Workshop 4: Action

We acknowledge and respect the lək̓ʷəŋən peoples on whose traditional territory the university stands and the Songhees, Esquimalt and W̱SÁNEĆ peoples whose historical relationships with the land continue to this day.

Reminder of the Challenge

Remind the group of the **single knowledge gap** your paper addresses. If you can't express it in one sentence, the paper's aim needs sharpening.

TEMPLATE	EXAMPLE
"We don't yet know *X* about *Y*, which matters because *Z*."	"We don't yet know the *drivers* of *Plate Tectonics*, which matters because *Plate Tectonics may be a required component for stable climate*."

Checkpoint: Would a non-specialist colleague repeat your sentence accurately after hearing it once?

Task 1 — No Distractions

Not every method, result, and discussion items belongs in your story. Identify the **action**—the paragraphs where the story advances.

Group Prompts

- Mark paragraphs where the **action** occurs.
- Flag any actions that don't clearly connect to the challenge—cut or revise.
- Identify missing actions (e.g., a hotspot paper with no concrete data on the Hawaiian chain).

Task 2 — Figures that Carry the Story

You will need **two original figures** in your final submission. If the current draft has figures, decide if those figures are *must-have* vs *nice-to-have*.

If no figures yet: Propose or sketch (title + axes + expected pattern) a figure that the story needs.

Task 3 — Methods with Purpose

Be exact, but motivate every step. Use the **Purpose** → **Action** → **Outcome** micro-pattern.

Before (Dry)

(Outcome) Samples were dissolved in HNO_3, followed by the isolation of U and Th from the solution through co-precipitation with $Fe(OH)_2$, redissolution, and column chemistry using Bio-Rad AG 1 × 8 200–400 mesh anion resin.

After (Purposeful)

(Purpose) To date coral samples (Action) and constrain the timing and history of local sea level, (Outcome) samples were first dissolved in HNO_3, followed by the isolation of U and Th from the solution through co-precipitation with $Fe(OH)_2$, redissolution, and column chemistry using Bio-Rad AG 1 × 8 200–400 mesh anion resin.

Specific tasks:

- Can you find "methods-heavy" paragraphs?
- Add a one-line *intent* sentence before each procedure.
- Trim steps that don’t change interpretation or reproducibility.


Task 4 — Results vs Discussion (Building to Resolution)

The story's **action** is split across *Methods* (what we do), *Results* (what we see) and *Discussion* (what it means).

Let's break down the results and discussion:

Results	Discussion
Observation + minimal inference	Interpretation, mechanisms, implications
"We find growth position coral assemblages…"	"This pattern suggests a framework reef…"
No "because / therefore" logic, except when obvious	Connects back to the central challenge

Does your paper contain "Discussion" that is clearly distinguished from Results?
What will you move, merge, or rewrite to sharpen that boundary?

Review Papers

- **Synthesizes** findings (not a summary—an interpretation of the field).
- **Surfaces contradictions** and explores resolutions.
- **Proposes conceptual models** that unify disagreeing results.
- **Simplifies** complexity
- **Sets future directions** for the evolving knowledge gap.

Task 4.5 — Discussion as a Mini-Story

Use a simple **Lead** → **Development** → **Resolution** structure.

Template

1. **Lead:** A clear, graspable claim.
2. **Development:** Evidence, alternatives, limits.
3. **Resolution:** What this changes; next steps.

Tip: Leads are brief arguments, not restatements of results.

Lead Highlight Example from Vine and Matthews 1963

Work on this survey led us to suggest that some 50 per cent of the oceanic crust might be reversely magnetized and this in turn has suggested a new model to account for the pattern of magnetic anomalies over the ridges. *The theory is consistent with, in fact virtually a corollary of, current ideas on ocean floor spreading and periodic reversals in the Earth's magnetic field. ´f the main crustal layer (seismic layer 3) of the oceanic crust is formed over a convective up-current in the mantle at the centre of an oceanic ridge, it will be magnetized in the current direction of the Earth's field. Assuming impermanence of the ocean floor, the whole of the oceanic crust is comparatively young, probably not older than 150 million years, and the thermo-remanent component of its magnetization is therefore either essentially normal, or reversed with respect to the present field of the Earth. Thus, if spreading of the ocean floor occurs, blocks of alternately normal and reversely magnetized material would drift away from the centre of the ridge and parallel to the crest of it.*

Why it works: the Lead states the claim; the rest develops mechanism and consequence.

Summary

- **Challenge:** One sentence, *sticks* in reader's mind (remind each other)
- **Action:** Keep only paragraphs that move the story forward (mark cut and revise)
- **Figures:** Two figures that are "must-have" (sketches)
- **Methods:** Purpose → Action → Outcome micro-structure (write the intent)
- **Results vs Discussion:** Do you have a discussion? Where is your synthesis? (identify gaps or discussion sections for revision)
- **Discussion:** Lead → Development → Resolution (tips for revisions)