Mangroves: above and below

PHOTO STUDY 1 • Look closely before you explain

Follow the waterline





These two views show mangrove branches and leaves above the water, with roots continuing below the surface.

Discuss: Which parts can you see above the waterline? Which continue below it?

Ages 6–8: Point to a leaf, a branch and a root. Draw a line to show the water's surface.

Ages 9–12: Compare the two root patterns. Give two observations and one question that the photographs cannot answer.

Original photographs, shown in full: _TRM0715a.jpg, _TRM0720a.jpg

Mangroves: above and below

PHOTO STUDY 2 • Look closely before you explain

Look across the roots





Two wider views show roots crossing the waterline and reaching the bottom. Look at the spaces between the roots.

Discuss: How might an animal use the spaces between roots? Mark this as an idea to investigate.

Ages 6–8: Trace the shape of a root. Find a place where a small animal might fit.

Ages 9–12: What extra evidence would show which animals use this habitat? Can a single image tell you how the tide changes?

Original photographs, shown in full: _TRM0725a.jpg, _TRM0731a.jpg

Mangroves: above and below

PUPIL WORKSHEET • Write, draw or discuss your answers

Name: _____ Date: _____

1. Draw part of a mangrove from a photograph. Label a leaf, a root and the waterline. Show something above and below the water.

2. Write two things you can see and one question you would like to investigate. Keep your observations separate from your ideas.

3. Plan one way a class could help care for a coastal habitat. Who would you ask for local advice, and how would you check whether the action helped?

Mangroves: above and below

TEACHER NOTES • Suggested answers and sources

Learning goal: Describe a mangrove habitat from photographic evidence and explain why caring for it matters.

Time: 30–40 minutes. **You need:** the photo pages, worksheet and pencils. Project the photographs or share printed copies; print only page 3 for each pupil.

Teach: Observe quietly, share in pairs, then discuss. Younger pupils can point, draw or dictate; older pupils should explain their evidence.

Reading the photographs

Roots, leaves, branches, the waterline and the bottom are observable. A possible hiding place is an inference, not proof that a particular animal lives there. The images do not establish a species, location, salt content or a change in tide.

Background

Mangroves are plants adapted to coastal tidal conditions. Their roots help anchor them; some root structures also help them obtain oxygen in waterlogged ground. Mangrove habitats provide shelter for many young fish and other animals and can reduce coastal erosion. Root shapes and functions vary between species. [1]

Timor-Leste connection

In a 2019 account, UNDP described communities in Ulmera, Timor-Leste, restoring and monitoring mangroves with government and project support. Use this as a community-care example, rather than as a description of the location in these photographs. [2]

Worksheet guidance

Accept clear labels and specific visible details. A useful care plan might prevent litter escaping from school, with a count before and after. Consult local custodians and habitat managers about local action; do not treat planting or entering a mangrove area as a classroom instruction.

Check learning: Ask for one observation, one explanation and one unanswered question.

Useful words: habitat: the place an organism lives; tide: the regular rise and fall of sea level; observation: something noticed or measured.

Sources and photograph record

Photographs supplied by Troy Mayne, shown in their original sequence without cropping. Source links checked 2 November 2026.

[1] WA Fisheries — Fact Sheet: Mangroves

[2] UNDP — Technology and tradition help restore Timor's mangrove forests (2019)