



**The Learning Tree Professional Development Network, LLC**  
Course Syllabus

**Course Title:** Literacy in Mathematics

**Credits:** 3 credits

**Class Type:** Accelerated Fully Online

*Participants taking this course for PDPs are required to complete ONE discussion board post, ONE written response, and a modified (to a lesser degree) final assignment in order to earn a Massachusetts' Department of Elementary and Secondary Education approved certificate.*

*Participants taking this course for CEUs are required to complete ONE discussion board post, ONE written response, and a written reflection on an educator's professional accomplishment and growth resulting from participation in the course.*

**CATALOG DESCRIPTION:**

Reading and writing in mathematics are of particular interest to educators because these processes are essential to both problem solving and concept development in mathematics. This course will expose participants to various strategies for incorporating literacy into math lessons in order to meet Common Core State Standards and accelerate student success. Strategies for teaching literacy in math will be explored through the topics of vocabulary, speaking and listening skills in math, using literary and expository texts in math, mathematical reading comprehension, assessments, and writing about math.

**COURSE PREREQUISITES:** None

**LEARNING OUTCOMES:**

GLOBAL GOALS OF THE COURSE:

1. Describe, critique, and apply theories of incorporating literacy into mathematics lessons.
2. Synthesize and apply principles of literacy strategies in mathematics lessons and teaching.

INSTRUCTIONAL OBJECTIVES:

1. Develop a knowledge of the basic and current issues in literacy in mathematics and be able to evaluate and apply current learning theories.
2. Implement Common Core State Standards in mathematics lesson.
3. Determine and select appropriate literacy techniques/strategies to incorporate into mathematics lesson.
4. Construct a math lesson that incorporates literacy in order to further student learning.
5. Synthesize and apply principles of written language in mathematics.

**TEACHING/LEARNING ACTIVITIES:**

Video clips, PowerPoints, readings, graphic organizers, teaching tools, sample lessons, classroom discussion, lecture, etc. will all be implemented to demonstrate concepts.

### **REQUIRED READINGS:**

Burns, M. (2004). Writing In Math. Educational Leadership, 62(2), 30-33.

Kenney, J. (2005). Chapter 2: Reading in the Mathematics Classroom. In Literacy strategies for improving mathematics instruction. Alexandria, Va.: Association for Supervision and Curriculum Development.

### **EVALUATION METHODS:**

1. **One Page Response Journals:** Some week participants will be given a required article to read. Participants should write a one page response to each article on particular weeks when journals are assigned. Participants should respond to the article, not summarize it. How does it affect you as an educator? How can you implement this in your own educational setting? Would you want to implement it?
2. **Online Discussions:** Participants are asked to discuss assignments. These discussions can include **meaningful** questions, stories, examples, concerns, ideas, etc. To get full credit for these discussions, a participant must post a response, question, story, etc. at least once during the assigned week.
3. **Final Assignment:** For the final assignment, participants will be required to choose one Common Core State Standard in Mathematics at any grade level. Participants will then need to write a one to three page paper describing literacy activities that he/she would incorporate into a lesson or unit on the chosen standard.

### **TESTING AND GRADING:**

- 40% Written assignments (one page response journals)
- 20% Online discussions
- 40% Final Assignment

### **ADA Policy**

If you as a student qualify as a person with a disability as defined in Chapter 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, the Americans with Disabilities Act Amendments Act of 2008 (ADAAA), you are strongly encouraged to register with the Center for Teaching and Learning. The Center for Teaching and Learning is located in the Diane M. Halle Library room 201 and online at <http://www.endicott.edu/academicresources>.

As a student registered with the Center for Teaching and Learning, it is your responsibility to present your accommodation letter to your instructor at the beginning of each semester.

### **Academic Integrity Statement**

Students are required to abide by the *Academic Integrity Policy* of Endicott College.

### **Course Credit Guidelines**

For a graduate three credit course, students are expected to receive a minimum of 135 hours of instruction and work outside of the class by the conclusion of the course.

6 Week online course - This course is a 3-credit course, which means that students are expected to do at least 22.5 hours of course-related work each week of the 6-week term. This includes work done completing assigned readings, studying for test and examinations, preparing written assignments, and other course-related tasks.

Students must review the Academic Calendar published by the Registrar's Office online at:

<http://www.endicott.edu/Undergrad/Academic-Calendar.aspx>

Class attendance is expected of all students up to and including the last day of scheduled classes in the semester. Students must plan accordingly.

## **TOPICAL TIMELINE**

### **Week One**

- Review Syllabus
- Topics Covered:
  - Why Incorporate Literacy in Math?

### **Required Readings**

Kenney, J. (2005). Chapter 2: Reading in the Mathematics Classroom. In Literacy strategies for improving mathematics instruction. Alexandria, Va.: Association for Supervision and Curriculum Development.

### **Other Assignments**

One Page Written Response.

### **Week Two**

- Topics Covered:
  - Vocabulary
  - Speaking & Listening Skills

### **Other Assignments**

Discussion Post.

### **Week Three**

- Topics Covered:
  - Read Alouds in Math

### **Other Assignments**

Discussion Post.

### **Week Four**

- Topics Covered:
  - Using Literary Text in Math
    - Reading Comprehension
    - Narrative Math Texts
    - Expository Math Texts

### **Other Assignments**

Discussion Post.

### **Week Five**

- Topics Covered:
  - Writing About Math

### **Required Readings**

Burns, M. (2004). Writing In Math. Educational Leadership, 62(2), 30-33.

### **Other Assignments**

One Page Written Response.

### **Week Six**

- Topics Covered:
  - Assessments

**Other Assignments**

Discussion Post.

Final Assignment.

**TOPICAL OUTLINE**

| Instructional Activity  | Description of Activity  | Time Spent |
|---|--|------------|
| <p><b><u>Week One</u></b></p> <ul style="list-style-type: none"> <li>● Review Syllabus</li> <li>● Topics Covered:               <ul style="list-style-type: none"> <li>○ Why Incorporate Literacy in Math?</li> </ul> </li> </ul> <p><b>Required Readings</b><br/>Kenney, J. (2005). Chapter 2: Reading in the Mathematics Classroom. In Literacy strategies for improving mathematics instruction. Alexandria, Va.: Association for Supervision and Curriculum Development.</p> <p><b>Other Assignments</b><br/>One Page Written Response.</p> | Posted Lecture Notes, Articles, PowerPoint, and Websites, Discussion Board, Written Response | 22.5       |
| <p><b><u>Week Two</u></b></p> <ul style="list-style-type: none"> <li>● Topics Covered:               <ul style="list-style-type: none"> <li>○ Vocabulary</li> <li>○ Speaking &amp; Listening Skills</li> </ul> </li> </ul> <p><b>Other Assignments</b><br/>Discussion Post.</p>   | Posted Lecture Notes, Articles, PowerPoint, and Websites, Discussion Board, Written Response | 22.5       |
| <p><b><u>Week Three</u></b></p> <ul style="list-style-type: none"> <li>● Topics Covered:               <ul style="list-style-type: none"> <li>○ Read Alouds in Math</li> </ul> </li> </ul> <p><b>Other Assignments</b><br/>Discussion Post.</p>   | Posted Lecture Notes, Articles, PowerPoint, and Websites, Discussion Board, Written Response | 22.5       |
| <p><b><u>Week Four</u></b></p> <ul style="list-style-type: none"> <li>● Topics Covered:               <ul style="list-style-type: none"> <li>○ Using Literary Text in Math                   <ul style="list-style-type: none"> <li>▪ Reading Comprehension</li> <li>▪ Narrative Math Texts</li> <li>▪ Expository Math Texts</li> </ul> </li> </ul> </li> </ul> <p><b>Other Assignments</b><br/>Discussion Post.</p>  | Posted Lecture Notes, Articles, PowerPoint, and Websites, Discussion Board, Written Response | 22.5       |
| <p><b><u>Week Five</u></b></p> <ul style="list-style-type: none"> <li>● Topics Covered:               <ul style="list-style-type: none"> <li>○ Writing About Math</li> </ul> </li> </ul> <p><b>Required Readings</b><br/>Burns, M. (2004). Writing In Math. Educational Leadership, 62(2), 30-33.</p> <p><b>Other Assignments</b></p>   | Posted Lecture Notes, Articles, PowerPoint, and Websites, Discussion Board, Written Response | 22.5       |

|  |  |                    |
|--|--|--------------------|
| One Page Written Response.   |  |                    |
| <b>Week Six</b> <ul style="list-style-type: none"> <li>• Topics Covered: <ul style="list-style-type: none"> <li>o Assessments</li> </ul> </li> </ul> <b>Other Assignments</b><br>Discussion Post.<br>Final Assignment. | Posted Lecture Notes, Articles, PowerPoint, and Websites, Discussion Board, Written Response | 22.5               |
|  |  | Total<br>135 hours |

\* *Syllabus is subject to change.*