



Living with typhoons

Lesson plan: typhoons in the Philippines, how storm surges form, the lessons of Yolanda, and mapping coastal risk



Ages	14 to 18 (grades 9 to 12)
Time	60 minutes
Group	Up to 36 students, in groups of three or four
Where	Any classroom. No internet needed.
You need	The slides and one risk map per group (A3 if possible), coloured pencils

What students learn

- How often tropical cyclones affect the Philippines, and when.
- How a storm surge forms, and why it is often deadlier than the wind.
- What made Yolanda so destructive.
- Which features make a coast vulnerable, and how to map risk.

Before the lesson

1. Print one **risk map** per group, on A3 if you can.
2. Be sensitive: some students or their families may have lived through Yolanda or other typhoons.

The lesson

- 1 A typhoon country **8 minutes, slides 1 and 2**. Share the PAGASA figures.
- 2 Storm surge **10 minutes, slide 3**. Explain wind set-up and low pressure raising the sea.
- 3 Yolanda **10 minutes, slide 4**. Keep it factual and respectful.
- 4 Vulnerable coasts **7 minutes, slide 5**. Link each factor to the village map.
- 5 Map the risk **20 minutes, slide 6**. Groups complete the risk map and compare.
- 6 Wrap up **5 minutes, slide 7**. Discuss one or two questions.

Answers and what to listen for

What to listen for on the map: the low coastal strip, the river mouth where water can travel inland, and homes closest to the shore are most at risk. The fringing reef and mangroves reduce wave energy, but a large surge can still flood low ground behind them.

Making it easier or harder

- **Younger groups:** skip the map and draw a simple before-and-after picture of a surge.

- **Older groups:** look up your municipality's hazard map from the local disaster risk office or national hazard maps, and compare.

Safety and good practice

- Handle the topic of disasters sensitively. Give students a way to step out if it is upsetting.

Curriculum links

- **Science:** weather, Earth systems, natural hazards.
- **Geography and Araling Panlipunan:** hazards, risk and communities.
- **Philippine senior high school:** General Science and disaster preparedness.
- **Ocean Literacy Principle 3:** the ocean is a major influence on weather and climate.

The teacher reading has the science behind every slide, with links to the sources.

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