

Student Learning Goals: Science

Collaborating in a Community of Readers and Writers

Contributing to Our Community	I contribute to maintaining a classroom community that feels safe, where everyone is able to take risks and grow.
Collaborating Effectively	I work with partners and groups in ways that are both respectful and risk-taking.
Participating Thoughtfully	I make my thinking count in discussions, as a speaker and a listener. I share my reading confusions and understandings to get and give help. I listen and learn from the reading confusions and understandings of others.
Building a Literacy Context	I understand and use the shared literacy vocabulary of our classroom.
Being Open to New Ideas	I appreciate and evaluate alternative viewpoints.
Developing a Literacy Agenda	I read to understand how literacy opens and closes doors in people's lives.
Sharing Books	I talk about books I am reading to involve others in what the books have to offer.
Writing to Communicate	I write to communicate my ideas to others.

Building Personal Engagement

Knowing My Reader Identity	I am aware of my reading preferences, habits, strengths, weaknesses, and attitudes—my Reader Identity.
Practicing	I put effort into practicing new reading strategies so that they become automatic.
Digging In	I am increasing my confidence and persistence for digging into text that seems difficult or boring.
Building Silent Reading Fluency	I read more smoothly and quickly, so I get more pages read.
Building Oral Reading Fluency	I read aloud more fluently and expressively.
Increasing Stamina	I set and meet stretch goals to read for longer and longer periods.
Increasing Range	I set and meet stretch goals for extending the range of what I read.
Choosing Books (SSR+)	I use tools I have learned for choosing a book that's right for me.
Taking Power	I read to understand how <i>what</i> I read applies to me and gives me power.
Reflecting on My Evolving Reader Identity	I reflect in discussions and in writing on my growth as a reader—my evolving Reader Identity.
Writing to Reflect	I use writing to step back and think about what I am learning.

Making Thinking Visible

Monitoring	I monitor my reading processes and identify problems.
Repairing Comprehension	I know what strategies to use to get back on track.
Talking to Understand Reading	I talk about my reading processes to understand them better.
Writing to Understand Reading	I write about my reading processes to understand them better.

Using Cognitive Strategies to Increase Comprehension: Science

Setting a Reading Purpose	I set a purpose for reading a text and keep it in mind while I read.
Choosing a Reading Process	I vary my reading process to fit my reading purpose.
Previewing	I preview text that is long or appears to be challenging, to mobilize strategies for dealing with it.
Identifying and Evaluating Roadblocks	I identify specific reading roadblocks and decide what to do.
Tolerating Ambiguity	I tolerate ambiguity or confusion in understanding a text while I work on making sense of it.
Clarifying	I work to clear up a reading confusion—whether it is a word, a sentence, an idea, or missing background information that I need to find.
Using Context	I use context to clarify confusions by reading on and rereading.
Making Connections	I make connections from texts to my experience and knowledge.
Chunking	I break difficult text into smaller pieces to better understand the whole.
Visualizing	I try to see in my mind what the author is describing. I read and represent scientific content and ideas in drawings, graphs, flow charts, and other visuals.
Using Mathematics	I read and create numerical representations to help clarify complex scientific text and ideas.
Questioning	I ask myself questions when I don't understand. I ask myself questions about the author's idea, story, or text, and I know where to find the answers—whether in my mind, the text, other texts, other people, or a combination of these. I ask inquiry questions when something I read makes me want to know more. I take a "convince me" stand and ask questions about the evidence presented to support a scientific claim.
Predicting	I use what I understand in the reading to predict what might come next.
Organizing Ideas and Information	I use graphic organizers to sort out ideas or items of information to see how they are related.

Paraphrasing	I restate a sentence or an idea from a text in my own words.
Getting the Gist	I read and answer in my own words the question, "What do I know so far?"
Summarizing	I boil down what I read to the key points.
Sequencing	I order events in time to understand their relationships. I keep track of how scientific processes unfold.
Comparing and Contrasting	I make comparisons to identify similarities and differences.
Identifying Cause and Effect	I find conditions or events that contribute to or cause particular outcomes.
Using Evidence	I use evidence to build and support my understanding of texts and concepts.
Rereading	I reread to build understanding and fluency.
Writing to Clarify Understanding	I write about what I think I know to make it clearer to myself.

Building Knowledge: Science

Mobilizing Schema	I use my relevant networks of background knowledge, or schema, so that new information has something to connect to and is easier to understand.
Building and Revising Schema	I add to and revise my schema as I learn more.
Synthesizing	I look for relationships among my ideas, ideas from texts, and ideas from discussions.
Writing to Consolidate Knowledge	I use writing to capture and lock in new knowledge.

Building Knowledge . . . About Text: Science

Text Structure	I use my knowledge of text structures to predict how ideas are organized. I know to look for the predictable ways science text is structured: classification and definition, structure and function, process and interaction, claim and evidence, and procedure. I know that visuals and numerical representations are particularly powerful ways to convey complex scientific text and ideas.
Text Features	I use my knowledge of text features like headings and graphics to support my understanding.
Text Density	Because I know that science text is often tightly packed with new terms and ideas, I preview and reread it. Because I know that science text is often tightly packed with new terms and ideas, I chunk and restate the chunks in familiar language to keep track of the gist as I read.
Point of View	I use my understanding that authors write with a purpose and for particular audiences to identify and evaluate the author's point of view.

Building Knowledge . . . About Language: Science

Word Analysis	I use my knowledge of word roots, prefixes, and suffixes to figure out new words.
Referents	I use my knowledge of pronouns and other referents to find and substitute the word that a pronoun or other word is standing for.
Signal Words and Punctuation (Text Signals)	I use my knowledge of signal words and punctuation to predict a definition, results or conclusions, examples, sequence, comparison, contrast, a list, or an answer. I know to look for the text signals that go with different scientific text structures.
Contextual Redefinition	I know that when familiar terms are used in unfamiliar ways, I can redefine them in context to clear up confusion.
Sentence Structure	I use my knowledge of sentence structure to help me understand difficult text. Because science textbooks often use passive voice, I know to restate sentences in active voice to keep track of the subject and action. Because science textbooks often use complex sentence constructions, I know to find the logical connecting words between ideas.
Word-Learning Strategies List	I use strategies to learn new words in the texts I read.

Building Knowledge . . . About the Discipline of Science

Scientific Documents	I know how to read and/or represent diverse scientific documents: reports, data tables and graphs, illustrations and other visuals, equations, textbooks, and models.
Scientific Sourcing	I source a science document, set of data, or piece of evidence as a step in evaluating its authority or reliability.
Scientific Labels	I know that using scientific names and labels is a shortcut for communicating precisely about scientific processes and structures.
Scientific Inquiry	Knowing that scientific inquiry involves cycles of questioning, making observations, and explaining and evaluating observations helps me read science investigations and describe my own.
Scientific Evidence	I know that scientific claims must be supported by evidence that is carefully collected, evaluated, and reported so that others can judge its value.
Scientific Explanation	I can write a scientific explanation that makes a claim about observations of the natural world and convincingly defends the claim with evidence.

Scientific Corroboration	I know that corroborating findings in science is a way to find out how likely they are to be true.
Scientific Understanding	I know that for scientific understanding to evolve, science moves forward using best evidence and information even though these may be proved incomplete or wrong in the future.
Conceptual Change	I monitor my schema to decide whether compelling evidence about scientific claims changes my personal understanding of the natural world.
Scientific Identity	I am aware of my evolving identity as a reader and consumer of science.
