

Five Attributes of Self-Assessment

Student self-assessment involves students actively monitoring their own learning. When self-assessing, students consider their progress in developing skills and knowledge, then use that information to determine where they are in relation to the Learning Goals, and decide on actions to take to close the gap.

Below are five attributes of Self-Assessment that highlight how to structure self-assessment opportunities into classroom practice. An example and guiding questions for students follow the five attributes.

#1 Self-assessment is explicitly taught and modeled by the teacher

When teachers explicitly teach students to become effective self-assessors, students are empowered to be in charge of their own learning—to identify goals, determine where they are in their learning with respect to those goals, and to take actions to close the gap. At each stage of this process, students require feedback, support, and practice.

Five strategies support teaching self-assessment skills to students:

- (1) Develop Success Criteria with students to clarify how the learning will be assessed;
- (2) Model how the criteria are applied to student work;
- (3) Provide opportunities for students to apply the criteria to their own work;
- (4) Discuss with students how well they are assessing their own learning; and
- (5) Help students use feedback (from the teacher, peer feedback, and self-assessment) to develop individual Learning Goals and clarify next steps in their learning.

The ultimate goal of self-assessment is for students to be able to self-assess independently. Students require modeling and feedback on all key elements of the process—including how to provide feedback aligned to the Success Criteria, how to use evidence, and how to develop effective Learning Goals.

#2 Self-assessment involves students applying all the elements of the Feedback Loop to their own work

Understanding and applying the Feedback Loop is not just for teachers! To do self-assessment well, students also need to know and understand each of the elements. In self-assessment, students attend to all three primary questions in the Feedback Loop, beginning with “Where am I going in my learning?”, then reviewing their own work or their thinking to determine “Where am I now?”, and finally answering “Where to next?”.

Understanding and internalizing the Success Criteria is a pre-requisite for students to effectively self-assess. Students must have a clear conception of where the learning is heading in order to assess their status in relation to that goal. The process of internalizing Success Criteria allows students to come to a deeper understanding of what they are learning, and results in their self-assessment being more aligned with the expected learning outcomes.

As students become skilled at assessing their progress towards achieving Learning Goals, they are increasingly able to make decisions about where to go next in their learning. Through use of all the Feedback Loop elements, students are able to generate individual Learning Goals, clarify how they'll take next steps in learning, and monitor their progress towards achieving those goals.

#3 Self-assessment involves students in generating internal feedback to guide their learning

When learning to self-assess, students benefit from both teacher modeling and opportunities to practice and develop effective feedback skills. Students who have learned to give (and have had opportunities to receive) feedback that is aligned to the Success Criteria, to not involve ego, and to organize around next steps are more prepared to self-assess. In this way, peer feedback and self-assessment are complementary processes. The ability to generate internal feedback is a crucial college- and career-ready skill, as students are the ones who must ultimately learn to monitor their own progress and to take action that will support their next steps in learning.

As students develop skills to generate internal feedback, the most helpful roles for teachers are to build in regular opportunities for student self-assessment and to discuss with students how well they are able to self-assess and determine next steps.

#4 Self-assessment is an essential element in support of student agency and self-regulation

Student self-assessment is a critical component of classroom formative assessment, as it is a key element of practice that supports students to become independent and self-regulating learners. Self-assessment supports students to develop metacognitive skills, in which they can think about their thinking and how they learn. This provides students with opportunities to practice self-regulation skills. While teachers model this work in the early stages of implementation, the expectation is that students develop and use metacognitive skills themselves.

To help students reach this independent stage, teachers develop a repertoire of strategies students can use (for example, templates, checklists, and reflections) that facilitate students' responsibility and ownership for monitoring their own learning.

#5 Self-assessment requires students to hold an understanding of quality work that is similar to that of the teacher

Through explicit instruction and modeling, teachers help students understand what constitutes quality in their work. But sometimes, this can take time. It is often necessary to review and revise the criteria as a lesson unfolds, and particularly as students conduct self-assessment. Reviewing criteria as learning is underway provides opportunities for both teachers and students to prioritize the criteria with the greatest impact on learning, add additional criteria based on new learning, and prioritize and focus criteria for self-assessment and next steps. The goal is to help students come to hold an understanding about quality that mirrors that of the teacher.

Guiding Questions to Promote Student Self-Assessment and Metacognition

Adapted from *Approaches to Biology Teaching and Learning*, in CBE Life Sciences Education

Activity	Planning	Monitoring	Evaluating
Class session	<ul style="list-style-type: none"> • What are the goals of the class session going to be? • What do I already know about this topic? • How could I best prepare for the class session? • Where should I sit and what should I be doing (or not doing) to best support my learning during class? • What questions do I already have about this topic that I want to find out more about? 	<ul style="list-style-type: none"> • What insights am I having as I experience this class session? What confusions? • What questions are arising for me during the class session? Am I writing them down somewhere? • Do I find this interesting? Why or why not? How could I make this material personally relevant? • Can I distinguish important information from details? If not, how will I figure this out? 	<ul style="list-style-type: none"> • What did I hear today that is in conflict with my prior understanding? • How did the ideas of today's class session relate to previous class sessions? • What do I need to actively go and do now to get my questions answered and my confusions clarified? • What did I find most interesting about class today?
Active-learning task and/or homework assignment	<ul style="list-style-type: none"> • What is the instructor's goal in having me do this task? • What resources do I need to complete the task? How will I make sure I have them? • How much time do I need to complete the task? • If I have done something like this before, how could I do a better job this time? 	<ul style="list-style-type: none"> • What strategies am I using that are working well or not working well to help me learn? • What other resources could I be using to complete this task? What action should I take to get these resources? • What is most challenging for me about this task? Most confusing? • What could I do differently mid-assignment to address these challenges and confusions? 	<ul style="list-style-type: none"> • To what extent did I successfully accomplish the goals of the task? • To what extent did I use resources available to me? • If I were the instructor, what would I identify as strengths of my work and flaws in my work? • When I do an assignment or task like this again, what do I want to remember to do differently? What worked well for me that I should use next time?

Source: <http://www.lifescied.org/content/11/2/113/T1.expansion.html>

Establishing Classroom Routines for Self-Assessment

Creating frequent opportunities for students to self-assess is an essential aspect of formative assessment practice. A simple practice involves having students rate their understanding of the Success Criteria each day.

In this example, an elementary math teacher does a daily “ticket out the door” where students rank their knowledge and/or ability on each of the Success Criterion and then explain their ratings. The teacher returns the exit tickets to students the following day, and after reviewing content in small or large groups, students then write a Learning Goal for the day that builds on the information they shared in the previous day’s exit ticket.

• I can accurately place fractions between 0 and 1.	1	2	3	4
• I can develop strategies based on what I know to figure out where each fraction belongs on the number line.	1	2	3	4
• I can prove that my fractions are located correctly on the number line.	1	2	3	4
<i>On this day, one student writes: I need help figuring out where on the number line the fractions go. I understand where to put halves because they are easier for me, but I don't know how to find the place for 1/8. I think 1/8 is closer to 1 whole because 8 is closer to 10.</i>				

Another strategy for developing regular opportunities for student self-assessment is to ask students to use metacognitive strategies when reading complex text. In this reading example below, consider what questions the teacher might have asked in this assignment.

Developing Student Metacognition

The following example, from *Teaching Reading in Science*, highlights a strategy to help students develop an internal voice in order to actively monitor their learning.



HANDOUT 6.4.1 – Your Turn

Metacognition in Reading

Directions: Look at the following reading passage example. What metacognitive strategies is this reader using? What additional strategies could she have used to support her understanding of the text?

Following launch aboard a Boeing Delta II rocket, the Genesis spacecraft will travel to a point in the solar system called [L1]. It's a [libration point], and these are special points, located throughout the universe, that can be used for [low fuel trajectories (paths that require less-than-normal fuel)]. These points are called libration points. Librate is a verb that means to swing slightly in opposite directions, like the needle on a bathroom scale when it is coming to rest. An object librates because it is being affected by two opposing forces. Libration points in space are places between two orbiting objects where the gravitational force exerted by the objects on each other is balanced. The Genesis spacecraft will remain at one of these libration points and collect [solar wind] for two years. As the Earth journeys around the sun, the location of the sun-Earth libration point stays constant with respect to those two solar system objects, but moves from the perspective of a fictional observer hovering over the Milky Way galaxy in a spaceship. An object, natural or man-made, which is at one of the libration points will remain stationary, as observed from Earth, unless acted on by some additional force. A satellite can also be made to orbit one of these points. After its nearly [three-year orbit], the spacecraft will return to the Earth.

L1? Did I get that right? Better reread to make sense.

Okay, now I get it. It's like driving downhill; it takes less fuel.

Solar wind. What's that? I'll read ahead to see if that term is explained. If it isn't, I'll have to look it up or ask my teacher what it means.

I'm getting a picture in my head of an activity I've seen. A paperclip was attached to a string and suspended in air because of the force of a magnet.

Libration point. I wonder what that is.

Trajectories. Since I can't break it down into smaller words, I'd better look it up.

Yeah, I've seen that.

Like playing with magnets.

Huh? I didn't get that. I better reread it.

Wow, three years; that's a long time!

Text from "Cool Stuff About Genesis," by McREL, 2001. Retrieved from http://www.genesismission.org/product/genesis_kids/aboutgenesis/aboutgenesis.html

Barton, M. L., & Jordan, D. L. (2001). *Teaching reading in science: A supplement to Teaching Reading in the Content Areas Teacher's Manual* (2nd ed.), p. 108. Aurora, CO: Mid-continent Research for Education and Learning.