



Department of Education & Workforce

Literacy Across the Disciplines: Mathematics

Approximate time to complete: 45 minutes

Download the Course Companion document before starting this course. You can use the Companion Document to take notes on your learning, address reflection prompts, and as an easy way to retrieve course resources.

[Literacy Across the Disciplines: Mathematics Course Companion \(/getattachment/Topics/Learning-in-Ohio/Literacy/Literacy-Academy/Literacy-Academy-on-Demand/Grades-6-12/Literacy-Across-the-Disciplines-Mathematics/Course-Companion-LAtD-Math.docx.aspx?lang=en-US\)](https://getattachment/Topics/Learning-in-Ohio/Literacy/Literacy-Academy/Literacy-Academy-on-Demand/Grades-6-12/Literacy-Across-the-Disciplines-Mathematics/Course-Companion-LAtD-Math.docx.aspx?lang=en-US)

Learning Objectives:

Participants will be able to:

- Understand and explain elements of the Simple View of Reading and how it can support literacy in math
- Implement classroom tools and strategies to improve students' literacy
- Utilize literacy tools and strategies to improve instruction in math

Consider This Scenario

Mrs. Grant is a Geometry teacher at Parker High School. She loves finding ways to make geometry relevant to students and often finds ways to incorporate real-world situations and events into her instruction. In her latest unit, she used a popular game that many students played on a phone app to introduce key concepts in geometry. As part of this unit, she wanted her students to read through an article about how game designers

incorporate concepts from geometry into their development. However, she noticed that several of her students struggled to read the passage, often stopping at words they did not know. This led several of the students to feel confused about the article's main points and relation to mathematics. Mrs. Grant knows that she wants to help her students read more fluently and to comprehend what they read. However, she is unsure how to help them.

CONNECTION POINT

In your Course Companion Document, consider these questions:

Can you relate to the above scenario? In what ways are your challenges in literacy instruction similar or different?

How can literacy support learning in mathematics education?

Ohio's Standards for Mathematics call for students to broadly engage in mathematical reasoning, problem solving, and real-world application of mathematical principles. Reading and writing are essential to support students in deepening their mathematical knowledge and skills. Furthermore, college and career ready students will encounter challenges and opportunities that require reading, writing, and mathematical reasoning in tandem. There are few, if any, real world scenarios that require students to utilize mathematics skills divorced from reading and writing.

Consider the ways that students will utilize literacy knowledge and skills in their math classes. On any given day, students must:

- Read and solve complex written problems

- Utilize a robust vocabulary of mathematical terminology

- Understand several different modes of written expression including articles, paragraphs, diagrams, charts, and labels

- Write out their answers utilizing clear language

- Develop and revise arguments using data and evidence from different texts

Supporting Mathematics Literacy with Dr. Joshua Lawrence

In this video presentation, Dr. Lawrence describes the Simple View of Reading and its application for supporting math.

Literacy Across the Disciplines Math



Reflection Question: Consider some components of the Simple View of Reading identified by Dr. Lawrence that impact reading in Mathematics (Background, reasoning, academic language & vocab, searching & sources, literacy knowledge, perspective taking). Which of these elements of effective reading do you commonly draw on in your classroom? What elements might you begin to employ to more effectively teach your students?

Knowledge Check

Take the brief quiz below to test your knowledge. Click the square button to expand the quiz.



Resources

[Disciplinary Literacy in Mathematics](#) ([/getattachment/Topics/Learning-in-Ohio/Literacy/Literacy-Academy/Literacy-Academy-on-Demand/Grades-6-12/Literacy-Across-the-Disciplines-Mathematics/Disciplinary_Literacy_Math-LAoD.pdf.aspx?lang=en-US](#)). : This

document from Dr. Josh Lawrence provides an overview of content from this course in addition to several tools that can be used in mathematics classrooms to support students' literacy.

Course Reflection

Which of the tools and/or strategies identified by Dr. Lawrence could you incorporate into your current instruction? What steps do you need to take?

To Learn More

[Reading and Writings in the Disciplines](https://www.learner.org/series/reading-writing-in-the-disciplines/) (<https://www.learner.org/series/reading-writing-in-the-disciplines/>). by Annenberg Learner: Reading and Writing in the Disciplines contains video demonstrations of classroom lessons in addition to explanations and resources to support literacy in mathematics, science, English, and social studies.

Big Ideas in Literacy – Math: (<https://www.learner.org/series/reading-writing-in-the-disciplines/big-ideas-in-literacy-mathematics/>). This document from the Annenberg Foundation, provides an overview and examples of disciplinary literacy in Mathematics

Feedback:

Please take a moment to fill out this **feedback form** (https://forms.office.com/Pages/ResponsePage.aspx?id=xPz4UNiUB0-E6zbtV8flogYC_CKDPvZNhgLPj1rTGIJUNUhPVEdRVklaOFYzNkdYNTIRUjI1T1NNRi4u). We will use your feedback to improve this and other courses.

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