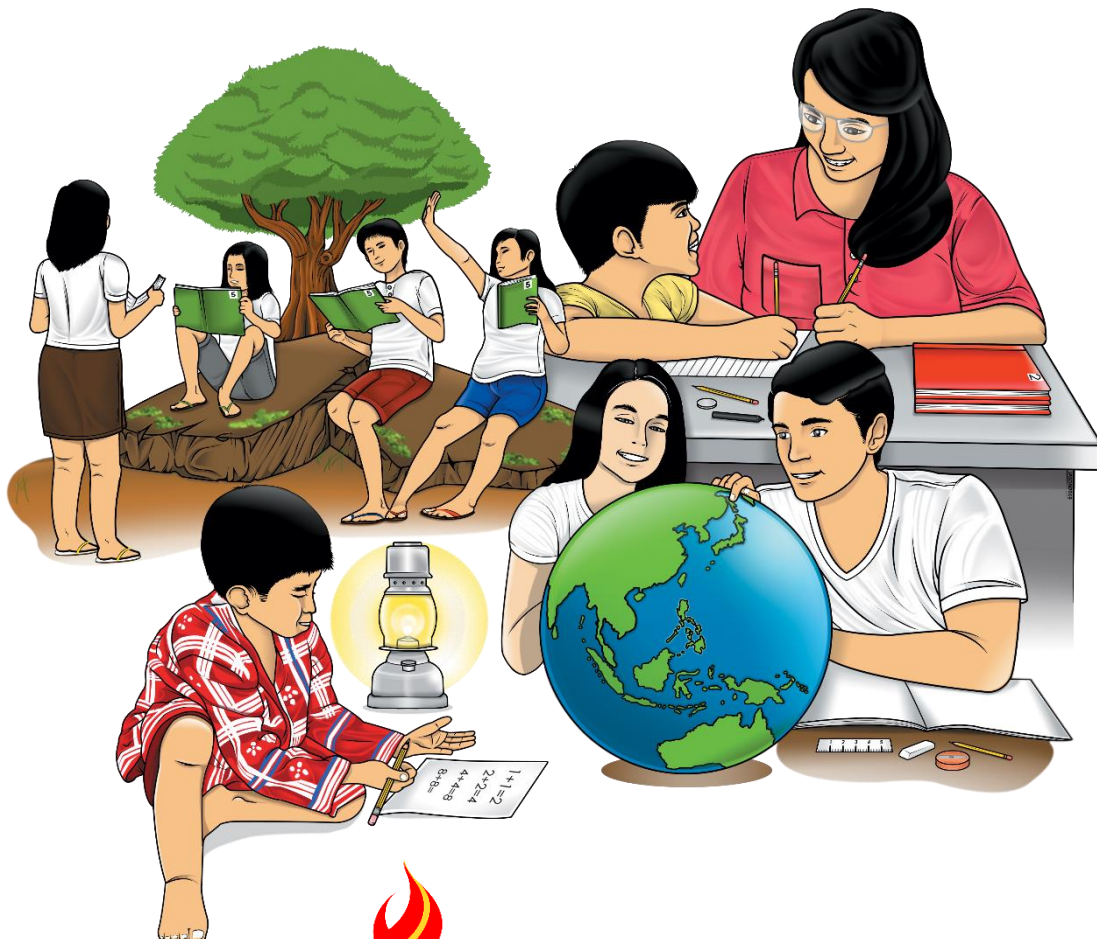


Disaster Readiness and Risk Reduction

Quarter 1 – Module 9: Hazard and Its Types



**Disaster Readiness and Risks Reduction
Alternative Delivery Mode
Quarter 1 – Module 9: Hazard and Its Types
First Edition, 2021**

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Disaster Readiness and Risk Reduction

Quarter 1 – Module 9: Hazard and Its Types

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 Disaster Readiness and Risks Reduction on the topic *Hazard and Its Types*. It contains different information about hazard and comprises of various samples.. The scope of this module permits it to be used in many different learning situations specifically in dealing various hazards. 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 module you are now using.

The module focused on the concept of hazard and its types.

After going through this module, you are expected to:

1. Define and cite examples of the types of hazards
2. observe proper precautions signs and symbols in hazard areas; and
3. appreciate the importance of observing precautionary measures



What I Know

Read the following sentences carefully and choose the letter of the correct answer.

1. Which is not the meaning of Hazard?
 - A. Hazard is an agent which has the potential to cause harm to vulnerable target.
 - B. Hazard cannot cause harm or damage to humans, property, or environment.
 - C. Hazard is defined as the source of danger and is something that may cause injury or harm. It is also the uncertain course of events in a country.
 - D. Hazard is a dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

2. Which is not an example of Natural Hazards?
 - A. fires
 - B. floods
 - C. landslides
 - D. tsunami

3. It is the type of Hazard that arises through interaction of natural processes and human activities.
 - A. natural hazards
 - B. quasi-natural hazards
 - C. technological (or man-made) hazards
 - D. none of the above

4. Which is an example of Natural Hazard?
 - A. avalanche
 - B. plane crash
 - C. pollution
 - D. smog

5. This type of hazards arises directly as a result of human activities.
 - A. natural hazards
 - B. quasi-natural hazards
 - C. technological (or man-made) hazards
 - D. none of the above

6. Which is not an example of Quasi- Natural Hazards?
 - A. air pollution
 - B. smog
 - C. volcanic eruptions
 - D. water Pollution

7. Which is an example of Quasi- Natural Hazards?

A. fog	C. storm surge
B. landslides	D. toxic

8. It is the type of hazards that arises from natural processes in the environment.
 - A. natural hazards
 - B. quasi-natural hazards
 - C. technological (or man-made) hazards
 - D. none of the above

9. Which is an example of Natural Hazards?

A. dam failures	C. plane crashes
B. sandstorm	D. smog

10. Which of the following is a man-made disaster?
 - A. major fire
 - B. Pollution
 - C. terrorism
 - D. all of the above

11. Bush Fire is an example of what types of Hazards?
 - A. natural hazards
 - B. quasi-natural hazards
 - C. technological (or man-made) hazards
 - D. none of the above

12. Which one of the following is a Type of Natural Hazard?

A. acid rain	C. pollution
B. oil spill	D. wild fire

13. What is drought?
 - A. No rainfall for a long continuous period
 - B. Heavy rainfall for a long continuous period
 - C. Moderate rainfall for a long continuous period
 - D. None of the above

14. Which is not associated with the word HAZARD?

A. cautious	C. peril
B. menace	D. risk

15. These are the examples of Natural Hazards in the Philippines EXCEPT
 - A. avalanche
 - B. lightning
 - C. volcanic eruptions
 - D. none of the above

Lesson

1

Hazard and Its Types

This lesson introduces various concepts underlying hazard and determine types of hazard and its example. In the varied information given in this module it will help students understand the major effects of hazards and how to prevent and avoid that to happen. It will also serve as a warning signal for the students to be aware and extra cautious.



What's In

Activity 1: Let's Study and Analyze: Volcano and Parachutist



Let's Think About This

Based on the illustration, answer the following tasks/questions below:

1. What are the possible dangers that can be encountered here? Is it life threatening?
2. What do you think should be a better situation for the person jumping from the plane or should we say the parachutist?
3. How do feel if you are in the same situation?

Source: Richard J. King,
hazard_risk_cartoon_456.jpg, 2012,
<https://d320goqmya1dw8.cloudfront.net/images>



Notes to the Teacher

Teachers are expected to answer the students queries contain in the module via internet, messenger, email or text if necessary.



What's New

Identifying potential hazards can eliminate or control unintentional injuries, property damage or even worst, losing one's life that might happen in the future.

Activity 2.1: Let's Know! SPOT THE HAZARD



Observe the picture and answer the following questions below.

1. What objects do you see in the illustration above? How many objects are there on the table?
2. If you are going to shake the table, which object would be affected the most by the shaking? Why?
3. Based on the picture what object/s can be considered hazard?

Source: *Disaster, Hazard, Types of Hazard (Natural and man Made Hazards)*, <https://image.slidesharecdn.com/lesson1-180511083518/95/disaster-hazard-types-of-hazard-natural-and-man-made-hazards-and-vulnerability-categories-of-vulnerability-16-638.jpg?cb=1557750308>

Activity 2.2. Let's Know Deeper! SPOT THE HAZARDS

Find hazards on the given pictures and answer the following questions below

A. hazard at home



Source: *Danger in the kitchen*, www.google.com, accessed October 2019, <https://www.twinkl.co.uk/resource/cfe-h-011-dangers-in-the-kitchen-activity-sheet>

B. hazard at school



Source: *Slip, Trip and Fall Hazards*, accessed March 9, 2015, www.youtube.com, <https://youtu.be/ChQ8aoeHoEQ?t=146>

C. hazard outside

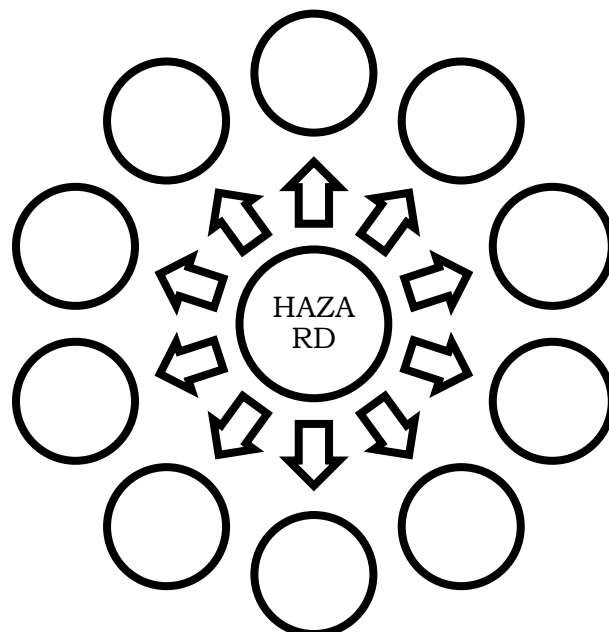


Source: Macky Lim, *Sun Star Davao*, June 2, 2020, <https://www.sunstar.com.ph/article/1801175>

1. List down the 5 different hazards found at home, school and outside.
2. Classify the types of Hazards present on the given picture.
3. Can the effects of hazards be avoided? How?

Activity 2.3 Concept Cluster

Give words associated with the word **HAZARD**. (10 points)



Activity 2.4 Give your own definition of the term HAZARD by completing the acrostic.

H -

A -

Z -

A -

R -

D -



What is It

Let's Learn

After identifying hazards in the previous activity, this part gives information about the types of hazard and its example.

Hazards can be categorized in different types:

- 1. Natural hazards** - arise from natural processes in the environment.
e.g. earthquakes, tsunami, landslides, volcanic eruptions and floods
- 2. Quasi-natural hazards**- arise through the interaction of natural processes and human activities
e.g. pollution or desertification, smog and fog
- 3. Technological (or man-made) hazards**- These arise directly as a result of human activities.
e.g. accidental release of chemicals, toxic and pesticides to floral and fauna

Hazards Signs and Symbols

These signs and symbols with corresponding meaning below help people to be extra cautious, aware and observant in surroundings.

Each picture is designed to become recognizable to anyone as a signal word like “danger” or “warning”.

Technology or Man Made Hazards Signs and Symbols

- **FLAME**



- Flammable
- Self-heating
- Emits Flammable Gas
- Pyrophoric

Source: *Safety Symbols and Their Meanings*, February 1, 2018,
<https://www.dcmgroup.ca/en/news/safety-symbols-and-their-meanings-2/>

- **HEALTH HAZARD**



- Reproductive toxicity
- Respiratory sensitizer
- Target organ toxicity
- Aspiration toxicity

Source: *Safety Symbols and Their Meanings*, February 1, 2018,
<https://www.dcmgroup.ca/en/news/safety-symbols-and-their-meanings-2/>

- **EXPLODING BOMB**



- Explosives
- Self-reactives
- Organic Peroxides

Source: *Safety Symbols and Their Meanings*, February 1, 2018,
<https://www.dcmgroup.ca/en/news/safety-symbols-and-their-meanings-2/>

- **SKULL AND CROSSBONES**



- Fatal or toxic
- Acute toxicity

Source: *Safety Symbols and Their Meanings*, February 1, 2018,
<https://www.dcmgroup.ca/en/news/safety-symbols-and-their-meanings-2/>

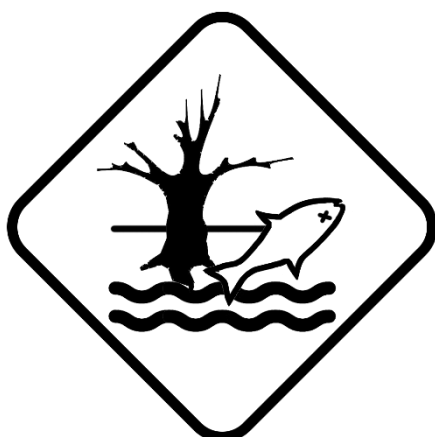
Natural Hazards Signs and Symbols



Source: Much Mania, *Natural Disaster Warning Signs, Caution, Danger, Hazard Symbol Set*, 2003-2020, <https://www.shutterstock.com/image-vector/natural-disaster-warning-signs-caution-danger-302759177>

Quasi-Natural Signs and Symbols

- ENVIRONMENT



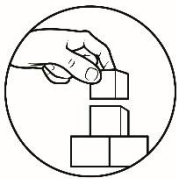
- Aquatic toxicity

Source: *Safety Symbols and Their Meanings*, February 1, 2018, <https://www.dcmgroup.ca/en/news/safety-symbols-and-their-meanings-2/>



- Air toxicity

Source: Wamsler, *Smog warning sign, grungy style, vector illustration*,
www.google.com,
https://www.123rf.com/photo_37312853_stock-vector-smog-warning-sign-grungy-style-vector-illustration.html



What's More

Activity 1.1 Arrange Me!

Choose the right example of types of hazards below and write it on the corresponding table.

Natural Hazards	Quasi-Natural Hazards	Technological Or Manmade Hazards

avalanche
 oil spill
 mining explosions
 wild fires or bush fires
 transportation accidents
 train accident
 falling objects
 air pollution
 global warming
 lightning
 plants and animals

volcanic eruptions
 biological attacks
 polluting ground water
 dam failures
 storm surge
 plane crashes
 typhoon
 water pollution
 desertification
 sandstorm

hurricanes
 landslides
 droughts
 fires
 earthquake
 tornadoes
 floods
 acid rain
 smog
 epidemic in human

Activity 1.2 Match Me!

A. See the following pictures below and give the sign and symbol and its description

1.



Source: Much Mania, *Natural Disaster Warning Signs, Caution, Danger, Hazard Symbol Set*, 2003-2020, <https://www.shutterstock.com/image-vector/natural-disaster-warning-signs-caution-danger-302759177>

2.



Source: Wamsler, *smog warning sign, grungy style, vector illustration*, www.google.com, https://www.123rf.com/photo_37312853_stock-vector-smog-warning-sign-grungy-style-vector-illustration.html

3.



Source: Much Mania, *Natural Disaster Warning Signs, Caution, Danger, Hazard Symbol Set*, 2003-2020, <https://www.shutterstock.com/image-vector/natural-disaster-warning-signs-caution-danger-302759177>

4.



Source: *Safety Symbols and Their Meanings*, February 1, 2018, <https://www.dcmgroup.ca/en/news/safety-symbols-and-their-meanings-2/>

5.



Source: *Safety Symbols and Their Meanings*, February 1, 2018, <https://www.dcmgroup.ca/en/news/safety-symbols-and-their-meanings-2/>

B. Answer the following questions.

1. Have you seen the following signs before? If not what signs are presents in your area?
2. Have you encountered people who failed to comply with the hazards signs and symbols?
3. What did you feel upon observing it?
4. Do you think it is important to know this precautionary signs? Why?



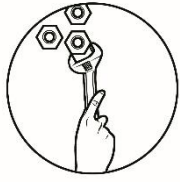
What I Have Learned

Complete Me!

Complete the following sentences by giving the appropriate answer needed in the blank.

Hazard is _____. It becomes hazard when _____. The different types of hazards are _____, _____, _____.

We can minimize the effects of hazards through _____.



What I Can Do

A. Let's Pretend!

Based on the world risk index The Philippines is considered as the third most prone to hazard country in the world, having more than 20 tropical cyclones in a year, earthquakes, and more than 20 active volcanoes found all over the country. Let's say that you represent your school as a disaster advocate, what are the things that you can contribute to possibly minimize the risks of disaster in your home and school?

B. Let's Try This: Significant interview

Conduct an interview among your family members about the hazards they encounter in the following settings. Then classify them according to types of hazards.

1. At home (When they were young)

2. In barangay/ town/ province

3. In workplace



Assessment

Read the following sentences carefully and choose the letter of the correct answer.

1. Which is not the meaning of Hazard?
 - A. Hazard is an agent which has the potential to cause harm to vulnerable target.
 - B. Hazard cannot cause harm or damage to humans, property, or environment.
 - C. Hazard is defined as the source of danger and is something that may cause injury or harm. It is also the uncertain course of events in a country.
 - D. Hazard is a dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.
2. Which is not an example of Natural Hazards?
 - A. fires
 - B. floods
 - C. landslides
 - D. tsunami
3. It is the type of Hazard that arises through interaction of natural processes and human activities.
 - A. natural hazards
 - B. quasi-natural hazards
 - C. technological (or man-made) hazards
 - D. none of the above
4. Which is an example of Natural Hazard?
 - A. avalanche
 - B. plane crash
 - C. pollution
 - D. smog
5. This type of hazards arises directly as a result of human activities.
 - A. natural hazards
 - B. quasi-natural hazards
 - C. technological (or man-made) hazards
 - D. none of the above
6. Which is not an example of Quasi- Natural Hazards?
 - A. air pollution
 - B. smog
 - C. volcanic eruptions
 - D. water Pollution

7. Which is an example of Quasi- Natural Hazards?
 - A. fog
 - B. landslides
 - C. storm surge
 - D. toxic

8. It is the type of hazards that arises from natural processes in the environment.
 - A. natural hazards
 - B. quasi-natural hazards
 - C. technological (or man-made) hazards
 - D. none of the above

9. Which is an example of Natural Hazards?
 - A. dam failures
 - B. sandstorm
 - C. plane Crashes
 - D. smog

10. Which of the following is a man-made disaster?

A. major fire	C. terrorism
B. pollution	D. all of the above

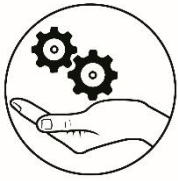
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 - A. acid rain
 - B. oil spill
 - C. pollution
 - D. wild fire

13. What is drought?
 - A. No rainfall for a long continuous period
 - B. Heavy rainfall for a long continuous period
 - C. Moderate rainfall for a long continuous period
 - D. None of the above

14. Which is not associated with the word HAZARD?
 - A. cautious
 - B. menace
 - C. peril
 - D. risk

15. These are the examples of Natural Hazards in the Philippines EXCEPT
 - A. avalanche
 - B. lightning
 - C. volcanic eruptions
 - D. none of the above



Additional Activities

Make your own article discussing the effects of hazards and how do people survive in this kind of situation?

1. Guimaras Oil Spill



Source: Shubert Ciencia, *Cleanup in Barangay La Paz, Nueva Valencia, Guimaras*, licensed CC BY 2.0



Source: <https://c8.alamy.com/comp/AMYWN2/oil-pollution-philippines-AMYWN2.jpg>

Shubert Ciencia, *Cleanup in Barangay La Paz, Nueva Valencia, Guimaras*, licensed CC BY 2.0

2. Floods in urban areas



Source: Floods in the Philippines 2009, www.google.com,
<https://floodlist.com/wp-content/uploads/2013/04/philippines>



Answer Key

<p style="text-align: center;">Assessment</p> <p>1. B 2. A 3. B 4. A 5. C 6. C 7. A 8. A 9. B 10. D 11. A 12. D 13. A 14. A 15. A</p>	<p style="text-align: center;">What's More</p> <table border="1"> <tr> <td>Technological Hazards or Man Made Hazards</td> <td>Quasi Natural Hazards</td> <td>Natural Hazards</td> </tr> <tr> <td> <ul style="list-style-type: none"> - oil spill - biological attacks - mining - explosions - polluting ground water - dam failures - fires - transportation accidents - falling objects - epidemic in human plants and animals - plane crashes </td> <td> <ul style="list-style-type: none"> - air pollution - water - acid rain - global warming - desertification - smog </td> <td> <ul style="list-style-type: none"> - avalanche - volcanic eruptions - hurricane - landslides - droughts - storm surge - tornadoes - typhoon - floods - lightning - sandstorm - wild fires - earthquake </td> </tr> </table>	Technological Hazards or Man Made Hazards	Quasi Natural Hazards	Natural Hazards	<ul style="list-style-type: none"> - oil spill - biological attacks - mining - explosions - polluting ground water - dam failures - fires - transportation accidents - falling objects - epidemic in human plants and animals - plane crashes 	<ul style="list-style-type: none"> - air pollution - water - acid rain - global warming - desertification - smog 	<ul style="list-style-type: none"> - avalanche - volcanic eruptions - hurricane - landslides - droughts - storm surge - tornadoes - typhoon - floods - lightning - sandstorm - wild fires - earthquake 	<p style="text-align: center;">What I Know</p> <p>1. B 2. A 3. B 4. A 5. C 6. C 7. A 8. A 9. B 10. D 11. A 12. D 13. A 14. A 15. A</p>
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