

THE LUCKY GROUND, LITERALLY

One idea must land: renewability is about RATE — does nature replace it as fast as we use it? — not a memorised list.

WE ARE LEARNING

What environmental resources are, and how to classify them as renewable or non-renewable.

CURRICULUM · VERBATIM

“The classification of environmental resources as renewable or non-renewable” — Revised WA Curriculum, Y7 Geography, Water in Australia (SCSA, implementation 2026).

SPARK WHICH OF THESE STARTED UNDERGROUND?

- Students lock their calls in the handout BEFORE any discussion — commitment first, reveal second.
- Reveal: all four. Phone — lithium, gold, nickel and 40+ minerals; can — bauxite; window — silica sand; concrete — limestone, sand, iron.
- Land the frame: “You live in the state that supplies more of this to the world than almost anywhere on Earth — over \$230 billion of resources leave WA every year.” (WA Dept. of Mines, 2024 — the only statistic in this lesson; don't improvise others.)

CORE THE RENEWABILITY TEST

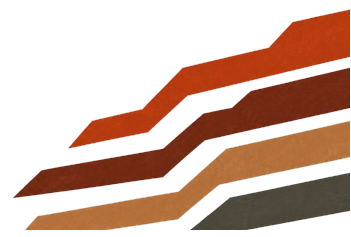
- Students draft their own definitions first (handout p2), then build the class versions.
- Teach classification as a TEST, not a list: does nature replace it as fast as we use it?
- Model two clean cases: sunlight (arrives daily regardless of use) vs Pilbara iron ore (≈ 2.5 billion years old; once shipped, not coming back).
- Set the trap that powers the workshop: “Some resources refuse to behave — water, timber, fish, soil.” Do NOT resolve it. Hand it to the teams.

WORKSHOP THE GREAT RESOURCE SORT + SIXTY-SECOND DEFENCES

- Teams of 3–4, one card set each, three lanes. Enforce both rules: max five It Depends; every It Depends card defended in writing.
- Circulate with the probing questions (over page). Close with defence round: sixty seconds per team, class votes whether each defence stands.

LAND IT EXIT TICKET

- Individual, handout p3. You are looking for RATE language — replace, replenish, faster than we use it — not list-memory.
- Skim before Lesson 2: it tells you who reasons by rate and who guesses by list.



■ PROBING QUESTIONS WHILE YOU CIRCULATE

- “How fast does nature make more of that?” — the rate question; use it relentlessly.
- “Renewable and recyclable — same thing?” (No: a can is recyclable; bauxite is still non-renewable.)
- “If it's renewable, can we still run out of it?” (Yes — a river in a dry year. Renewable ≠ unlimited.)
- “Would your answer change if we used ten times as much?” (Surfaces rate-thinking for timber, fish, groundwater.)

■ ANSWER KEY — INCLUDING THE ARGUMENTS WORTH ACCEPTING

LANE	CARDS
Non-renewable (clear-cut)	Iron ore · gold · lithium · natural gas · nickel · bauxite · coal · crude oil · diamonds
Renewable (clear-cut)	Sunlight · wind · wave energy · geothermal heat
Defensible as It Depends — accept either lane WITH a rate-based argument	River water (variable, scarce — the Lesson 3–4 seed) · groundwater (some aquifers recharge over centuries) · timber (renewable only if harvest ≤ regrowth) · fish stocks (same logic) · soil (forms over centuries) · sand (forms very slowly) · sea salt (effectively inexhaustible — strong teams may argue renewable)

Say it out loud to the class: a card placed “wrong” with good reasoning beats a card placed “right” with none.

■ DIFFERENTIATION

Support: reduce to the 12 core cards (marked ●); tape the printed test question to the sort mat. **Extend:** hand out the challenge card — “Human skill and knowledge: is a workforce a resource?” There is no settled answer; that is the point, and it is this program's own premise.

■ RUNNING SHORT — THE CUT LINE

Drop the defence round; teams submit written defences instead. Protect the Spark and the exit ticket — the hook and the evidence.

■ MISCONCEPTIONS TO WATCH

“Renewable means recyclable.” · “Renewable means unlimited.” (Lesson 4 depends on students knowing better.) · “Non-renewable means about to run out.” (It's about formation rate, not tomorrow's supply.)

