Science Notebook Entry Types
With ELL Modifications

This handout describes eight notebook entry types and offers a rationale for why a teacher might select a given entry type. It then suggests some simple modifications or support that could be provided for English Language Learners as they interact with these entry types. This document is a modification of the document found on the companion website – www.sciencenotebooks.org .

Entry Type	*Definition and Purpose*	*Suggested* *ELL Modifications/ Support*
Drawings	*Definition* Student generated drawings of materials, scientific investigation set-ups, observations, or concepts. Three common types of drawings used in science notebooks include: 1. Sketches: Informal pictures of objects or concepts created with little detail. 2. Scientific Illustrations: Detailed, accurate, labeled drawings of observations or concepts. 3. Technical Drawings: A record of a product in such detail that someone could create the product from the drawings. *Purpose* Students use drawings to make their thinking and observations of concrete or abstract ideas visible. Drawings access diverse learning styles, allow entry to the writing process for special needs students and emergent writers, and assist in vocabulary development (e.g. oral explanations, group discussions, labels).	• Expect simple labels • Front load vocabulary- provide specific vocab terms for students to use • Model types of drawings for students
Tables, Charts, and Graphs	*Definition* Formats for recording and organizing data, results, and observations. *Purpose* Students use tables and charts to organize information in a form that is easily read and understood. Recording data in these forms facilitates record keeping. Students use graphs to compare and analyze data, display patterns and trends, and synthesize information to communicate results. *Purpose* Graphic organizers help students organize ideas to recognize and to communicate connections and relationships.	• Add visuals to templates • Leave extra room for writing
Notes and Practice Problems	*Definition* A record of ideas, observations, or descriptions of information from multiple sources, including but not limited to direct instruction, hands-on experiences, videos, readings, research, demonstrations, solving equations, responding to guiding questions, or developing vocabulary.	• Add visuals • Use split notes to allow for personal sense making

	Purpose Students use notes and practice problems to construct meaning and practice skills for current use and future reference.	• Provide Sentence stems
Reflective and Analytical Entries	*Definition* A record of a student's *own* thoughts and ideas, including, but not limited to initial ideas, self-generated questions, reflections, data analysis, reactions, application of knowledge to new situations, and conclusions.	• Allow visuals and drawings for sense making • Allow use of primary language for sense-making • Provide lower language load options such as agree/disagree statements • Provide sentence stems
	Purpose Students use reflective and analytical entries to think about scientific content from their *own* perspective, make sense of data, ask questions about their ideas and learning processes, and clarify and revise their thinking.	
Inserts	*Definition* Inserts are artifacts placed within a notebook, including, but not limited to photographs, materials (e.g. flower petals, crystals, chromatography results), and supplemental readings (e.g. newspaper clippings).	• Use realia (artifacts) and pictures to make language connections
	Purpose Students use inserts to document and to enrich their learning.	
Investigation Formats	*Definition* Scaffolds to guide students through a controlled investigation, field investigation, or design process. Examples include, but are not limited to investigation planning sheets or science writing heuristics.	• Add visuals • Provide sentence stems or templates that lessen the language load.
	Purpose Students use investigation formats to guide their thinking and writing while they design and conduct investigations. Students also use these formats to reflect on and discuss their findings and ideas.	
Writing Frames	*Definition* Writing prompts used to focus a student's thinking. Examples include, but are not limited to, "I smelled…I felt…I observed…","My results show…", "The variable I will change is…", or "I think that because…".	• Add visuals • Highlight important vocabulary terms • Simplify language
	Purpose Students use frames to organize their ideas, prompt their thinking, and structure their written response. Frames help students become more proficient in scientific writing and less reliant upon the prompts.	