

10 HIGH IMPACT LITERACY ROUTINES

FOR MATH AND SCIENCE CLASSROOMS



Slow the Problem Down

Routine

Students annotate the problem before solving.

Why it works

Students shift from rushing to calculation to interpreting meaning first.

Think - Explain - Compare

Routine

1. Students solve individually.
2. Explain reasoning to a partner.
3. Compare approaches.

Why it works

Students see multiple solution strategies, which deepens schema.

Predict - Observe-Explain

Routine

1. Predict what will happen.
2. Observe experiment or data.
3. Explain results.

Why it works

Students connect prior knowledge with new evidence.

Graph Talk

Routine

Students answer three prompts:

1. What do you notice?
2. What patterns do you see?
3. What might explain these patterns?

Why it works

Students move beyond reading graphs to reasoning about them.

Multiple Representation Challenge

Routine

Students represent the same idea using:

- diagram
- equation
- graph
- written explanation

Why it works

Understanding grows when students translate between representations.

Claim-Evidence-Reasoning (CER)

Routine

Students write:

Claim: What do you conclude?

Evidence: What data supports it?

Reasoning: Why does this evidence support the claim?

Why it works

Students learn to justify their thinking with evidence.

Vocabulary in Context

Routine

Students define terms using:

- description
- example
- non-example

Why it works

Students understand terms conceptually rather than memorizing definitions.

Error Anyalysis

Routine

Show an incorrect solution.

Students answer:

- What mistake occurred?
- Why is it incorrect?
- How should it be corrected?

Why it works

Students learn to diagnose reasoning, not just produce answers.

Quick Write for Reasoning

Routine

Students write for 2 minutes about a provocation you provide:

Explain how you solved this problem.
or
What pattern do you notice in the data?

Why it works

Writing clarifies thinking and strengthens conceptual understanding.

Exit Reflection

Routine

Students answer:

- What concept did you learn today?
- What still confuses you?
- What question do you have?

Why it works

Students monitor their own learning.