FIVE FUNDAMENTAL PRINCIPLES FOR GUIDING THE DEVELOPMENT OF DISCIPLINARY LITERACY

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Why Disciplinary Literacy?

There are nuanced differences in literacy practices across groups and disciplines.
Use of language to organize and communicate specialized knowledge is not limited to school.
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Scientists use language to organize and communicate and do science

<table>
<thead>
<tr>
<th>Scientists Read</th>
<th>Scientists Write</th>
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<tr>
<td><img src="image1" alt="Scientists Read" /></td>
<td><img src="image2" alt="Scientists Write" /></td>
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<tr>
<th>Scientists Talk</th>
<th>Scientists Do</th>
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<td><img src="image3" alt="Scientists Talk" /></td>
<td><img src="image4" alt="Scientists Do" /></td>
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Disciplinary Literacy Learning in Science

**Read**
What/How Scientists read

**Write**
What/How Scientists write

**Talk**
How Scientists talk

**Do**
What Scientists do

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Today’s session

- Consider disciplinary literacy as presented in the CCSS
- Learn about five principles guiding disciplinary literacy in the classroom
- Engage in model science lessons that include disciplinary literacy.
Establishing the Context

Water on Mars

Photo: http://en.wikipedia.org/wiki/Mars
Water on Mars?

What did you experience?
• What literacy practices and skills did you employ to make meaning?
• What background knowledge did you need?
• What challenges did you have in understanding the information?
• What challenges do you think your students would have?

Disciplinary Literacy
(Shanahan & Shanahan, 2008)

Disciplinary Literacy:
discrete skills and specialized strategies needed for disciplinary learning

Intermediate literacy:
comprehension strategies, building vocabulary, fluency

Basic literacy:
alphabetical principles, print concepts, high frequency words, decoding
Disciplinary Literacy
Fundamental Principles

First Fundamental Principle

Students should acquire literacy expertise while in the pursuit of disciplinary knowledge and inquiry skill.
Second Fundamental Principle

Attention to disciplinary literacy instruction should begin as soon as students enter school – before would be even better!

Third Fundamental Principle

When traveling into the world of disciplinary knowledge, it is best to situate literacy as a set of tools not a set of goals.
Fourth Fundamental Principle

Text should never bear the entire burden for delivering knowledge.

Fifth Fundamental Principle

Participation in a disciplinary community is key to acquiring disciplinary expertise and literacy.
Strategy Guide Experiences

Pairing Experiences: Do and Read
Properties of Matter

Shared Expertise Discussions
Regional Climate

Break It Down
How Scientists Separate Mixtures
by Jonathan Corley and Ashley Chao

5 Fundamental Principles

- Students should acquire literacy expertise while in the pursuit of disciplinary knowledge and inquiry skill.
- Attention to disciplinary literacy instruction should begin as soon as students enter school – before would be even better!
- When travelling into the world of disciplinary knowledge, it is best to situate literacy as a set of tools not a set of goals.
- Text should never bear the entire burden for delivering knowledge.
- Participation in a disciplinary community is key to acquiring disciplinary expertise and literacy.
Disciplinary Literacy Learning in Science

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QUESTIONS?
Thank you for your participation!

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To learn more:

scienceandliteracy.org