

Writing-To-Learn: Science

What is it?

A [writing-to-learn](#) strategy is one that teachers employ throughout and/or at the end of a lesson to engage students and develop big ideas and concepts.

Strategy: Synthesizing

Students identify main idea from information presented (text, lecture and/or experience). They then combine this information with their prior knowledge to create a new or revised personal understanding (schema) (See: *Harvey & Goudvis, 2007*).

What does it do?

- Provides opportunity for students to make personal connections with information.
- Helps students accommodate prior knowledge and new information.
- Takes thinking required for summarization a step further.

How to implement:

- Students record their prior ideas and predictions.
- Students collect facts and/or data from a variety of sources.
- Students review and summarize new information.
- Students compare current ideas with ideas initially recorded.
- Students reflect on how their thinking has changed and make personal connections to their learning.

Example 1: Prompting and Recording

- Investigating Sound:

Students record everything they think they know about a science topic (sound). After a hands-on investigation, they revisit the graphic organizer and record how their thinking has changed. They then read informational text about how sound is formed and revisit the organizer again.

What is Sound?
I am thinking:
Now I am thinking:
Finally, I am thinking:
How this relates to me:

- Synthesizing Text

Students use an informational trade book or textbook to find facts about a topic in both the text and illustrations. After recording these facts, students summarize main points and reflect on how their thinking has changed on the topic (comparing ideas to prior thinking).

SYNTHESIS THROUGH INFORMATIONAL TEXT		
Important Facts from Pictures and Captions	Important Facts from Text	Summary of Main Points
Reflections:		

Example 2: Drawing and Describing

Students make a labeled drawing of a “scientist” (most students draw white males in lab coats with test tubes). Teacher then presents text, photos and video information about different types of people who work as scientists. Students draw a scientist again and compare their two illustrations. They reflect on the differences and make a personal connection.

Note: Student begins here after accessing written and/or visual text on scientists.

Labeled Drawing of a Scientist (include tools your scientist uses)	Scientist’s Job Description
Revised Drawing of a Scientist (include tools your scientist uses)	Revised Scientist’s Job Description
Synthesis: At first I thought, but now I think:	
Personal Response: I am like a scientist because:	