

JANUARY

Makugiton

FEBRUARY

Mahiguigmaon

MARCH

Matinabangon

APRIL

Matinahuron

MAY

Mahapsay og Malinpyo

JUNE

*Maabtik og Musunod sa
Oksaklong Oras*

JULY

Maantigo og Maabilidad

AUGUST

*Maginhunahunaon
para sa Uban*

SEPTEMBER

Madaginoton

OCTOBER

Matinud-anon

NOVEMBER

Masaligan

DECEMBER

Maalampon

6

Republic of the Philippines
Department of Education
Regional Office IX, Zamboanga Peninsula



Zest for *P*rogress
Zeal of *P*artnership

Science

Quarter 4- Module 2 The Effects of Earthquakes and Volcanic Eruptions



Name of Learner: _____

Grade and Section: _____

Name of School: _____



What I Need to Know

This module will help you understand what to do before, during, and after earthquakes and volcanic eruptions. At the end of this module, you are expected to:

- Enumerate what to do before, during, and after an earthquake and volcanic eruptions. **(S6ES-1Vb-2)**



What's In

Score:

10

ACTIVITY 1: Matching Type

Directions: Match the picture in column A with the correct word in column B. Write the letter of the correct answer on the space provided before the number.

A

B

_____ 1.



<https://www.toppr.com/guides/essays/essay-on-tsunami/>

A. Crack

_____ 2.



<https://www.who.int/health-topics/landslides>

B. Smoke & Gasses

_____ 3.



<https://www.preview.ph/culture/ashfall-health-hazards-a141-20200113>

C. Collapsed Buildings

_____4.



<https://www.reuters.com/article/us-philippines-volcano-idUSKBN1FG0GS>

D. Tsunami

_____5.



<https://scitechdaily.com/self-healing-materials-created-after-breakthrough-on-science-of-cracking/>

E. Landslide

_____6.



<https://www.nst.com.my/world/world/2018/01/329430/philippines-warns-volcanic-mudflows-heavy-rains>

F. Lahar

_____7.



<https://www.treehugger.com/places-where-you-can-safely-watch-lava-flow-4869327>

G. Volcanic fire

_____8.



<https://www.express.co.uk/news/world/384951/Bali-volcano-eruption-update-lahar-what-is-cold-lava-Mount-Agung>

H. Ashfall

_____9.



<https://buildersenquiry.com/7-steps-to-prevent-building-collapse/>

I. Mudflow

_____10.



<https://www.thestar.com.my/news/regional/2020/01/14/philippine-authorities-to-study-effects-of-cloud-seeding-in-volcanic-ashfall-areas>

J. Lava flow



What's New

Score:

10

ACTIVITY 2: Choose Me

Directions: Encircle the letter of the statement that tells precautionary measures on earthquakes and volcanic eruptions.

- A. Keep calm when you feel the earthquake.
- B. Shout as loud as you can stop the shaking.
- C. Listen to the radio for an update on volcanic activity in your area.
- D. When you are in a moving vehicle, jump off and run.
- E. Take cover under strong furniture.
- F. Make the necessary repairs and cleanup of houses hit by ashfall.
- G. When near the seashore, move to a higher place.
- H. Turn on all electrical home appliances.
- I. Follow the warning and instructions issued by concerned government agencies.
- J. Stay away from damaged buildings.



What Is It

Earthquake Safety Precaution

To lessen the lives and properties, safety precautions should be practice before, during, and after an earthquake and volcanic eruption.

Before an Earthquake	During an Earthquake	After an Earthquake
Get to know what you should do or not do when an earthquake happens.	When you are inside the building, do not rush out. Hide under a sturdy or strong table on a stand in a doorway.	Listen to the radio for further information(s), and instructions.
Know the easy and safe exits of the building.	When you are outside, stay away from electrical wires, posts, trees, and buildings.	Avoid damaged buildings.
Keep flammable materials, breakable items, and harmful chemicals in a safe place.	Avoid falling rocks and landslides.	Watch for fires.

Keep flashlights, candles, matches, and first-aid kits and know where they are kept.	When in school, keep away from beams, glass walls, and cabinets.	Do not touch electric wires.
Learn how to turn off electricity, water, and gasses.	When near seashore, move to a higher place.	Be prepared for some aftershocks. Aftershocks are a lesser shock after the mainshock of an earthquake.
	Stay calm. Do not panic.	

PRECAUTIONARY MEASURES BEFORE, DURING, & AFTER A VOLCANIC ERUPTION

Before Volcanic Eruption	During Volcanic Eruption	After Volcanic Eruption
Learn about your community warning system and develop an emergency communication plan. If there is none, work with your community and develop one.	Avoid areas near the slopes of the volcano. Lava could flow near the slopes.	Listen to a battery-powered radio or television for the latest emergency information.
Prepare disaster supplies or a survival kit.	If caught indoors, close all windows, doors, and other openings. Remain inside.	Stay away from volcanic ash falls. Wear goggles to protect your mouth and nose.
Your local government has evacuation plans, follow them. Follow the authorities' instructions and leave the area before the disaster begins. Get to the higher grounds away from the eruption.	If caught outdoors, protect the head from rocks and immediately run indoors.	If you have respiratory ailments, stay indoors to avoid inhaling dust and ash. Follow local health officials. Seek advice if it is safe to go outside.
Evacuate before a volcano erupts. It is no safe to stay at home and wait for an eruption; doing so	Avoid low-lying areas where lava flow could reach and poisonous gasses could collect.	Clear your house from ashfall or dust. Ashfall can cause roofs to collapse.

could be very dangerous. Stay safe.		
Have a plan in case family members are separated during a volcanic eruption. Ask help from your relatives or friends to get In touch with your family.	Wear long-sleeved shirts and a pair of pants to protect you from volcanic dust. Use a dust mask to protect your eyes or hold a damp cloth over your face.	
Put all household materials inside your house and bring animals and live stocks into closed shelters.	Never watch an erupting volcano. Stay away from it. A literal blast of a volcano can travel many miles away.	
	Avoid mudflows. Mudflows occur when rain falls and mixes with ashes and debris. Stay away from bridges and streams to avoid mudflow.	



What's More

Score:

20

ACTIVITY 3:

Directions:

A. Write for **BE** if the statement is a precautionary measure before an earthquake. **DE** if during an earthquake. **AE** if after an earthquake.

- _____ 1. Keep flashlights and first aid kits ready.
- _____ 2. Hide under a strong table.
- _____ 3. Keep away from the shore and stay in a high place.
- _____ 4. Avoid damaged buildings.
- _____ 5. Be prepared for some aftershocks.
- _____ 6. Know the easy and safe exits of a building.
- _____ 7. When outside, stay away from electrical wires, posts, trees, and buildings.
- _____ 8. Stay calm, don't panic.
- _____ 9. Avoid falling rocks and landslides.
- _____ 10. Watch out for fires.

- B. Write the word **Before**, **During**, or **After** in every statement whenever the safety measure in volcanic eruption applies.
- _____ 1. Avoid areas near the slopes of the volcano. Lava could flow near the slopes.
 - _____ 2. Prepare disaster supplies or a survival kit.
 - _____ 3. If outdoor, protect your head from rocks and immediately run indoors.
 - _____ 4. Evacuate before a volcano erupts. It is not safe to stay at home and wait for an eruption; doing so could be very dangerous. Stay safe.
 - _____ 5. Listen to a battery-powered radio or television for the latest emergency information.
 - _____ 6. Avoid low-lying areas where lava flow could reach and poisonous gases can collect.
 - _____ 7. Never watch an erupting volcano. Stay away from it. A literal blast of a volcano can travel many miles away.
 - _____ 8. Put all household material inside the house and live stocks.
 - _____ 9. Stay away from volcanic ash falls. Wear goggles to protect your eyes and use a damp cloth to protect your mouth and nose.
 - _____ 10. Wear long-sleeved shirts and a pair of pants to protect your eyes or hold a damp cloth over your face.



What I Have Learned

Score
10

ACTIVITY 4:

Directions: Match column **A** with column **B**. Write the letter on the space provided before each number.

A

B

- | | |
|--|---|
| <ol style="list-style-type: none"> _____ 1. Help prevent or lessen the disastrous effect of a strong earthquake. _____ 2. These are observe before, during, and after an earthquake and volcanic eruption. _____ 3. An area which should evacuated by people. _____ 4. Essential commodities to bring to the evacuation center. _____ 5. Best earthquake drill. _____ 6. What to do when an earthquake strikes. _____ 7. Reason why getting sick during volcanic eruption. _____ 8. A place provides affected people hit by an earthquake and volcanic eruption. _____ 9. The thing to do at home after a volcanic eruption happened. _____ 10. Observing measures before, during, and after an earthquake and volcanic eruption can prevent extensive damage. | <ol style="list-style-type: none"> A. Safety measure B. Food, Medicine, Clothe C. Drop, Cover, Hold D. Evacuation Center E. Regular Earthquake Drills F. Volcano Danger Zone G. Keep Calm H. Volcanic Ash I. To lives and properties J. Remove ash deposits |
|--|---|



What I Can Do

Score:

5

Activity 5:

Directions: Encircle the letter of the best answer.

1. What should you do during an earthquake at home?
 - A. Stand beside a bookshelf.
 - B. Stay inside until the shaking stops and it is safe to exit.
 - C. Hide inside the bathroom.
 - D. Shout as loud as you can stop the shaking.
2. If you are a volcano warning, what will you do before the volcanic eruption?
 - A. Listen for the emergency information and alerts.
 - B. Do not follow orders to evacuate,
 - C. Evacuate near the areas downstream.
 - D. Stay at home.
3. How can you protect yourself from volcanic ash?
 - A. Use goggles to protect your eyes.
 - B. Wear a hat.
 - C. Wear a sleeveless shirt and short pants.
 - D. Stay inside the house with doors and windows open.
4. What is the best way to do after an earthquake?
 - A. Take a photo outside.
 - B. Visit your relatives next door.
 - C. Be prepared for aftershocks,
 - D. Stay outside, wait for another earthquake to strike.
5. What are the three (3) things you should **NOT** do during an earthquake?
 - A. Check yourself and others for injuries.
 - B. Turn on the radio,
 - C. Be careful around broken glass and debris.
 - D. Do not use matches, lighters, camp stoves or barbeques, electrical equipment appliances until you are sure there is no leak.



Assessment

Score:

20

Activity 6: A. Modified TRUE or FALSE.

Directions: Write **T** if the statement is true. If not, change the underlined word/s to make the statement true. Write your answer on the space provided before each number.

- _____ 1. The Philippine Institution of Volcanology and Seismology is tasked with monitoring deforestation activities in the country.
- _____ 2. A Volcano Danger Zone is an area which should vacated by people.
- _____ 3. People should stay outdoors during a volcanic eruption.
- _____ 4. Going to the evacuation center must be done hurriedly but softly.
- _____ 5. Food, medicine, and water are essential commodities to bring the evacuation center.
- _____ 6. Always have you first-aid kit.
- _____ 7. Keep calm when an earthquake strikes.

- _____ 8. Place heavy materials in high places.
- _____ 9. Stay near posts, walls, and power lines during an earthquake.
- _____ 10. Cooperate with rescue officers.

B. Directions: Encircle the letter of the best answer.

1. A bulletin was issued to warn people that Taal Volcano may erupt within the week. What should the people living in dangerous areas do?
 - A. Wait for the next bulletin.
 - B. Cover the roof with wet sacks.
 - C. Reinforce the roof of their houses.
 - D. Follow orders to evacuate.
2. Which of the following will you do during an earthquake?
 - A. Standstill
 - B. Stand beside a bookshelf
 - C. Hide inside a bathroom
 - D. Go under a table.
3. Ashes from an erupting volcano are all over your place. What should you do to protect yourself?
 - A. Cover the nose with a wet cloth.
 - B. Stay inside the house.
 - C. Wear sunglasses.
 - D. Wear a hat.
4. What will you do after an earthquake?
 - A. Listen to the radio for further information and instruction.
 - B. Go outside and take a photo.
 - C. Avoid falling rocks and landslides.
 - D. Visit your friends in other barangays.
5. Your family is going to evacuate. You are told to bring along only a few things. Which of these will you bring along?
 - A. Chairs, tables, and clothes.
 - B. Food, water, and clothes.
 - C. Pets, toys, and books.
 - D. Candles, rays, and matches.
6. Why is it important to keep calm in case of an earthquake?
 - A. To avoid doing things that can put you or others in danger.
 - B. To run quickly.
 - C. To stay happy.
 - D. To become peaceful and healthy.
7. Why must we turn off the electricity during an earthquake?
 - A. To save energy.
 - B. To avoid fire.
 - C. To save electricity bills.
 - D. To consume less electricity.

8. What will you do before the volcano erupt?
- A. Stay indoor.
 - B. Avoid places along the rivers.
 - C. Listen to the radio/people with authority for safety instructions.
 - D. Remove ashes from roofs.
9. Which precautionary measures can be done during an earthquake?
- A. Stay from the electric post when outside.
 - B. Rush out when you are inside the building.
 - C. Stay under wooden structures, like, tables, if indoors.
 - D. Stock some food and water.
10. How can you protect yourself from ashfall?
- A. Wear long-sleeved shirts and long pants.
 - B. Wear shorts and sleeveless shirts.
 - C. Stay inside with windows and doors.
 - D. Wear eyeglasses with a big hat.



Additional Activity:

Activity 7:

Directions: Give at least five (5) simple important reminders on what to do in case of an earthquake and volcanic eruptions.

Score:

5

- | |
|----------|
| 1. _____ |
| 2. _____ |
| 3. _____ |
| 4. _____ |
| 5. _____ |

ANSWER KEY: SCIENCE Quarter 4 - Module 2

- What I Have Learned**
1. E
 2. A
 3. F
 4. B
 5. C
 6. G
 7. H
 8. D
 9. J
 10. I

- What's In**
1. D
 2. E
 3. F
 4. G
 5. A
 6. I
 7. J
 8. B
 9. C
 10. H

- What I Can Do**
1. B
 2. A
 3. A
 4. C
 5. D

- What's New**
1. A
 2. G
 3. C
 4. I
 5. E
 6. F
 7. G
 8. I
 9. J
 10. J

- What's More B.**
1. During
 2. Before
 3. During
 4. Before
 5. During
 6. During
 7. During
 8. Before
 9. After
 10. During

- What's More A.**
1. BE
 2. DE
 3. DE
 4. AE
 5. AE
 6. BE
 7. DE
 8. BE
 9. DE
 10. AE

- A:**
1. Volcanic Activities
 2. Evacuation center
 3. Indoor
 4. True
 5. True
 6. True
 7. True
 8. Down places
 9. Stay away
 10. True

- B:**
1. D
 2. D
 3. A
 4. B
 5. B
 6. A
 7. B
 8. C
 9. C
 10. A

Assessment

Additional Activities
Answer may vary

References:

Books:

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Estrellita S. Dela Cruz, Estelita S. Diaz, & Norma M. Abracia, Ed.D. (2000). *Science & Health- For A Changing Environment*. VIBAL PUBLISHING HOUSE, INC.

Juanita M. Cruz, Danilo S. Gutierrez, Victoria S. Ziganay, & Helen E. Caintic (2001). *Into The Future: SCIENCE AND HEALTH*. DIWA SCHOLASTIC PRESS INC.

Evelyn Caslante- Padpad (2017). *The New Science Link: Worktext in Science and Technology*. REX BOOK STORE

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