

Ongoing Learning Assessment

VISUAL

TRANSCRIPT



Empowering Teaching Strategies for
Elementary **S&T**

**Ongoing Learning
Assessment**



How can I ensure my students
are learning what's in the QEP
with the limited time I have?





*"...the most salient characteristic of a
great teacher is [their] ability to recognize
the difference between "I taught it" and
"they learned it."*

-Doug Lemov

A good thermostat "knows" the desired temperature of a room, measures the room's temperature frequently and has a mechanism to bring the room's temperature closer to the desired goal.

The Role of Formative Assessment



Dylan Wiliam, author of "Embedded Formative Assessment", has likened the function of AfL to that of a thermostat; a good thermostat "knows" the desired temperature of a room, measures the room's temperature frequently and has a mechanism to bring the room's temperature closer to the desired goal (namely activating or stopping the furnace). A good teacher ought to:
have a clear learning target in mind,
frequently measure the current state of their students' abilities relative to that target and
have the means to close the gap between the target and the current state.
Without all three parts, AfL cannot work.

5 Formative Assessment Strategies

	WHERE THE LEARNER IS GOING	WHERE THE LEARNER IS	HOW TO GET THERE
TEACHER		2. Engineering effective discussions, tasks and activities that elicit evidence of learning	3. Providing feedback that moves learners forward
PEER	1. Clarifying, sharing, and understanding learning intentions	4. Activating students as learning resources for one another	
LEARNER		5. Activating students as owners of their own learning	

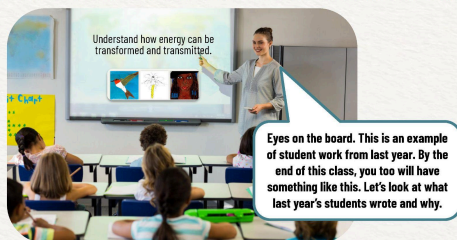
Formative Assessment Strategies

The goal of formative assessment is to collect data about learning so as to provide feedback both to the student about their learning and to the teacher about their teaching.

Dylan's five formative assessment strategies are as follows:

1. Clarifying, understanding, and sharing learning intentions
2. Engineering effective classroom discussions, tasks and activities that elicit evidence of learning
3. Providing feedback that moves learners forward
4. Activating students as learning resources for one another
5. Activating students as owners of their own learning

1. Clarifying, understanding, and sharing learning intentions



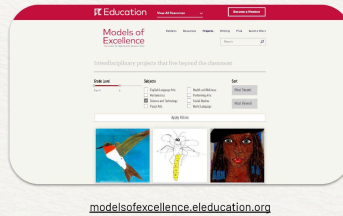
If you don't know where you're going you'll never get there. This includes learning goals/targets but also what does excellence look like?

- Could be examples of previous student work
- Could be a teacher-generated model/example of end-result

Having the marking scheme or the rubric is good, but often not useful for feedback or as learning targets

- they are unidimensional
- they focus on evaluation achievement rather than improvement
- they don't have the same meaning for teachers and students

1. Clarifying, understanding, and sharing learning intentions

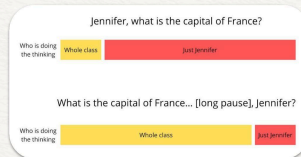


Sometimes quality cannot be easily put into words.
Have students study real examples of good work from past years or other classes.

modelssofexcellence.eleducation.org

2. Engineering effective classroom discussions, tasks and activities that elicit evidence of learning

COLD CALLING TECHNIQUE



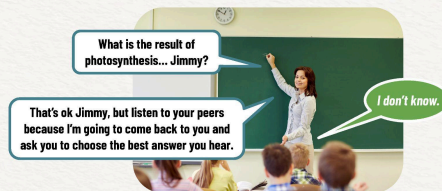
Adapted from Lemov

Cold calling

- We tend to be biased when we pick students to answer...
- Randomizing options: Class Dojo, popsicle sticks
- The point is not to embarrass anyone...
- The point is to have a true sample of what is understood

2. Engineering effective classroom discussions, tasks and activities that elicit evidence of learning

COLD CALLING & NO OPT-OUT TECHNIQUE



Cold calling + No opt-out

Best guess

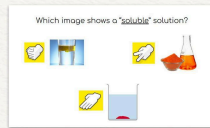
Or listen and curate/reflect back the best answer from classmates

2. Engineering effective classroom discussions, tasks and activities that elicit evidence of learning

WHOLE CLASS QUESTIONING TECHNIQUES



Coloured cards



Finger voting

Increase the number of students actively participating (and thinking hard) in your class with whole class questioning techniques.

2. Engineering effective classroom discussions, tasks and activities that elicit evidence of learning

WHOLE CLASS TECHNIQUES

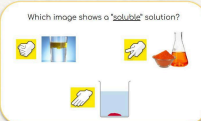


Mini whiteboards

MWB can be used for MC questions like HPQ but have the added benefit of being useful for other generative learning strategies like writing or sketching.

2. Engineering effective classroom discussions, tasks and activities that elicit evidence of learning

THINK-PAIR-SHARE TECHNIQUE

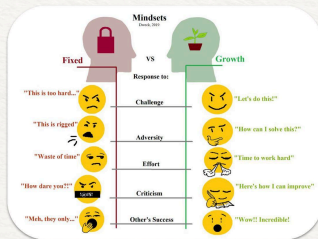


Now, before we vote, you have 15 seconds to tell your shoulder buddy what you think the answer is and why.



Turn & Talk aka Think Pair Share = extra thinking time
Keep this focused (with a targeted amount of time)
This helps before cold calling

3. Providing feedback that moves learners forward



Praise hard work not intelligence
Focus on self-efficacy, not self-esteem
Give task-involving, rather than ego-involving feedback (i.e. don't do: 'you need to put more effort' - do: 'there is a mistake on line 6, find it and fix it.')

Build students' capacity to use feedback (e.g. practice improving an anonymous students work from another class that has received feedback)

Feedback should focus on what's next, not what's passed

Don't give feedback unless you allocate class time for students to respond

Feedback should be more work for the students than the teacher

Don't make feedback too specific (i.e. don't do all the thinking for your students)

Grades are NOT feedback

How to tell students they are wrong in a way that

<https://scitech.swlsb.ca/pedagogy/explicit-instruction#h.vqq17itotzs7>

3. Providing feedback that moves learners forward

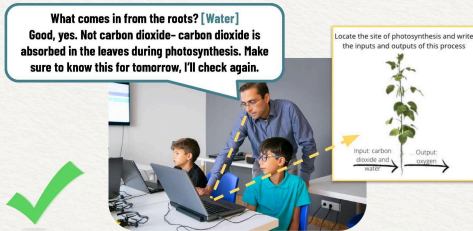


Scenario 1:

Sam has just finished teaching his class about gravity. He does a quick check for understanding (CFU) and asks his class why things don't fall off the bottom of the planet with a cold-call. A student says 'because gravity sticks things to the planet.' Sam says 'interesting, but that's not what I was looking for' pauses for a little while and then moves on to another student.

The above is an example of non-directive feedback. The teacher is hoping not to embarrass his student by saying "interesting" and doesn't want to give too much help but waits to see if the student could fix their thinking. The problem here is that novices do not know what they do not know. Sam's student is lacking too much domain knowledge to evaluate their own answer and may have been confused by the teacher's comment of "interesting". Here Sam should have said "Thanks for sharing - that's a common misconception and I'm glad you said it. No, gravity does not 'stick' things like glue. Who can make this right?" After hearing the correct answer from another student, Sam should come back to the first student and have them now answer the question correctly.

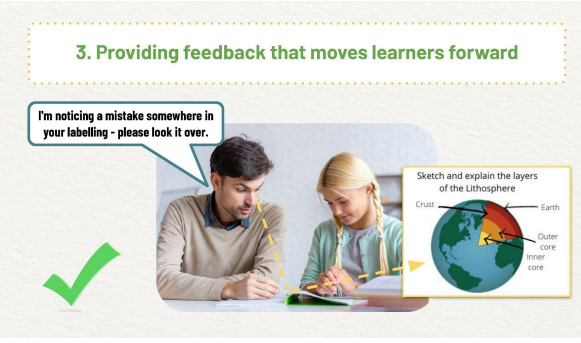
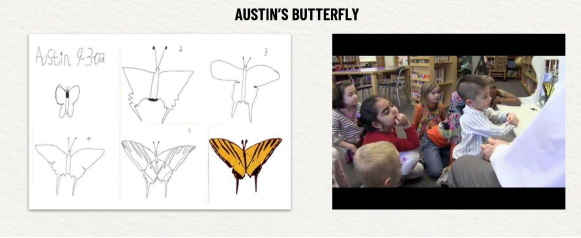
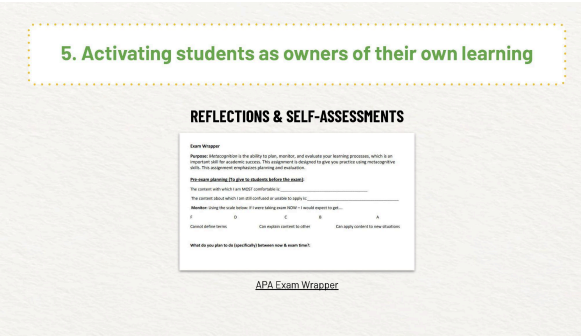
3. Providing feedback that moves learners forward



Scenario 2:

Sam's class is answering a set of questions about photosynthesis and, as he circulates the room, he notices that a student has written that carbon dioxide is absorbed in the roots of a plant. Sam interrupts the student and says 'what comes in from the roots?' [water] 'good, yes. Not carbon dioxide. Carbon dioxide is absorbed in the leaves during photosynthesis. Make sure you review this for homework because I'll ask you about this again soon.'

Here Sam noticed a student with low domain knowledge struggling and rather than playing the game "guess what's in the teacher's head" or "20 questions", Sam immediately corrected the student and instructed them to practice this more (with retrieval practice

	homework) because there will be a check up (likely in the form of a prior knowledge check in the next class). Directive feedback of this kind reduces the chances that a student becomes demotivated as they fumble to make sense of the teacher's cryptic questions.
3. Providing feedback that moves learners forward 	Scenario 3: Sam has been working with his class for weeks on tectonic plates and his class has demonstrated a lot of mastery in this topic when he checks for understanding. In a sketch and explain activity, Sam notices a student accidentally mislabeled the Earth's crust. He interrupts the student and says 'I'm noticing a mistake somewhere in your labelling - please look it over' then walks away. Here the teacher knows their student has the domain knowledge and can find and correct the error independently. Non-directive feedback is well applied here.
4. Activating students as learning resources for one another 	Use peer feedback (Note: best if students are not novices in their current learning) Provide sentence starters (e.g. "I think it would be clearer if...") Start with peer assessment of anonymous work Start in pairs before going into larger groups (e.g. think pair share) Prioritize individual accountability in peer assessment (or group work) 3 THINGS Culture Feedback generated Feedback used
5. Activating students as owners of their own learning 	Use self-reports, but don't rely on them (self-assessment is notoriously unreliable) Focus self-assessment on improvement, not on standards ("Never grade a student while they are still learning." - Alfie Kohn) Make self-assessment a routine part of class work (exit slip?) In self-evaluations, have students identify changes they need to make Have student-led Parent-Teacher conferences (prepare a list of sentence starters or reflection questions for suddenly shy students. e.g. 'what help do I need from my parents?' or 'What help do I need from my teacher?') Nurture both intrinsic and extrinsic motivation