

# STRATEGIC INTERVENTION MATERIAL

IN SCIENCE & HEALTH 5

**ROSALYN DG. PAULO**  
AUTHOR



# **STRATEGIC INTERVENTION MATERIAL SCIENCE & HEALTH 5**

Brace  
yourself

# **STRATEGIC INTERVENTION MATERIAL SCIENCE & HEALTH 5**



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# OVERVIEW

This Strategic Intervention Material will discuss the weather in relation to disturbances.

A weather disturbance is a general term that describes any pulse of energy moving through the atmosphere. They are important in that they can act as focusing mechanisms for storm formation, or even to intensify low pressure systems.

They are typically mid or upper atmospheric troughs of low pressure that are embedded in the general wind flow of the atmosphere.

After completing this lesson, you will be able to determine the types of weather disturbances and its effect to the environment before, during and after the typhoon.

# **SUB TASKING**

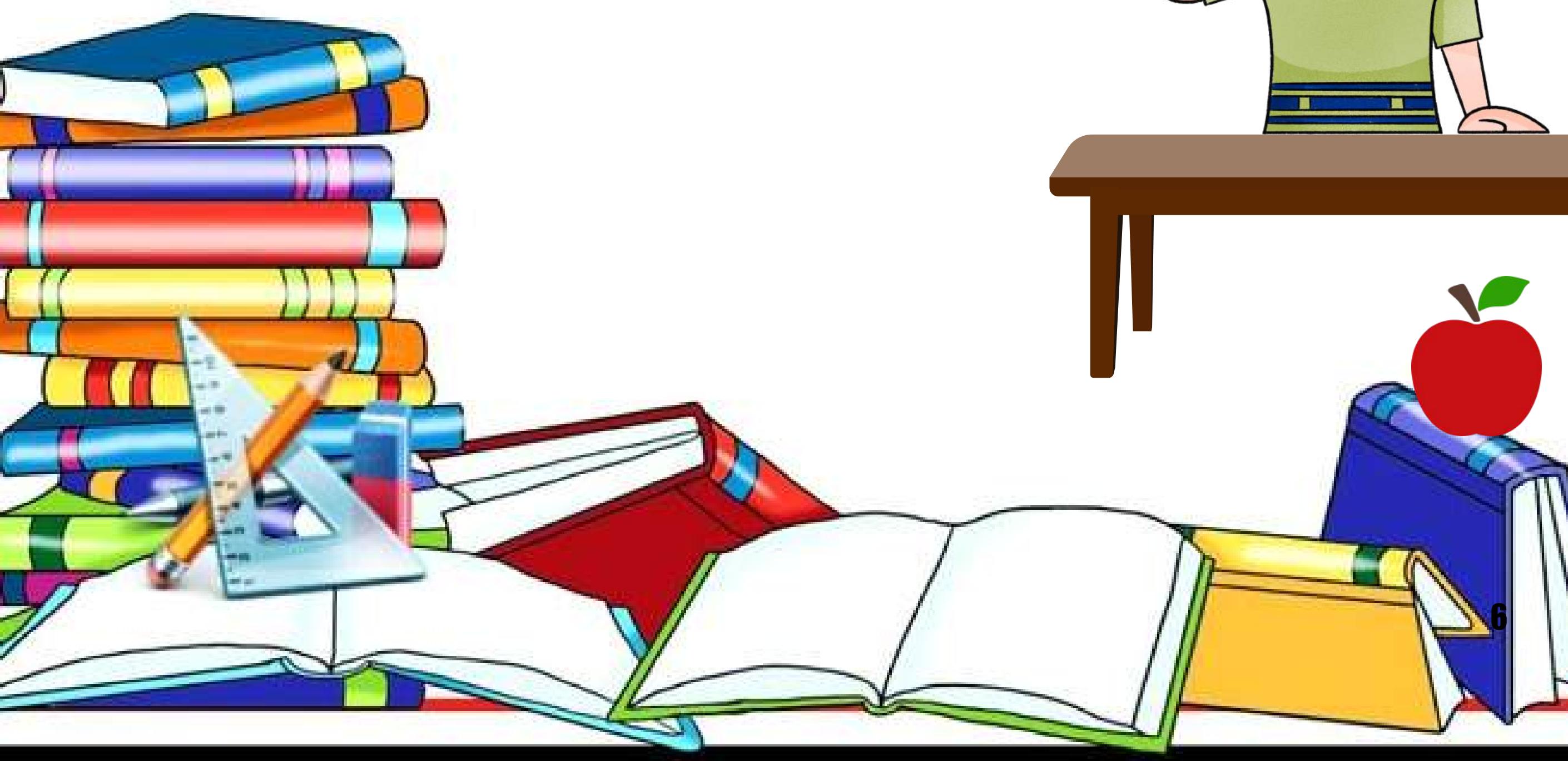
1. Characterize weather disturbances in the Philippines and describe their effects to daily life .
  - *S5FE-IVd-4*
  - *S5FE-IVe-5*
  - *S5FE-IVf-6*
2. Determine weather disturbances and their effect on the environment.
3. Prepares individual emergency kit.

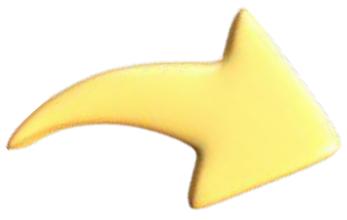
# **OBJECTIVES**

1. Describe the condition of the environment before, during and after a typhoon.
2. Identify the storm signal.
3. Practice precautionary measures before, during and after a typhoon.

# GUIDE CARD

**Hi Kids!**  
**Come and join me.**





**Hello young Meteorologist!**

**Look at the picture below?**

**What causes this scenario in our community?**





**This scenario happens because of weather disturbances like typhoon that bring strong winds and heavy rains.**

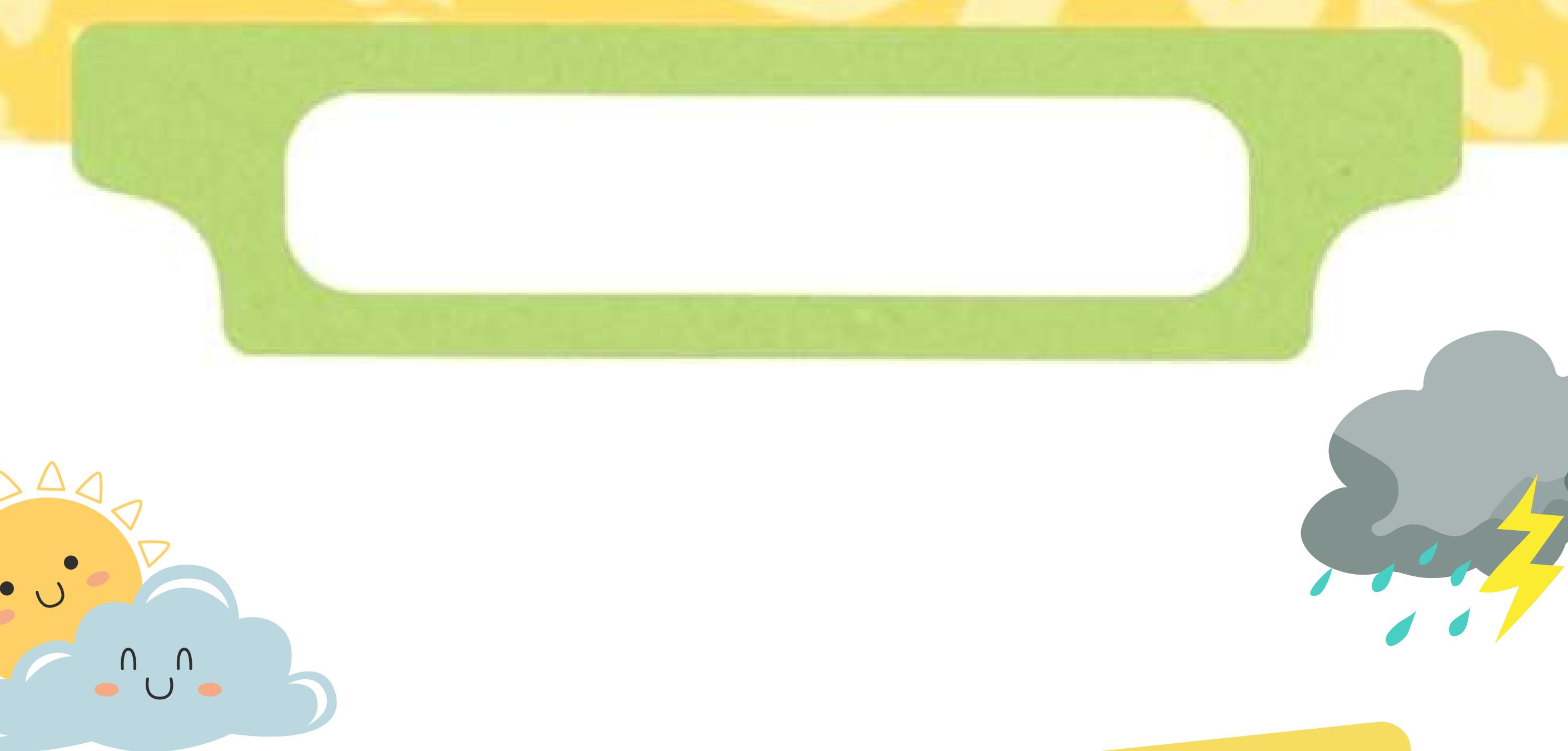




You're right young meteorologist!

Now let us learn about the changes in the weather before, during and after a typhoon.

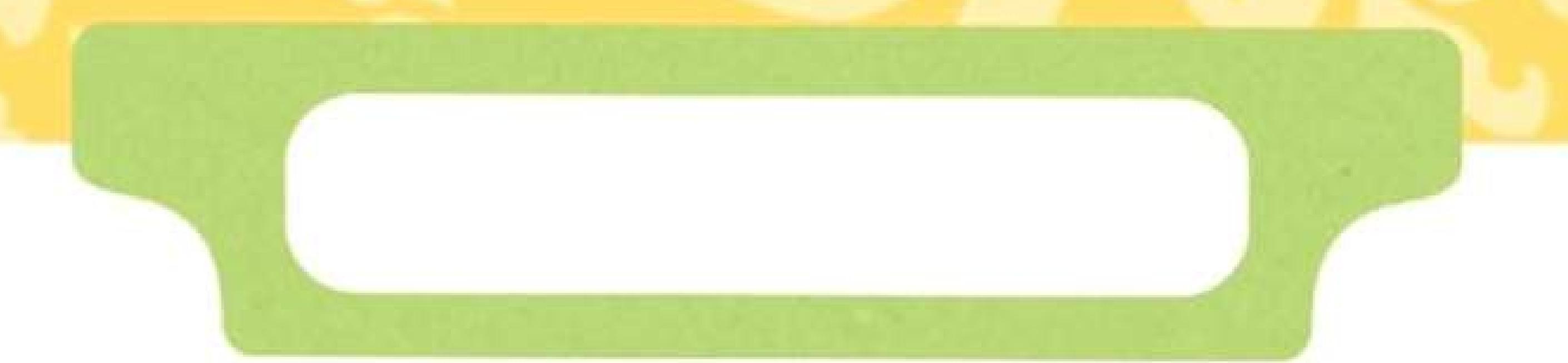




**Before the typhoon occur, high clouds occurs, high clouds are observed in the sky. The air is dry and cold since most of the warm air has already risen.**

**The relative humidity is high. The wind blows gently and scattered rain showers may occur.**

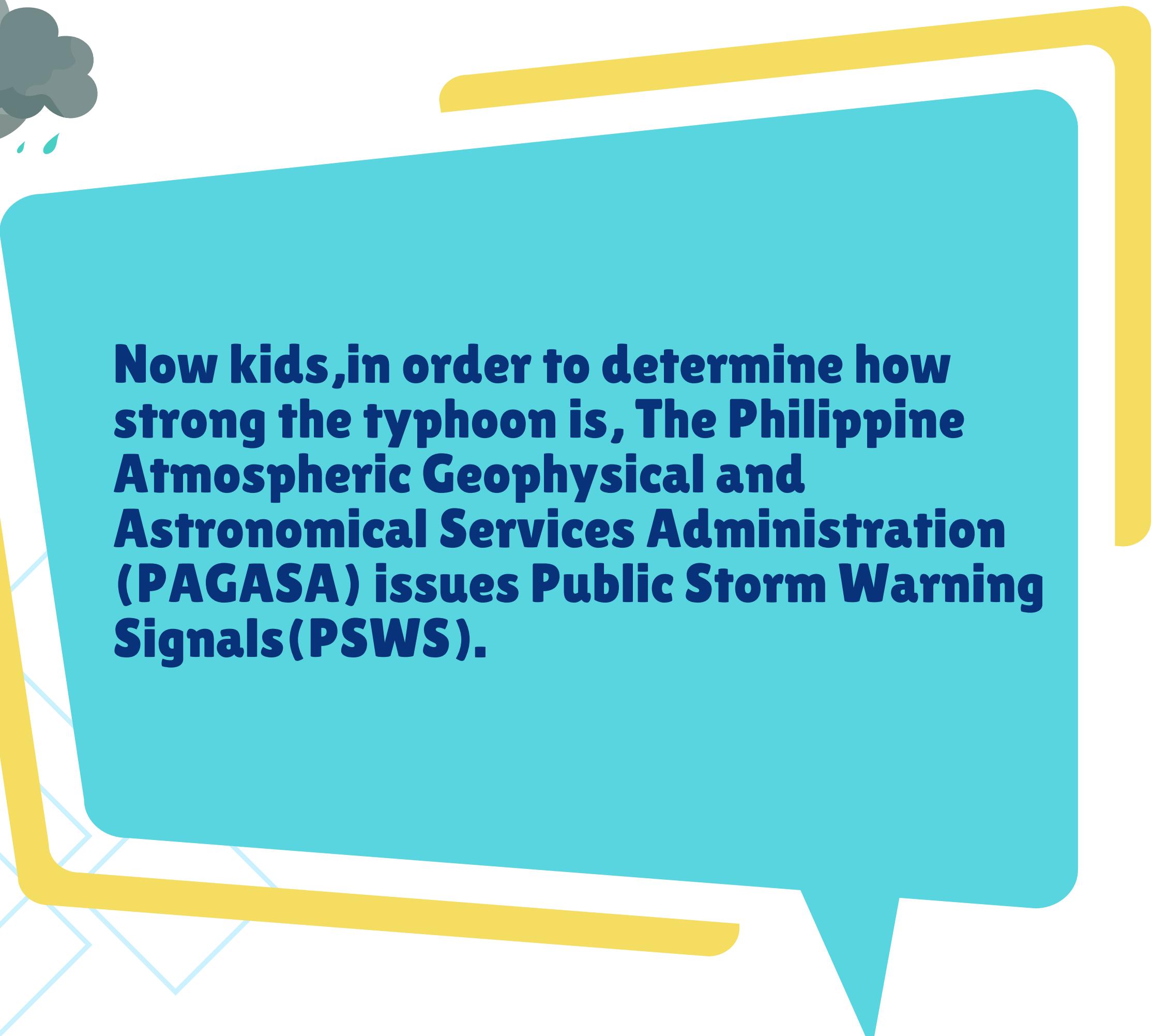
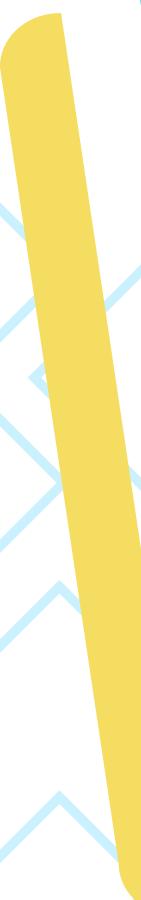




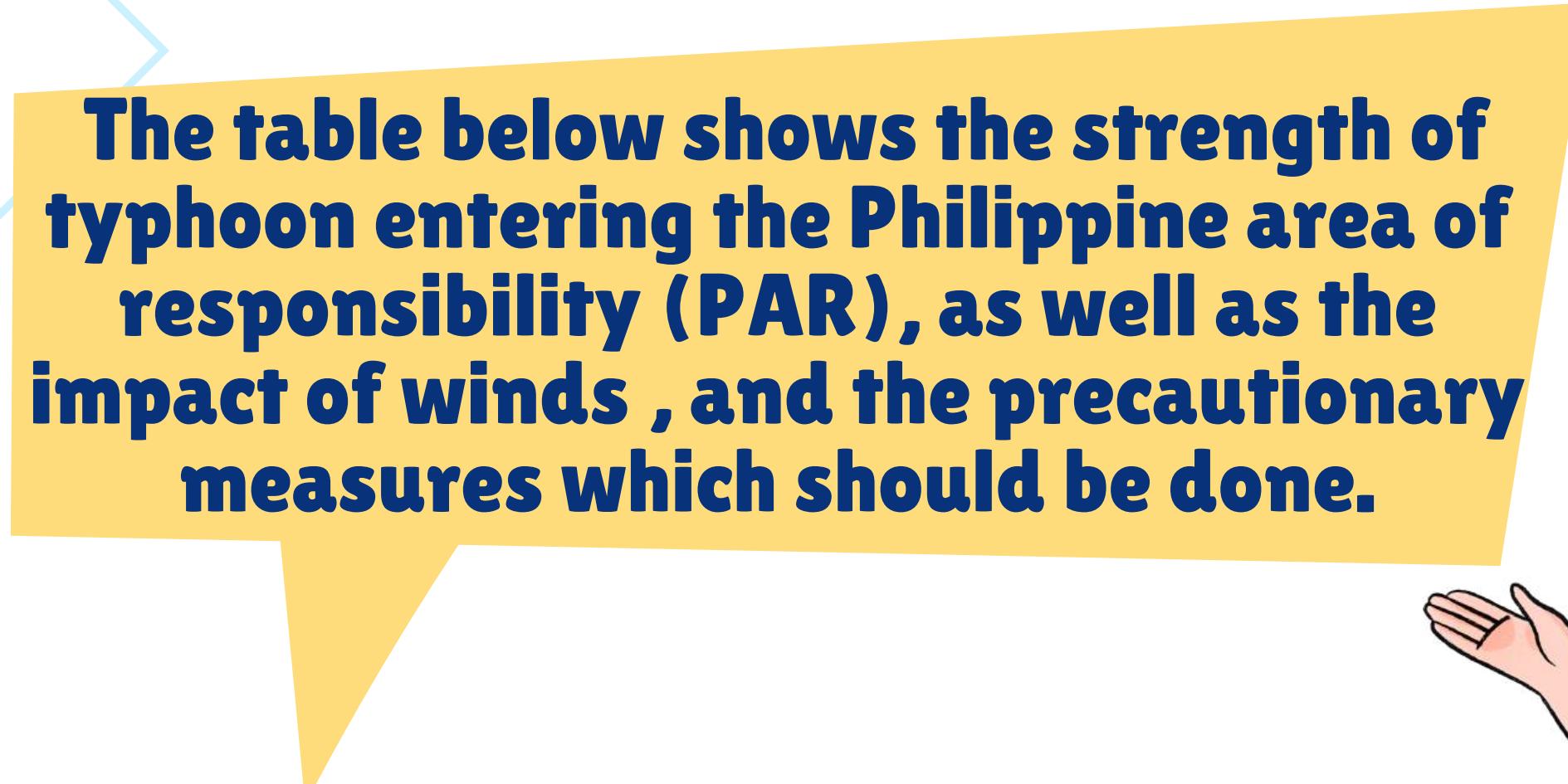
**The changes in the weather during a typhoon are dark and cloudy sky, heavy rainfall with strong winds, big waves near the coast,**

**when waves get abnormally high storm surge can occur, flash floods and landslides and trees and crops uprooted.**





**Now kids,in order to determine how strong the typhoon is, The Philippine Atmospheric Geophysical and Astronomical Services Administration (PAGASA) issues Public Storm Warning Signals(PSWS).**



**The table below shows the strength of typhoon entering the Philippine area of responsibility (PAR), as well as the impact of winds , and the precautionary measures which should be done.**



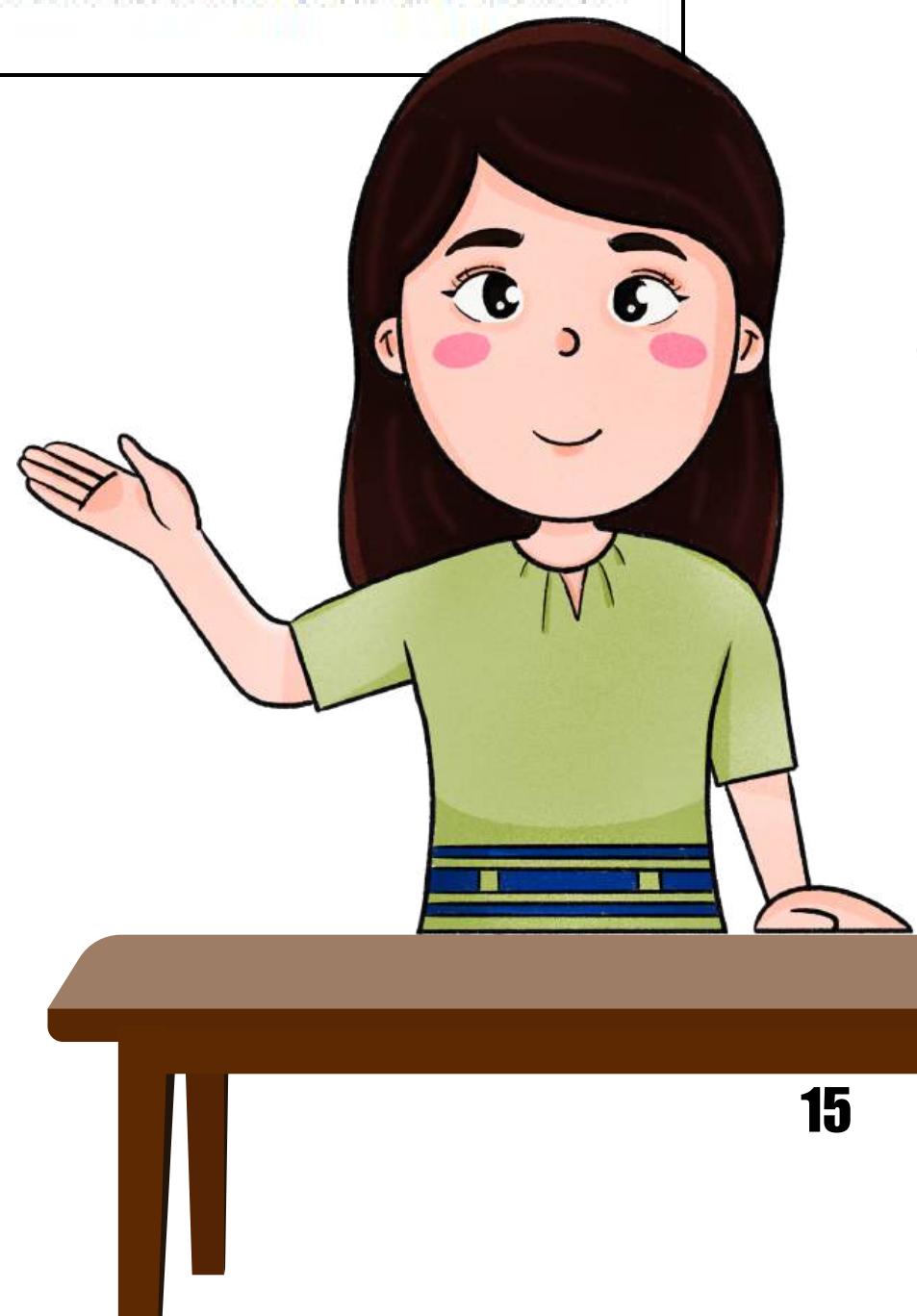
<b>PSWS #</b>	<b>Environment Condition</b>	<b>Impact of the Wind</b>
1	<ul style="list-style-type: none"> <li>• A tropical cyclone will affect the locality</li> <li>• Winds move at a speed of 30-60kph may be expected in at least 60 hours.</li> <li>• Continual (on and off) rain is expected within 36 hours.</li> </ul> 	<ul style="list-style-type: none"> <li>• Branches of small trees may be broken.</li> <li>• Some banana plants may be tilted.</li> <li>• Some houses of light materials (nipa &amp; cogon) may be partially unroofed.</li> <li>• Only very light damage to the exposed community.</li> <li>• People are advised to listen to the latest weather forecast of PAGASA.</li> <li>• Some coconut trees may be tilted or broken.</li> <li>• Few big trees may be broken</li> <li>• Many banana plantations may be drowned.</li> <li>• Rice and corn may be adversely affected.</li> <li>• Large number of nipa and cogon houses may be partially or totally unroofed.</li> </ul>
2	<ul style="list-style-type: none"> <li>• A tropical cyclone will affect the locality</li> <li>• Winds move at a speed of 61-120kph and may be expected in at least 24 hours.</li> </ul>	



		<ul style="list-style-type: none"> <li>• Some galvanized iron roofs may be peeled off.</li> <li>• In general, the winds may bring moderate damage to the exposed community.</li> <li>• Outdoor activities of children should be postponed.</li> </ul>
3	<ul style="list-style-type: none"> <li>• A tropical cyclone will affect the locality.</li> <li>• Winds move at a speed of 121-170kph and may be expected in at least 18 hours.</li> </ul> 	<ul style="list-style-type: none"> <li>• Many coconut trees may be broken or destroyed.</li> <li>• Almost all banana plants may be downed and a large number of trees may be uprooted.</li> <li>• Majority of houses made in light materials may be unroofed or destroyed.</li> <li>• There may be widespread disruption of electrical power supply and communication services.</li> <li>• In general, moderate to heavy damage may be experienced particularly in the agricultural and industrial sectors.</li> </ul>



4	<ul style="list-style-type: none"> <li>A very intense typhoon will affect the locality.</li> <li>Winds move at a speed of 171-220 kph and may be expected in at least 12 hours.</li> </ul> 	<ul style="list-style-type: none"> <li>Coconut plantations may suffer extensive damage.</li> <li>Many large trees may be uprooted.</li> <li>Rice and corn plantations may suffer severe damages.</li> <li>Most residential and institutional buildings made from mixed construction materials.</li> <li>may be severely damaged.</li> <li>Electrical power and communication services may be severely disrupted.</li> <li>Overall, damage to affected communities can be very heavy.</li> <li>Disaster coordinators are fully alert to respond emergencies.</li> </ul>
5	<ul style="list-style-type: none"> <li>A super typhoon will affect the locality.</li> <li>Winds move at a speed of 220kph or above is expected in at least 12 hours.</li> </ul> 	<ul style="list-style-type: none"> <li>Widespread damage to high-risk structures.</li> <li>Complete roof failure on many residences and industrial buildings.</li> </ul>
		<ul style="list-style-type: none"> <li>Electrical power distribution and communication services severely disrupted.</li> <li>Most plants and tall trees are broken, uprooted or defoliated.</li> <li>All kinds of travel and activities should be canceled.</li> </ul>



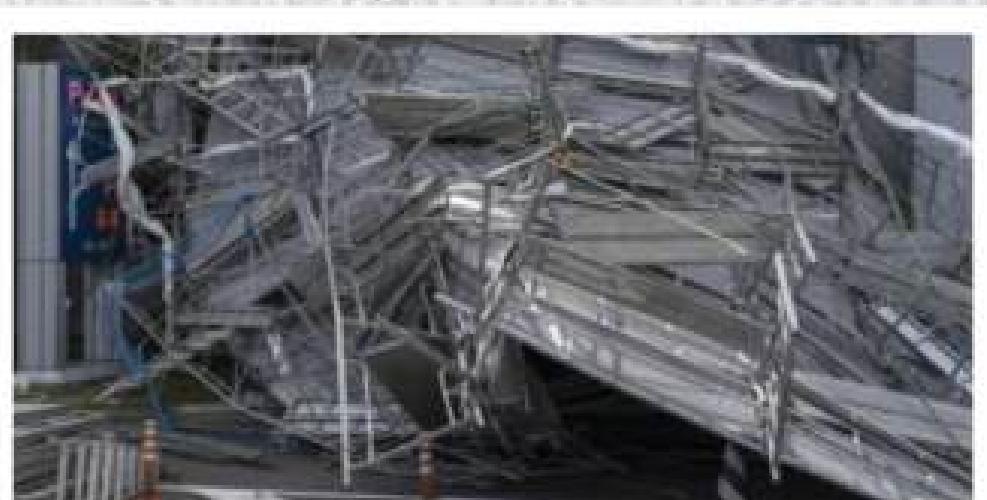
**The changes in the weather after a typhoon are sun becomes visible, sky becomes clearer, scattered rain shower, areas might still be flooded, recovering from typhoon, residents are in the evacuation area, rescue & relief operations and water bourne disease occur.**

**What are the changes in the weather after a typhoon??**



# ACTIVITY CARD

**Directions:** Study each photo then identify the storm signal that affected the area whether it is storm signal #1.#2.#3,#4 and Signal #5.



## ACTIVITY 2

Observe the changes in the weather before, during and after a typhoon. Describe the condition of environment before, during and after a typhoon.

### Pictorial Study:

**I. Materials:** Pictures showing weather condition before, during and after a typhoon.

**II. Procedure:**

1. Observe the picture of weather condition.
2. Then, answer the question that follow.



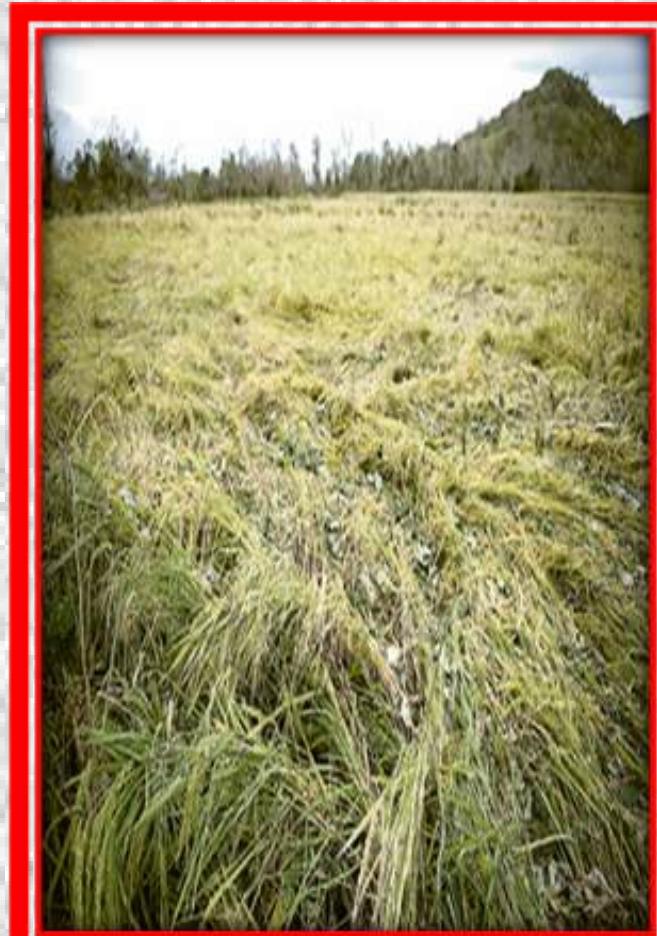
**Before a typhoon**



## **During a typhoon**



## **After a typhoon**



### **III. Questions:**

1. What have you observed about the weather condition before a typhoon?
2. What have you observed about the weather condition during a typhoon?
3. What condition have you observed about the weather after a typhoon?
4. Will you describe the condition of the environment after a typhoon?

## ACTIVITY 3

**Directions:** Put a check mark (/) to the sentence that stating correct preparedness before, during and after a typhoon and put a wrong mark (x) if it is incorrect. Write your answer on your answer sheet.

\_\_\_\_\_ 1. Mang Jose is a farmer. He observed the sky is dark and seems it is about to rain. The wind is moist and cold. He, then turned on his radio and listened for weather forecasts.

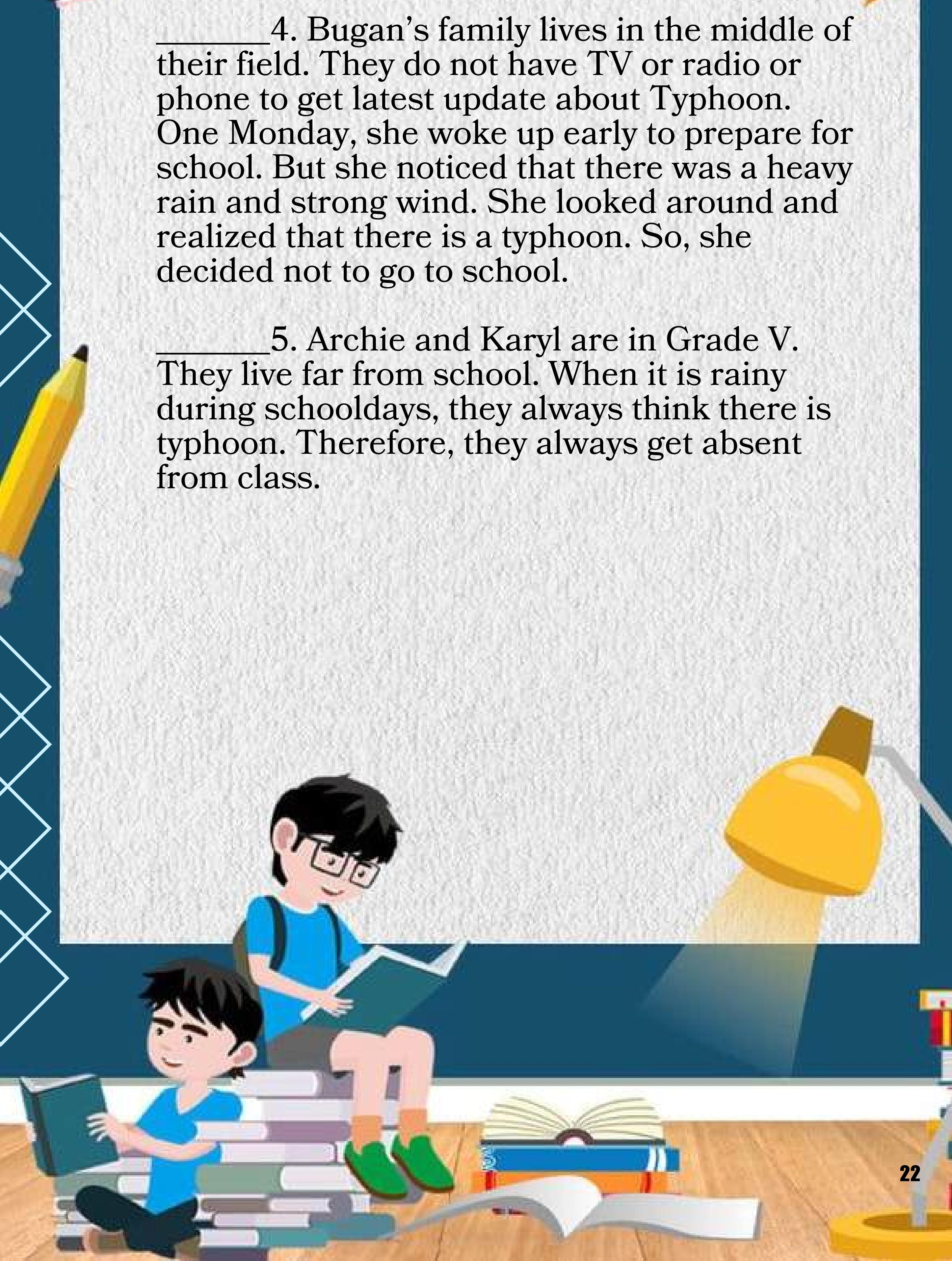
\_\_\_\_\_ 2. Mila is a Kindergarten pupil. They do not have class because their area is affected by the Typhoon Ompong with signal number 1. There was little rain, so she went to play with their neighbour.

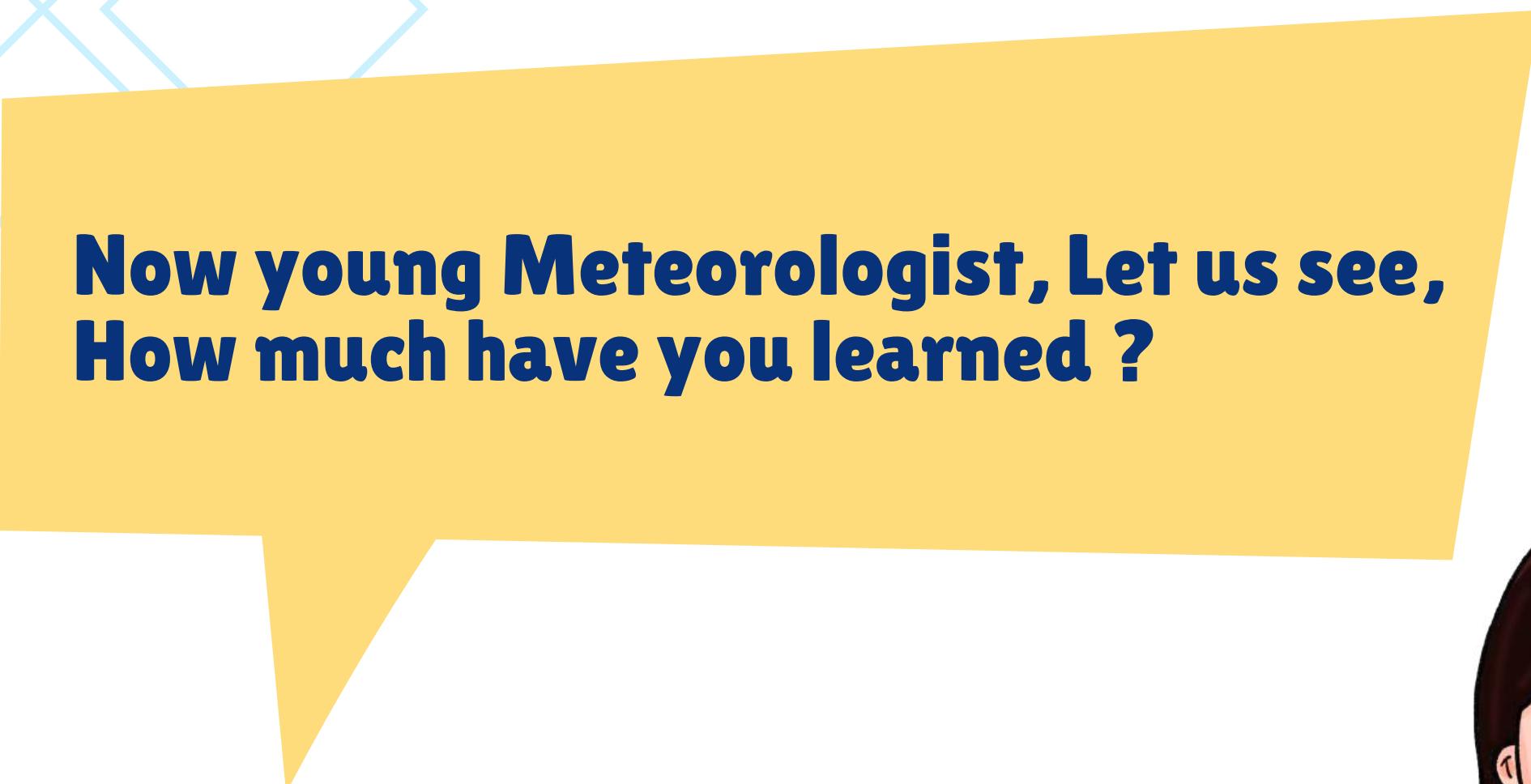
\_\_\_\_\_ 3. The Dulnuan family planned to hold a birthday celebration in a resort this Saturday. However, the weather forecaster announced that a Typhoon is coming and will be affecting the area where the Dulnuan family lives. So, they postponed their planned family occasion.



4. Bugan's family lives in the middle of their field. They do not have TV or radio or phone to get latest update about Typhoon. One Monday, she woke up early to prepare for school. But she noticed that there was a heavy rain and strong wind. She looked around and realized that there is a typhoon. So, she decided not to go to school.

5. Archie and Karyl are in Grade V. They live far from school. When it is rainy during schooldays, they always think there is typhoon. Therefore, they always get absent from class.





**Now young Meteorologist, Let us see,  
How much have you learned ?**



# ASSESSMENT CARD

**Directions:** Read each statement carefully. Choose the letter of the correct answer and write it on your answer sheet.

**1. The following are observed before a typhoon, except one. Which among the following is an exception?**

- A. Big clouds are risen to the sky.
- B. The relative humidity is high.
- C. The air is dry and cold.
- D. There is strong wind and heavy rain.

**2. Which is not observed during a typhoon?**

- A. Rescue and relief operations are ongoing.
- B. Flash floods may occur due to heavy rain.
- C. There are high ocean tides and storm surge.
- D. Trees and crops may be tilted or uprooted.



**3. Which of the following is observed in the environment after a typhoon?**

- A. Some people are affected by diseases such as influenza and dengue.
- B. The wind blows gently and there are scattered rain showers.
- C. Big waves in the coasts of oceans are observed.
- D. All of the above.

**4. Which of the following is a condition of the environment during a typhoon?**

- A. The humidity is high.
- B. Many people are moved to evacuation areas.
- C. Floods and landslides happen in some places.
- D. All of the above.

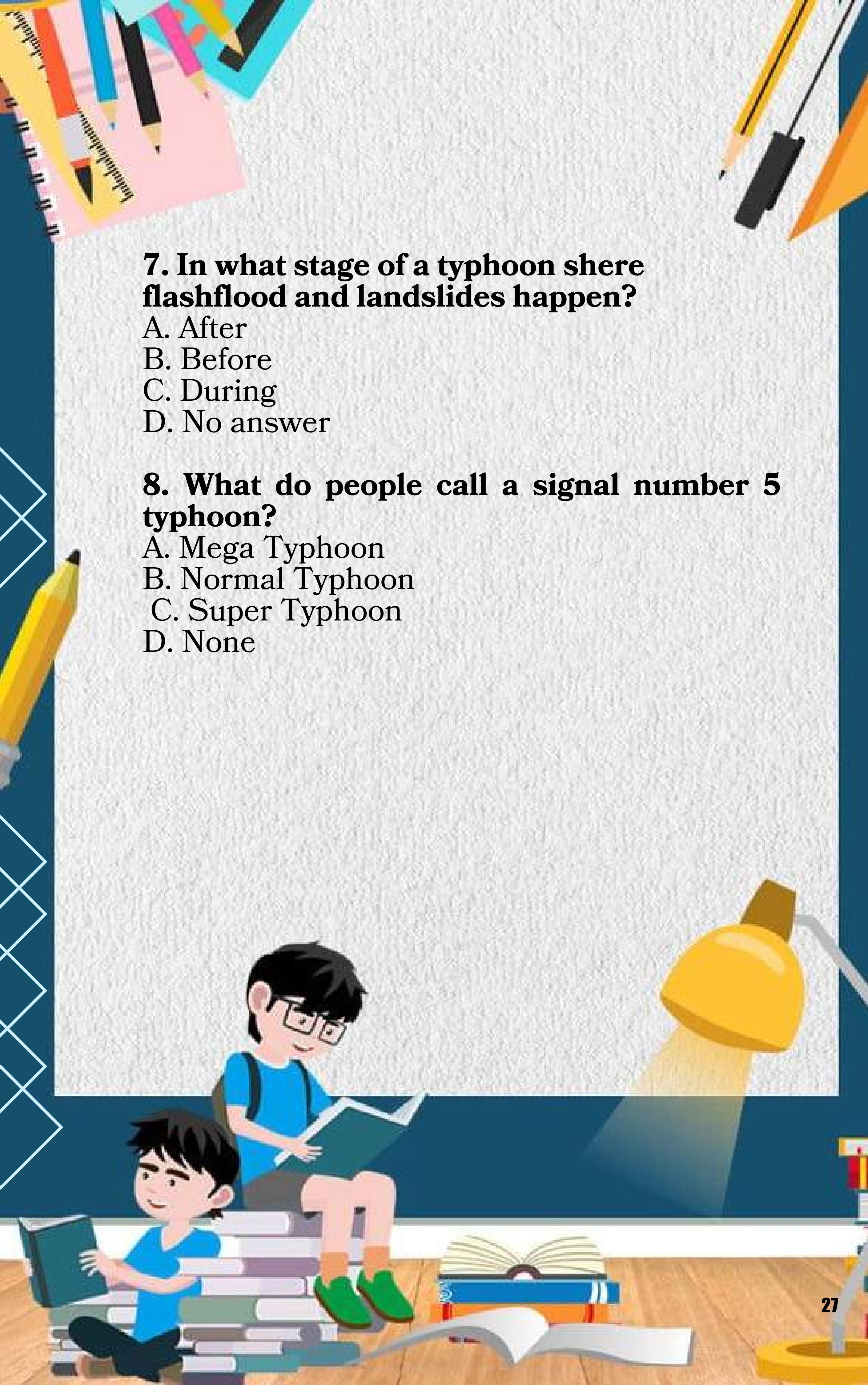


**5. After a typhoon, what is usually observed in the surrounding?**

- A. Many people are brought to evacuation centers.
- B. Some areas are flooded and devastated.
- C. People may suffer from water-borne diseases.
- D. All of the above

**6. Which of the following is an environmental condition before a typhoon?**

- A. There is a heavy rain accompanied by strong wind.
- B. The clouds in the sky are high and dark.
- C. The sky is clear and the sun brightly shines.
- D. All of the above



**7. In what stage of a typhoon shere flashflood and landslides happen?**

- A. After
- B. Before
- C. During
- D. No answer

**8. What do people call a signal number 5 typhoon?**

- A. Mega Typhoon
- B. Normal Typhoon
- C. Super Typhoon
- D. None

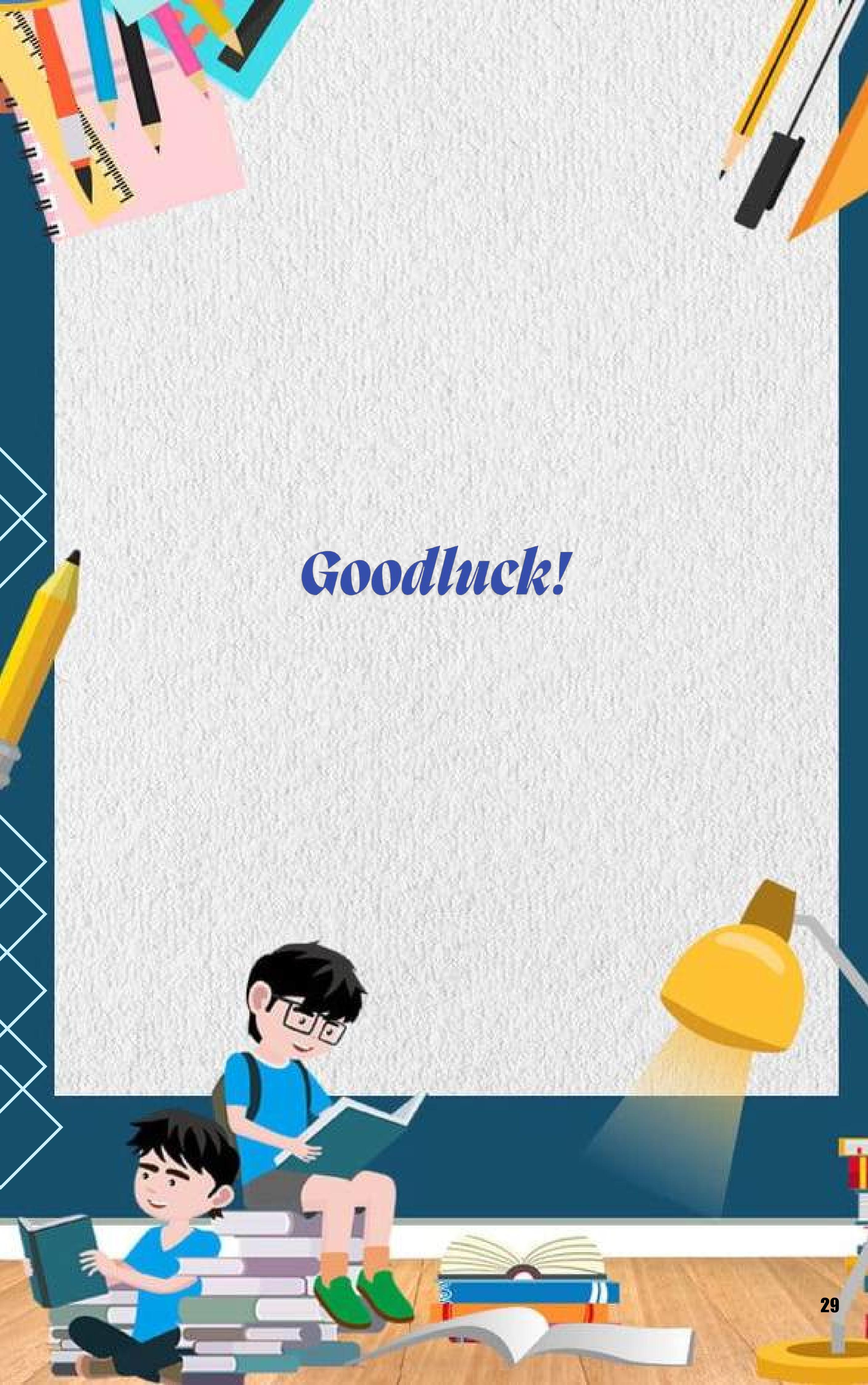


**9. Why is it important to observe the weather condition before, after and during a typhoon?**

- A. To be able to know if there is unforeseen weather disturbance
- B. To be prepared for the possible effects of the typhoon.
- C. To avoid much devastation brought by a typhoon
- D. All of the above

**10. How fast does the wind move when it is storm signal number 1?**

- A. 20-30 kph
- B. 40-60 kph
- C. 30-60 kph
- D. 50-70 kph



*Goodluck!*

*Why do meteorologist observe or monitor the weather condition from time to time , especially during typhoon?*

*If you were a meteorologist, will you work full time to monitor the weather conditions? Why?*



# ENRICHMENT CARD

***Cut out a news clipping about a recent typhoon that hit our country. Identify ways on how you can extend help to the victims of typhoon.***

# ANSWER KEY CARD



## Activity 1

1. Before a typhoon occurs, high clouds are observed in the sky. The air is dry and cold since most of the warm air has already risen. The relative humidity is high. The wind blows gently and scattered rain showers may occur.
2. During a typhoon, the sky is dark and cloudy. Heavy rainfall accompanied by strong winds occurs. Big waves are also observed near the coast. When these waves become unusually high due to abnormally high ocean tides, a storm surge occurs. Flash floods and landslides may occur and some trees and crops uprooted.
3. After a typhoon, the sun becomes visible, and the sky becomes clearer there might be scattered rain showers. Some areas may still be flooded and recovering. If a certain place is severely devastated, many residents are staying in evacuation areas. Rescue and relief operations are also on going.
4. Rice and corn plantation suffer damage, residential and institution building of mixed construction material may be severely damaged, electric power and communication may be disrupted, heavy damage on community.

# **ANSWER KEY CARD**



## **Activity 2**

1. The bayanihan spirit shines in the character of every Filipino every time calamities, disaster and tragedy strikes the nation. This is the best virtue we can show to the whole world.
2. You should always be alert and be ready to lend a helping hand.
3. Maybe I will join the volunteer to distribute food and water to the victim, donate some of my clothes which are slightly use.

# ANSWER KEY CARD



Infrastructure or Resources	What Happen...		
	Before typhoon	During typhoon	After typhoon
Coconut trees	Calm, standing straight or gets slightly blown by the wind.	Coconut trees get swayed from mild to violent, depending on the strength of the typhoon. Some trees maybe uprooted.	Some coconut trees may be totally bent down.
Rice fields	Calm, gets slightly blown by the wind.	Rice fields get flooded or the rice seedlings get blown all over the place.	The rice seedlings may have been drowned by the flood or some may be totally destroyed.
Wind	The wind feels humid and can blow from gentle to slightly strong.	The wind blows from gentle to violent, depending on the strength of the typhoon.	The wind now blows and slightly humid.

# ANSWER KEY CARD



Electrical power	Electricity supply still present	Electricity supply may be cut off in some areas. Some power lines may be toppled down, resulting to power outages.	Electricity supply in some places may take a few days to weeks to be totally restored. Some may be restored within a few hours.
Houses	Houses are standing still, no damage present.	Houses may be slightly damaged to totally devastated depending on the strength of the typhoon and the built of the house.	Some houses need to have the roof fixed. Houses made of light materials may have been totally blown away or destroyed.

# REFERENCE CARD

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- Science Beyond Borders 5 (textbooks & manual) 5
- Hazel I. Tamayo Module in Science 5. Week 3, Fourth Quarter
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# ABOUT THE AUTHOR



**Rosalyn DG. Paulo** is a graduate of Bachelor of Elementary Education, specializing in Mathematics at Colegio de Dagupan, Dagupan City in 2005. Because of her passion in teaching, she became a private school teacher after she passed the Licensure Examination for Teachers (LET) in 2005. She rendered her first teaching at Saint Philomena's Academy in Pozorrubio, Pangasinan for 6 years and another same years of service at Aguilar Catholic School, Aguilar, Pangasinan. In 2019, she was hired as a public grade school teacher in Panacol Elementary School.

At present, Rosalyn DG. Paulo is a teacher at Ninoy Elementary School, Aguilar District, SDO Pangasinan I. She has been handling Grades 5 and 6 pupils. She was also designated as a Mathematics Coordinator, Learners Formation focal person and SELG teacher-adviser from 2021 to present.

She took a Master of Arts in Education to enhance teaching skills and upgrade potential by portraying a higher level of commitment to her profession. She graduated from Lyceum-Northwestern University in Dagupan City this year 2025.

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