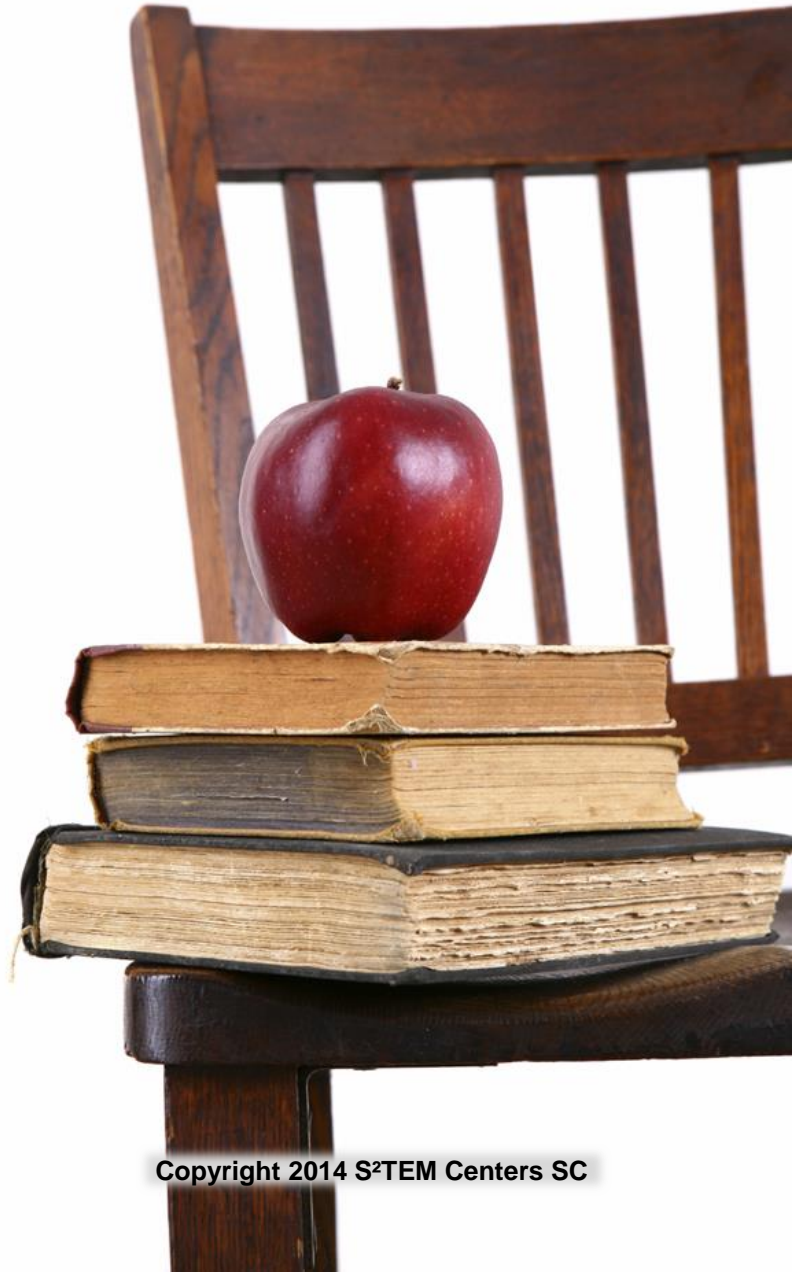




STEM + Literacy = Learning!

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Inquiring Minds: Reading to Learn and Innovate in Mathematics and Science (IQ-MS)

A three-year research project funded by a challenge grant from Boeing SC, with matching funding from the State of South Carolina and BMW Manufacturing Co.



Disciplinary literacy

Advanced literacy instruction embedded within content areas. This sort of instruction engages learners with content in ways that mirror what scientists and mathematicians do to inquire and gain understanding in their disciplines.

Shanahan, T. & Shanahan C. (2008)

Total Instructional Focus



High Quality
STEM
Instruction

Purposeful
Reading



Meaningful
Writing



Productive
Dialogue



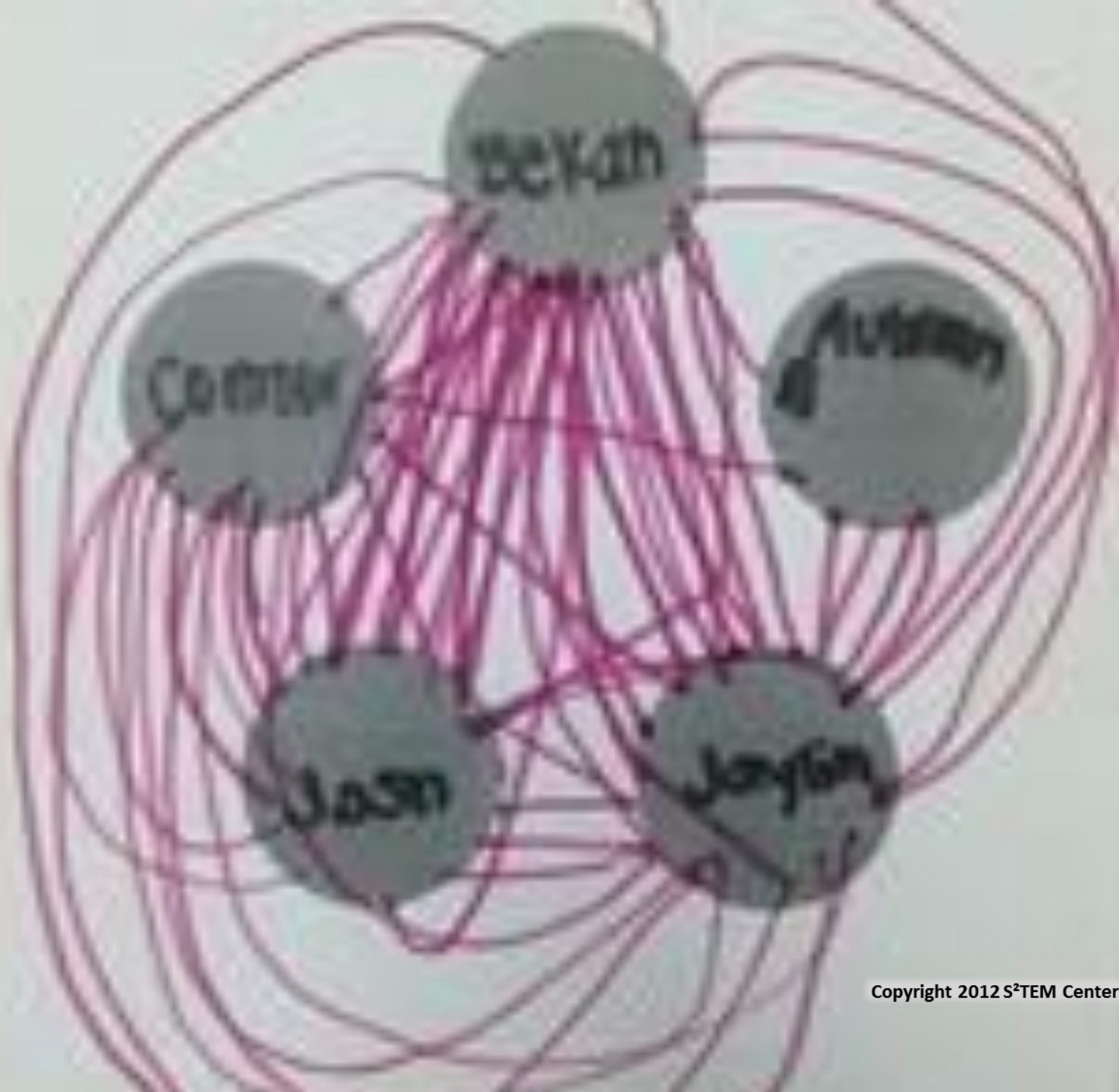
How are the children and teacher in this video engaging in the work of scientists?

[View Video](#)



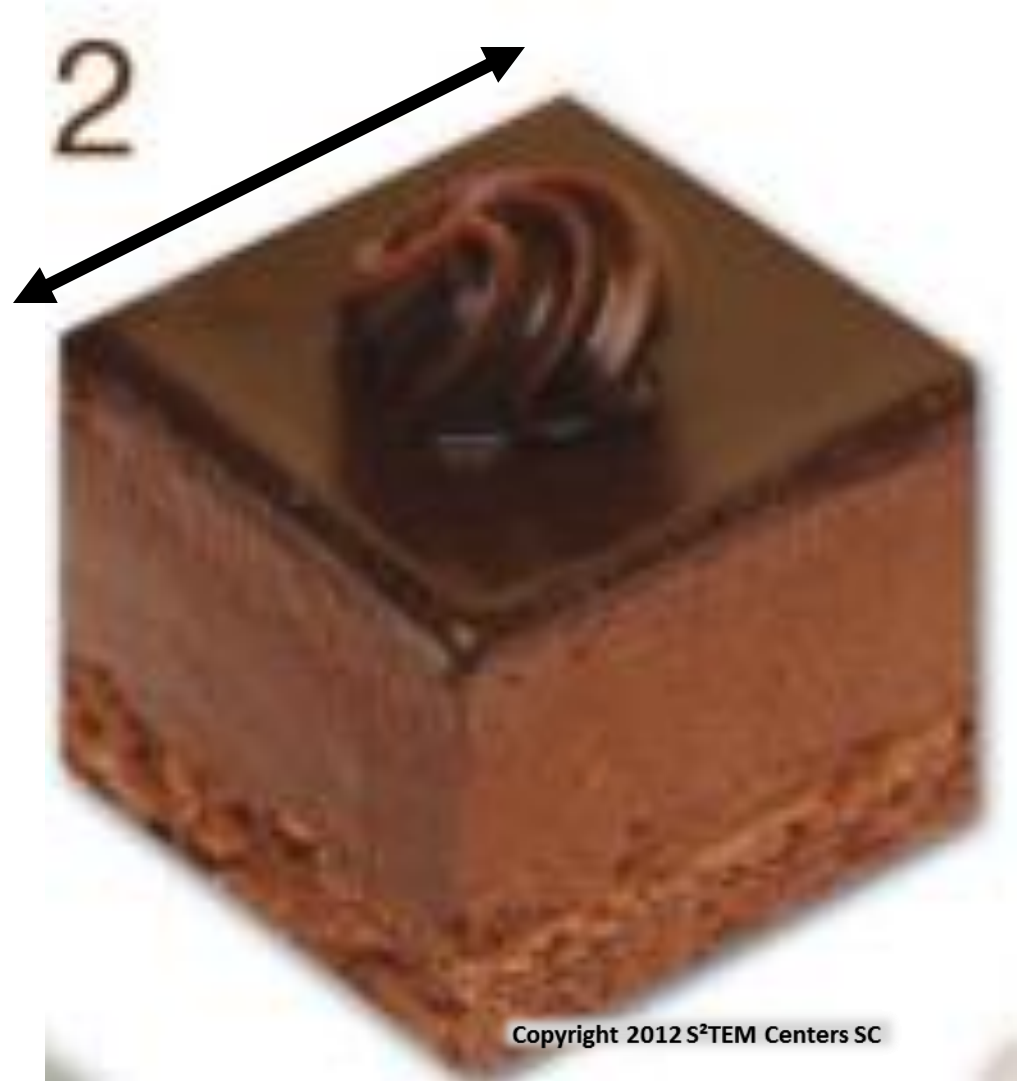
Strategies for Productive Dialogue

- Bounce Cards
- Accountable Talk
- Harkness Strategy



Suppose you eat a dessert that is shaped like a cube 2 units on each side.

How might you maximize the ratio of the surface area of the dessert to the volume?





Strategies for Purposeful Reading

- Highlighting
- Say Something
- Gist Statements

How does disciplinary literacy support the learning of mathematics in this classroom?

[View Video](#)



Chewing and Digestion



Strategies for Meaningful Writing

- Most Important Point (MIP)
- Proof Paragraph
- Tweet



Something to Tweet about

- Think about what you learned about disciplinary literacy in the session today.
- Develop a tweet response that summarizes your thoughts in no more than 140 characters.
- Share your tweet globally!



FYI



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Solutions in Science, Technology, Engineering & Mathematics Education

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