Mayon Virtual Field Trip

A 20-minute, screen-based investigation of a stratovolcano, its people, and the evidence used to describe volcanic hazards.

WHAT THIS IS

A free companion to the Mayon interactive. It uses a true-scale terrain model, selected historical scenes, and explicitly illustrative hazard layers. It does not provide monitoring, forecasts, evacuation advice, or a substitute for official guidance.

Learning goals

By the end, learners should be able to (1) identify how repeated eruptions build a stratovolcano, (2) distinguish observed terrain, historical evidence, and modeled interpretation, (3) describe why hazards reach different parts of a landscape, and (4) explain why communities need both place knowledge and official warning information.

Before you begin

Open **mayonrajan.com**. Select **Story** and work through the four chapters in order. Keep **Hazards** for the final activity. If a prompt asks for an answer, a short labelled sketch or two sentences is enough.

Materials: browser, headphones optional, this sheet, pencil. Suggested group size: 1-3 learners.

FIELD ROUTE

Four stops, one question

01 A CONE, BUILT IN LAYERS / 4 minutes

What observations make Mayon look like a volcano built through many eruptions rather than one event?

In the experience: Start Story, chapter 1. Orbit gently, turn on **Scale**, and compare the summit with the rice plain.

Discuss or write: Make a labelled sketch of the cone. Mark one feature you observe directly and one process you infer. What evidence would make the inference stronger?

02 1814 - CAGSAWA / 5 minutes

How does a historic eruption remain visible in a living landscape?

In the experience: Advance to chapter 2. Keep the date in view and locate the Cagsawa belfry.

Discuss or write: Write a caption for the site that separates: (a) what remains, (b) what historical accounts tell us, and (c) what the visualization reconstructs.

03 2018 - SOUTH FLANK / 4 minutes

Why might a lava route favor one flank on one occasion?

In the experience: Advance to chapter 3. Notice the glowing south-flank layer and change the viewpoint.

Discuss or write: Name two controls that could influence a route (for example, vent position, slope, topography, or eruption rate). Which are actually represented here, and which are simplified?

04 DARAGA AND THE LONG VIEW / 4 minutes

Why is a volcano more than its summit?

In the experience: Advance to chapter 4. Use **Places** to compare Daraga, Cagsawa, and the cone.

Discuss or write: Describe one value at stake beyond physical exposure: heritage, livelihood, agriculture, infrastructure, or memory. How should a public visualization respect it?

HAZARDS: READ WITH CARE

Scenario, not forecast

Open **Hazards**. These layers are an interpretive teaching device. They do not identify current danger, predict a route, or replace the official hazard maps and advisories issued by Philippine authorities.

05 COMPARE POSSIBLE PROCESSES / 3 minutes

How do process, terrain, and weather change where a volcanic impact may be felt?

In the experience: Try PDC / uson, Lava, Lahar, and Ash one at a time. Move the ash-wind control only to see why wind direction matters. Then select Composite.

Discuss or write: Complete this table: For each process, state whether it is mainly controlled by slope/topography, rainfall, wind, or several factors. Circle the layer that most needs an official, time-specific source before use in a real decision.

SAFETY NOTE

For current activity, alert levels, rainfall information, and official hazard communication, consult PHIVOLCS and local authorities. In an emergency, follow official instructions - not an interactive model.

Exit ticket

Claim: “A visually persuasive volcano model is a reliable real-time hazard map.”
Your response: Agree, disagree, or qualify the claim in 3-4 sentences. Refer to one observation, one inference, and one source you would check before acting.

How to frame the model

Use the experience to prompt evidence-based questions, not to deliver a hazard decision. The surface terrain is based on digital elevation data; the internal plumbing and hazard graphics are conceptual or illustrative. Historical scenes simplify a complex record. Invite learners to ask “what do we know, how do we know, and how certain is it?”

Source trail

PHIVOLCS Volcano Hazard Maps - Mayon. Official map index and risk communication context. volcanohazardmaps.org/map/?id=1047

Smithsonian Global Volcanism Program - Mayon. Eruption history and volcano reference record. volcano.si.edu/volcano.cfm?vn=273030

Springer / Bulletin of Volcanology (2021). Petrological constraints relevant to conceptual magma storage beneath Mayon. doi.org/10.1007/s00445-021-01486-9

USGS Cascade Volcano Observatory teaching resources. General classroom approaches for teaching volcanic processes and hazards. usgs.gov/observatories/cvo/teaching-resources

Version 1.0 - 24 July 2026. A maintained methods and source page is available at mahastrategies.com/projects/mayon.