



Application: LR Skills in Science Classrooms

Connecting to Standards of Learning

NGSS: Science and Engineering Practices

- SEP 6: Constructing Explanations and Designing Solutions
- SEP 7: Engaging in Argument from Evidence
- SEP 8: Obtaining, Evaluating, and Communicating Information



Connecting to Standards of Learning

NJ:

Career Readiness, Life Literacies, and Key Skills (9.4 - *Life Literacies and Key Skills*):

- Information and Media Literacy (p.13, 55-56)
 - Core Ideas and Performance Expectations



Connecting to Standards of Learning

PA:

Reading and Writing in Science and Technical Subjects

- CC.3.5.6-8.F Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text.
- CC.3.6.6-8.G Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source...



Integrate and Advocate

- ❑ **Content-Rich Experiences**
- ❑ **High Quality Literature**
- ❑ **Read Alouds** ➔ Access for ALL
- ❑ **Literacy** ➔ Sensemaking:
 - ❑ Reading
 - ❑ Writing
 - ❑ Speaking & Listening

- ❑ **Research** Literacy & Integration
- ❑ **Integrate** then Teach Others
- ❑ **Collaborate** with Colleagues
- ❑ **Make Connections**
 - ❑ School/District
 - ❑ Community
 - ❑ Legislators



Source: Stephanie Westhafer, EdD, Georgia DOE

Using LR with MELs

How does LR integrate with MELs?

What resources do we provide?

How do you use LR beyond the MELs?

The **ART** of Reading Laterally

To check on the truth and accuracy of a source, before reading vertically, fact-checkers open tabs and practice the ART of reading laterally:



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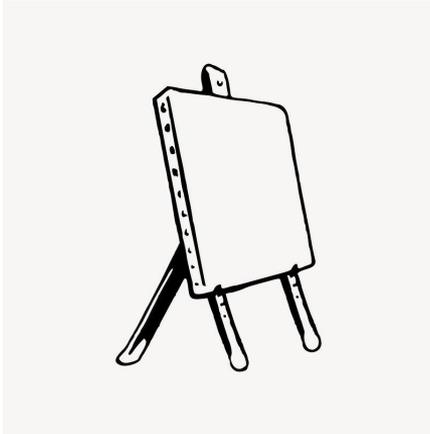
“Lateral readers don't spend time on the page or site until they've first gotten their bearings by looking at what other sites and resources say about the source at which they are looking.” - Web Literacy for Student Fact-Checkers - Mike Caulfield

“Rather than trust the 'about' section, leave the website and research the organization or author” - Common Sense

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Time to Brainstorm



In pairs or triads, brainstorm how lateral reading strategy can be used in the science classroom

- When would you include direct instruction in Lateral Reading?
- How would you ADAPT the strategy?
- How/When would you include a LR activity?
- How & when you would use LR outside of MELs?

Gallery Walk



- As you walk around, if someone else's paper has an idea similar to yours, put your group number next to it
- If it is new but you really like it, add a star (or comet) or heart
- If you don't understand it, add a question mark

ACKNOWLEDGEMENTS



This research project is supported by the US National Science Foundation (NSF) under Grant Nos. 2201012, 2201013, 2201015, 2201016, 2201017, 2201018, and 2346657. Any opinions, findings, conclusions, or recommendations expressed are those of the authors and do not necessarily reflect the NSF's views.

Georgia's Emphasis on Literacy Across the Curriculum

SIMPLE VIEW OF READING

The Simple View of Reading has been empirically validated by over 150 scientific studies. It shows us that reading comprehension is not the sum, but the product of two components - word recognition and language comprehension - such that if either one is weak, reading comprehension is diminished. No amount of skill in one component can compensate

for a lack of skill in the other. While it is a simple view of a developmental process, skilled reading development is NOT simplistic. For a more in-depth understanding of the subcomponents within word recognition (WR) and language comprehension (LC), we turn next to Scarborough's Reading Rope.



Gough, P. B., & Tunmer, W. E. (1986). Decoding, reading, and reading disability. *Remedial and Special Education*, 7, 6-10.

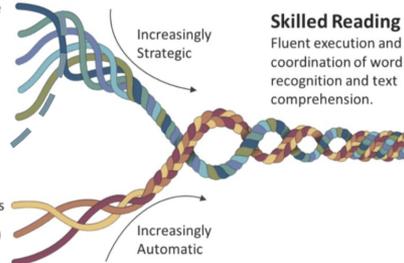
Figure 1: From "The Science of Reading: Defining Guide." Distributed by The Reading League.

Language Comprehension

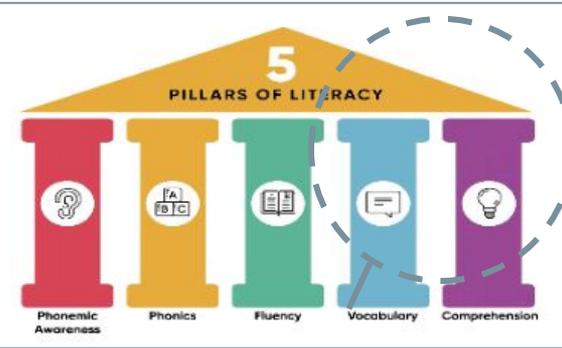
- Background Knowledge
- Vocabulary Knowledge
- Language Structures
- Verbal Reasoning
- Literacy Knowledge

Word Recognition

- Phonological Awareness
- Decoding (and Spelling)
- Sight Recognition



Scarborough, H. 2001. Connecting early language and literacy to later reading (dis)abilities: Evidence, theory, and practice. Pp. 97-110 in S. B. Neuman & D. K. Dickinson (Eds.) *Handbook of Early Literacy*. NY: Guilford Press.



- ❑ Georgia ELA Milestones Aligned to SCI and SS Content
- ❑ Systematic and Explicit Instruction is Beneficial in ALL Literacy
- ❑ Building Knowledge (Natural and Social World) is Essential
- ❑ Acquiring Knowledge includes:
 - ❑ Language-Rich Environments- Vocabulary and Discourse
 - ❑ Engage with Complex Text- Strategies for Sensemaking)



Source: Stephanie Westhafer, EdD, Georgia DOE

Science Instruction to Support ELA

- 2025-2026 GADOE ELA Standards (Big Idea: Context)
 - Students recognize influences on texts and analyze how they shape meaning (6-8).
 - Analyze how evidence and tone reveal the author’s perspective and impact credibility.
 - Identify an author’s bias and determine how that bias impacts credibility.
 - Students explore the relationship between authors, purposes, and audiences of texts (9-12).
 - Identify the impact of the speaker’s reliability or credibility on the text.
 - Determine influencers of text, including “invisible” commercial influences.



How does this fit into SCIENCE?



Science Instructions to Support ELA

- 2025-2026 GADOE ELA Standards (Big Idea Progressions) Research & Analysis
 - Conduct research generating questions to guide investigations of complex topics of interest and using credible sources to support analyses. (6-8)
 - Utilize multiple print and digital texts to address a specific topic or question, assessing source credibility and relevance and integrating evidence properly. (6-12)
 - Draw from accumulated knowledge and research to analyze texts supporting , challenging, or extending ideas and information. (6-8)

How does this fit into SCIENCE?



High Quality Instructional Materials for Science

❑ Evidence-Based Approaches

- ❑ Align to the Science of Reading AND Georgia ELA Standards
- ❑ Incorporate High-Quality Literature and Read Alouds
- ❑ Create a Scope & Sequence with Instructional Routines

❑ Listening & Reading Comprehension

- ❑ Interactive Discussions to Deepen Background Knowledge
- ❑ Address Complex Topics for Deeper Understanding
- ❑ Explicitly Teach Strategies Related to Text Selection



Source: Stephanie Westhafer, EdD, Georgia DOE

Solution? Integrated Learning!

- Science and literacy integration fosters critical thinking, problem-solving, and communication skills.
- GA DOE Initiatives in integrating literacy skills
- Includes digital literacy.
- Emphasis on supporting literacy across the curriculum.

