

Reading Strategy Matrices

We have grounded our reading, writing and thinking approach in Strategic Reading Behaviors as discussed by Pearson, Roehler, Dole & Duffy (1992). Many of these reading strategies are used well across the curriculum, but there are interesting differences regarding their employment in the secondary science classroom. As students and teachers experience these strategies, it is important to be metacognitive about the impact of these strategies on conceptual learning as well as on inquiry habits of mind. We have designed text-based experiences that foster the development of both.

Matrix 1. Reading Strategies and Corresponding Strategic Reading Behaviors

Strategic Reading Behaviors → (SRB)	1	2	3	4	5	6	7	8
Reading Strategies (alphabetically) ↓	Building Accurate Comprehension	Monitoring Comprehension	Distinguishing Essential Concepts/ Processes	Personalizing the Reading	Searching for Connections	Synthesizing	Drawing Inferences	Evaluating voice, bias, and genre
Drawing/Modeling (2D or 3D) ¹	•			•		•		
Graphic Organizers ²	•		•		•			
Interrupted Reading (Tasks)	•		•		•		•	
Marginal Question and Answer Relationship (QAR)	•		•		•		•	
Mathematical/Symbolic Representation of Prose	•		•					•
Reciprocal Teaching	•						•	
Rereading	•		•		•			
Selective Highlighting		•		•				
Strand Map Questions		•		•			•	
Survey Technique			•			•		
Text-to-Self/World Connections		•		•		•		•
Text-to-Text/World Connections ³		•		•			•	
Underlining Action Words	•			•				
Visual Text Interpretation (i.e., data, diagrams, video, animations)	•			•		•		•

¹ We do not include any modeling done during a Procedure.

² We do not include the data tables constructed or completed by students during a Procedure as a reading strategy in these matrices. However, we do feel that collecting, organizing and analyzing data supports reading comprehension in science.

³ We include Text-to-World Connections in Text-to-Text Connections since many of the resources focus on global issues; Text-to-World Connections may relate to Text-to-Self Connections based on context.

Reading Strategy Matrices

Matrix 2. Reading Strategies and Corresponding Laboratory Texts: Sample Unit of Study

Note: The implementation of some strategies have been modified to fit program purposes.

The Quest for Energy I Labs →	17	18	19	20	21
Reading Strategies (alphabetically) ↓	Society's Fuels — Exploring Past and Future Quests	Preparation of Respiration Gases	Separation of Spinach Pigments Through Paper Chromatography	Experimental Determination of Melting & Boiling Points of Water	Identification of Unknown Elements Through the Use of Flame Tests
Survey Technique	•	•			
Interrupted Reading (Tasks)	•	•	•	•	•
Drawing/Modeling (2D or 3D)	•	•	•	•	
Visual Text Interpretation (i.e., data charts, diagrams, photos, video, animations)	•	•	•	•	•
Rereading	•	•	•	•	•
Selective Highlighting		•	•	•	•
Strand Map Questions	•	•	•	•	•
Graphic Organizers	•	•	•		
Underlining Action Words		•	•	•	
Text-to-Text/World Connections	•	•	•		•
Mathematical/Symbolic Representation of Prose	•	•			•
Marginal Question and Answer Relationship (QAR)	•	•		•	
Reciprocal Teaching	•	•			
Text-to-Self/World Connections	•	•	•		

Pearson, P.D., Roehler, L.R., Dole, J.A., & Duffy, G.G.. 1992. Developing Expertise in Reading Comprehension. In *What research has to say about reading instruction*. edited by S.J. Samuels and A.E. Farstrup, Newark, DE: International Reading Association.