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 in grades K through 8. 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. Analyze 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 lessons.
3. Determine and select appropriate literacy techniques/strategies to incorporate into mathematics lessons.
4. Construct a math lesson that incorporates literacy in order to further student learning.
5. Analyze 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?

One Page Response Journals Rubric (Online Response Journal Rubric)

Article Content has been incorporated: journal response is mindful of article's content (25 pts)
Reflection: journal response demonstrates participant's reaction to the article's content (25 pts)
Course Concepts have been integrated: journal response is reflective of course content (25 pts)
Journal Requirements have been met: journal response is a minimum of one page (25 pts)

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.

Online Discussions Rubric (Discussion Board Rubric)

Discussion Content: discussion post is reflective of assignment week's topic AND discussion post contributes meaningfully to the discussion and participant learning (50 pts)
Journal Requirements: discussion post is a response, question, story, or reflection to assigned week's topic AND participant posted at least one post to assigned week's discussion board (50 pts)

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.

Literacy in Mathematics Final Assignment Rubric	
Paper incorporates concepts reviewed in the course.	___ / 25
Appropriate literacy activities have been selected that match the chosen Common Core State Standard and grade level.	___ / 25
Chosen literacy activities enhance the teaching and learning of the selected Mathematics Common Core State Standard.	___ / 25
Paper requirements have been met: -1-3 pages, double spaced in 12 point Times New Roman font AND -one Common Core State Standard in Mathematics at any grade level has been chosen	___ / 25

TESTING AND GRADING:

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

Final Grading:

A = 4.0 (93-100)	C = 2.0 (73-76)
A- = 3.7 (90-92)	C- = 1.7 (70-72)
B+ = 3.3 (87-89)	D+ = 1.3 (67-69)
B = 3.0 (83-86)	D = 1.0 (63-66)
B- = 2.7 (80-82)	D- = 0.7 (60-62)
C+ = 2.3 (77-79)	F = 0.0 (Below 60)
	IN = Incomplete

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 through the accrediting affiliated college or university. Please see your respective course syllabi for information on how to complete this process. If you are registered for PDPs or CEUs, please contact The Learning Tree PDN at learningtreepdn@gmail.com. Instructors will then be notified directly from the Accessibility Services Office of any approved academic accommodations including extended time eligibility.

Academic Integrity Statement

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

Academic dishonesty is any form of cheating which results in students giving or receiving unauthorized assistance in an academic exercise or receiving credit for work which is not their own. In cases of academic dishonesty, the instructor will inform The Learning Tree PDN prior to implementation of punitive action. Academic dishonesty is grounds for disciplinary action by both the instructor and The Learning Tree PDN. Any student judged to have engaged in academic dishonesty may receive a failing grade for the work in question, a failing grade for the course, or any other lesser penalty which the instructor finds appropriate. To dispute an accusation of academic dishonesty, the student should first consult with the instructor. If the dispute remains unresolved, the student may then state his or her case to The Learning Tree PDN.

By taking this course, students agree that all required assignments may be subject to submission for "similarity review" to Turnitin.com, a tool intended to not just detect instances of plagiarism, but to prevent it as well. The tool is intended to help students identify passages that are unoriginal, incorrectly cited, or lacking appropriate source information. Submitted assignments may also be archived in the Turnitin.com database for the purpose of checking for possible future instances of plagiarism, additional similarity searches, and other educational purposes at the discretion of the instructor. For more information, please review the Privacy and Security guide at Turnitin.com.

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.

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
Week One ● Review Syllabus ● Topics Covered: o 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.	Posted Lecture Notes (1 hr), Articles (8 hrs), PowerPoint (3 hrs), and Websites (3 hrs), Discussion Board (4 hrs), Written Response (3 hrs)*	22.5
Week Two ● Topics Covered: o Vocabulary o Speaking & Listening Skills **Other Assignments** Discussion Post.	Posted Lecture Notes (1 hr), Articles (8 hrs), PowerPoint (3 hrs), and Websites (3 hrs), Discussion Board (4 hrs), Written Response (3 hrs)*	22.5
Week Three ● Topics Covered: o Read Alouds in Math **Other Assignments** Discussion Post.	Posted Lecture Notes (1 hr), Articles (8 hrs), PowerPoint (3 hrs), and Websites (3 hrs), Discussion Board (4 hrs), Written Response (3 hrs)*	22.5
Week Four ● Topics Covered: o Using Literary Text in Math ▪ Reading Comprehension ▪ Narrative Math Texts ▪ Expository Math Texts **Other Assignments** Discussion Post.	Posted Lecture Notes (1 hr), Articles (8 hrs), PowerPoint (3 hrs), and Websites (3 hrs), Discussion Board (4 hrs), Written Response (3 hrs)*	22.5
Week Five ● Topics Covered: o Writing About Math **Required Readings**	Posted Lecture Notes (1 hr), Articles (8 hrs), PowerPoint (3 hrs), and Websites (3 hrs), Discussion Board (4 hrs), Written Response (3 hrs)*	22.5

Burns, M. (2004). Writing In Math. Educational Leadership, 62(2), 30-33. **Other Assignments** One Page Written Response.		
<u>Week Six</u> ● Topics Covered: o Assessments **Other Assignments** Discussion Post. Final Assignment.	Posted Lecture Notes (1 hr), Articles (8 hrs), PowerPoint (3 hrs), and Websites (3 hrs), Discussion Board (4 hrs), Written Response (3 hrs)*	22.5
	*hrs are estimates	Total 135 hours