



The Program
Evaluation and
Research Group
(PERG)

side x side
AWAKENING TOMORROW'S INNOVATORS
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A Pocket Guide to Reflection: Developed for Side x Side by Debra Smith (PERG)

What and why reflection?

American educator and philosopher John Dewey said that we don't learn from experience, but from reflecting on that experience. Research on learning has validated that this is indeed true. (Bransford, Brown & Cocking, 1999). Pausing to reflect allows our brains to assess our experiences, integrate them with what we already know and plan for next steps, and improve our work along the way. Reflection and connection to action are inherent in the creative process, but artists don't usually think about their work in these terms. Experienced practitioners become adept at reflecting *in action* (Schon, 1983,1991), a tacit habit.

In most classrooms, the focus is on activities and products. Integrating reflection as a regular element of classroom routines and helps to "make learning visible," shifting the focus to thinking and creativity, and fostering students' metacognition (thinking about thinking) and learning.

Visible Thinking

Project Zero researchers have studied metacognition and reflection in schools through their Visible Thinking project. The [Visible Thinking in Action website](#) provides an overview and many routines to use with students to foster reflection and critical thinking. Try "See, Think, Wonder" (in Core Routines) as a starting point.

Some tips for integrating reflection in teaching and learning

Modeling reflection helps students to learn to incorporate it into their own work. Ask questions, share what you're thinking and invite them to do the same as they work.

Plan reflective pauses. Making time for reflection allows quiet space for students to make connections, consolidate and articulate their own thinking.

Sharing. Quiet reflection helps students to process their own learning. Giving students a few minutes to self-reflect and then share with others further supports synthesis, and they learn from each other. Try Think-Pair-Share from the Visible Thinking website.

Critique is another way to support reflection and sharing. Use a simple routine such as “See, Think, Wonder,” or ask students to use post-it notes to share with their peers: Use a prompt such as “One thing I like about this piece is, one questions I have for the artist is....”. Once they have reflected and posted their notes, have them do a gallery walk to see all the comments on all the work. Other Visible Thinking routines support shared reflection as well.

Journals. If students are keeping project journals, this is a perfect opportunity to incorporate written reflections about their work and learning. Pose a prompt for them to respond to in their journals. See sample prompts below.



Artists’ statements. For finished work that will be performed or exhibited, ask students to write about their work and what they learned through the process of creating it. Include these in labels or a performance program.

Prompts for reflection

Prompts for student reflection are embedded in the PZ Thinking Routines, and can be adapted to use for individual or group reflections during or at the end of a class, or at the end of a learning experience or project. Here are a few examples of simple question prompts.

Reflection on what happened today

What surprised you today, and why?

What’s the most important thing you learned today? Why do you think so?

What do you want to learn more about, and why?

When were you the most creative, and why do you think that is?

What made you curious today? How does learning feel different when you’re curious?

When were you at your best today, and why?

What new ideas came up for you today?

How well did your group work together? What could work better?

What is one thing you learned from someone else in your class/ group today?

What is one decision you made today about your work? How did that change what you were doing?

Reflection at a key point of at the culmination of a learning experience

What stood out for you in learning about...

If you could do this project again, what would you do differently and why?

How did you incorporate something you learned about the content [extreme weather, animals, etc.] in your artwork?

What are you most proud of?

How did your peers help you to.....?

What's one thing you learned from [community expert?] Did this make you think about your own work as a grown up and how?

Reflection in the moment

Why...?

How would it be different if...?

What are the reasons...?

Suppose that...?

What if...?

What if we knew...?

What is the purpose of...?

What would change if...?

What's going on here? What makes you say that?

Keep in mind

For most students, reflection is a new habit that takes time to cultivate. Teachers note that it can be challenging to build in time to reflect, but that the rewards for students are worth it, and their ability to reflect and the quality of their work visibly improves over time. Go slow and see what happens!

