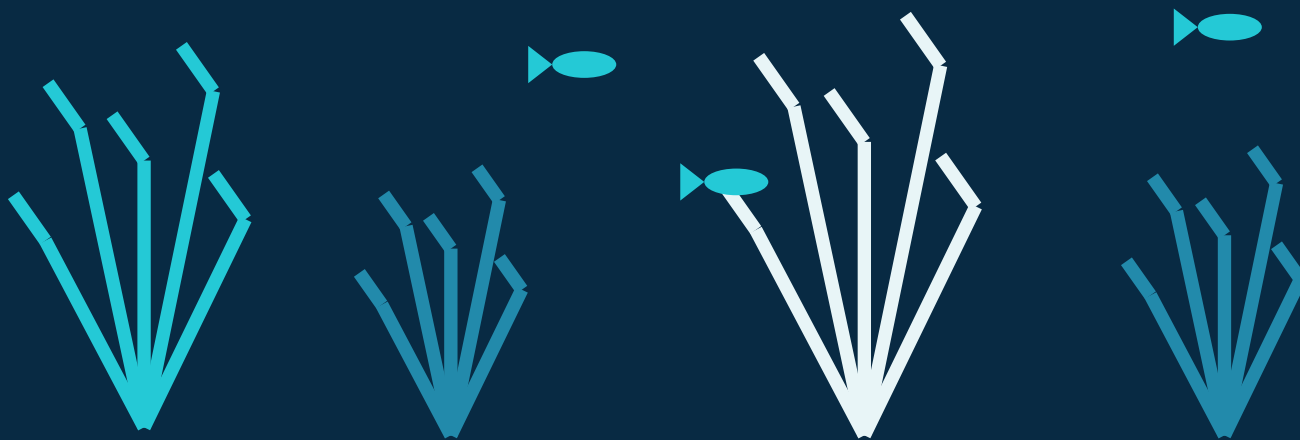


THE SILENT REEF

PLAYER PACK

The signal is urgent.
The evidence is incomplete.
Your decisions matter.



Read the reef. Challenge the claim.
Unlock a response that the evidence supports.

AGES 15+ / 3-5 PLAYERS / 60 MIN / C1

A4 / PRINT AT 100% / SINGLE-SIDED



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An urgent reef signal

START HERE / FICTIONAL RESEARCH MISSION

A reef station reports extensive paling and a decline in fish sightings. Your research team must interrogate the records and authorise an evidence-based response before the next vessel departs. Resist premature causal attribution: the setting and all quantitative observations are fictional.

RESEARCH DIRECTOR / YOUR MISSION

Locate the survey stations. Explain bleaching. Check what the observations justify. Allocate the response budget and unlock the authorisation grid. You are approving a first response, not declaring the reef saved.

How to play

Open five files in order. Each gives a three-digit code. Show the host your code and reasoning before receiving the next file. Keep the middle digit of each code: five middle digits form the final lock. Keep all earlier evidence.

Your team

Rotate reader, mapper, evidence checker and recorder. Use a dictionary or calculator if useful. Ask for hints without penalty. All clues are on paper; do not search real equipment. Nobody is locked in.

BEFORE YOU DIVE IN

Corals are animals. Many reef-building corals host microscopic algae in their tissues. Bleaching involves loss of these algae; it does not automatically mean death. [1] “Silent” is the mission title, not a sound-based diagnosis.



Your research ledger

KEEP THIS PAGE / RECORD VERIFIED CODES

TEAM NAME

01

Station map

KEEP

02

Bleaching sequence

KEEP

03

Evidence check

KEEP

04

Response budget

KEEP

05

Authorisation grid

KEEP

FINAL LOCK

Read middle digits in File 1-5 order. Prepare a two-sentence research update: one supported finding and one uncertainty that still needs investigation.



Locate the survey stations

FILE 01 / MAP AND FIELD NOTES / NOT TO SCALE

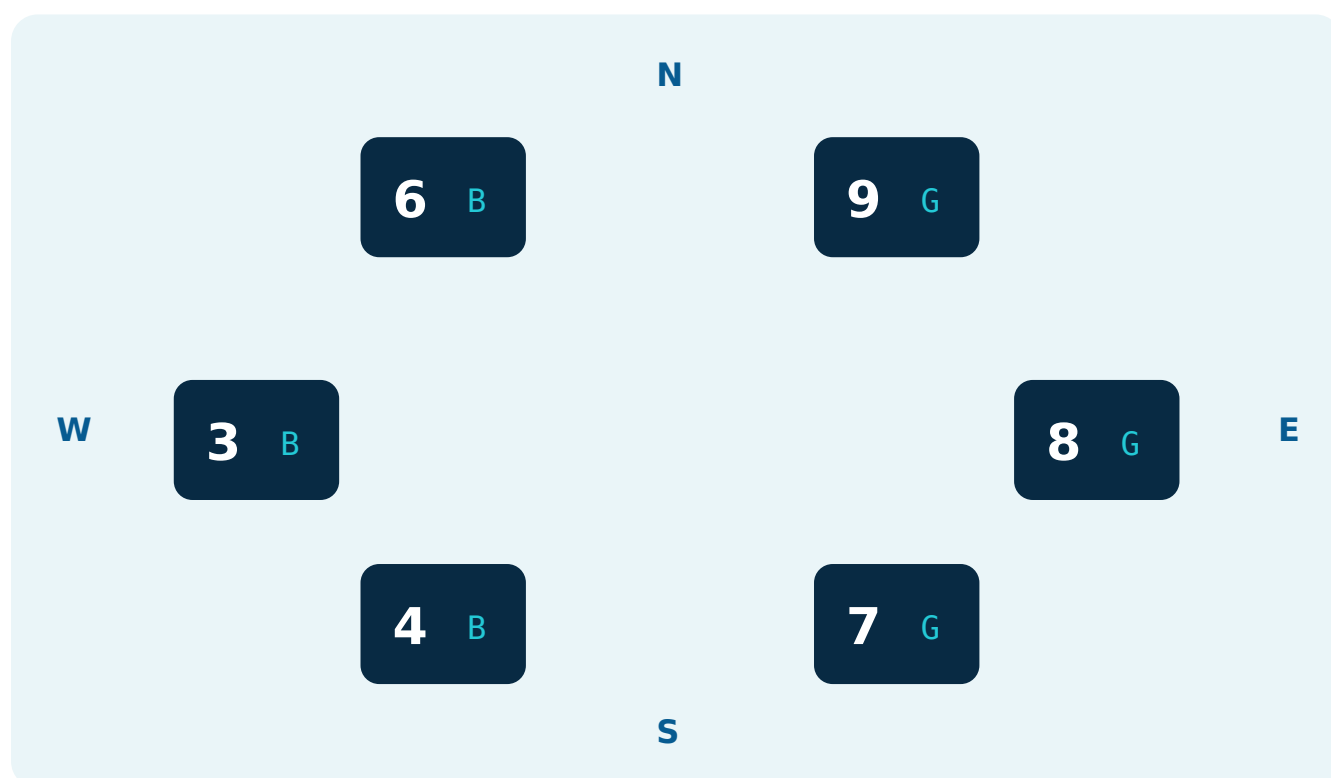
Reconcile each field description with the spatial and symbolic attributes of the survey stations. Concatenate identifiers in NORTH, EAST, SOUTH order. Preserve the underlying identifiers for the final cross-reference.

FIELD NOTES

NORTH / branching coral, not seagrass.

EAST / seagrass, not branching coral.

SOUTH / branching coral, not seagrass.



B = branching coral / G = seagrass

ACCESS CODE

Show your code and evidence to the host. Keep its middle digit.



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What happened to the coral?

FILE 02 / CUT THE SIX CARDS / KEEP THREE IN SEQUENCE

Reconstruct the proximate mechanism of thermal bleaching in three stages: stressor, disruption of symbiosis and immediate consequence. Exclude misconceptions and the contingent recovery scenario. Encode the selected identifiers in causal order.

1

PROCESS CARD

COLONY RECORD

Coral becomes pale or white. It is stressed but not necessarily dead.

7

PROCESS CARD

FIELD THEORY

White coral always means that the coral animal has already died.

2

PROCESS CARD

CONDITION LOG

Unusually warm water places the coral under stress.

4

PROCESS CARD

FOLLOW-UP SCENARIO

If conditions improve, surviving corals may regain algae and recover.

9

PROCESS CARD

TISSUE RECORD

The coral loses many of the symbiotic algae living in its tissues.

6

PROCESS CARD

FIELD THEORY

Corals are plants, so bleaching means that their leaves fall off.

Evidence under pressure

FILE 03 / SELECT ONE CONCLUSION PER NOTE

Select the sole inference warranted by each evidence note, distinguishing association from causation and bleaching from mortality. Concatenate identifiers in A, B, C order without extending the stated scope of the evidence.

THREE OBSERVATIONS / FICTIONAL SURVEY

A / Same route and survey duration: 40 fish seen last month, 20 now. Visibility fell from 12 m to 3 m.

B / Unusually warm water and new coral paling occurred in the same week.

C / Pale colonies still had living tissue when examined.

7

CONCLUSION

NOTE A

Visibility is a potential confounder; the observation warrants standardised resampling rather than a mortality estimate.

2

CONCLUSION

NOTE A

The observed reduction establishes a 50% mortality rate across the reef's fish population.

3

CONCLUSION

NOTE B

The temporal association is consistent with thermal stress but cannot establish exclusive causal attribution.

8

CONCLUSION

NOTE B

The thermal anomaly is sufficient to exclude all competing and interacting stressors.

5

CONCLUSION

NOTE C

Viable tissue establishes survival at sampling, without determining the colony's subsequent trajectory.

9

CONCLUSION

NOTE C

Loss of pigmentation overrides the tissue observation and establishes colony mortality.



Choose your first response

FILE 04 / CUT SIX ACTION CARDS / BUDGET: 9 CREDITS

Construct the unique three-action portfolio satisfying all operational requirements within an inclusive nine-credit ceiling. Select one intervention per category in HEAT, RUNOFF, ANCHORS order; retain the HEAT identifier for final authorisation.

REQUIRED TASKS / ONE ACTION PER CATEGORY

HEAT / Track temperature AND repeat the coral survey.

RUNOFF / Put a physical sediment control in place before rain.

ANCHORS / Use existing approved moorings AND brief boat crews.

8

RESPONSE ACTION

HEAT / 2 CREDITS

Record temperature only. No repeat coral survey.

4

RESPONSE ACTION

HEAT / 3 CREDITS

Record temperature AND repeat the coral survey. Does not cool the ocean.

2

RESPONSE ACTION

RUNOFF / 4 CREDITS

Install a sediment barrier at the active work site before the next rainfall.

9

RESPONSE ACTION

RUNOFF / 2 CREDITS

Design a poster. No barrier or other sediment control is installed.

6

RESPONSE ACTION

ANCHORS / 2 CREDITS

Direct boats to existing approved moorings and brief crews: no anchoring on coral.

1

RESPONSE ACTION

ANCHORS / 4 CREDITS

Same approved-mooring and crew-briefing service, plus a decorative sign.



Authorise the response

FILE 05 / EARLIER EVIDENCE REQUIRED

Recover the authorisation sequence by cross-indexing the station identifiers against the selected HEAT intervention. Preserve the original spatial ordering of the rows. Previous three-digit access codes are not table labels.

Station / action	4	8	2	6
4	9	2	5	1
6	8	4	7	3
8	5	6	1	7
9	3	7	2	6

READ THE LABELS

Rows are station IDs, not the complete code from File 1. Your column is the HEAT action ID, not its cost. Keep the NORTH, EAST, SOUTH row order.

ACCESS CODE

Show your code and evidence to the host. Keep its middle digit.

