p>1. T 2. T 3. T 4. F 5. T</p>	<p><b>Assessment</b></p> <p>1. D 2. D 3. B 4. D 5. A 6. D 7. A 8. C 9. B 10. B 11. C 12. C 13. D 14. D 15. B</p> <p><b>Additional Activity</b></p> <p>1. Due to high temperature and the surrounding bodies of water. 2. Baguio is at higher altitude therefore the temperature is low. 3. Rainfall distribution throughout depends upon the direction of the winds that carries moisture and the location of the mountain systems.</p>
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Hand-drawn Season on Earth Digital Worksheet

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