

Childhood Studies

Winter 2020

EA 206-E: Developing Numeracy in the Elementary Classroom

Children's developing math concepts and abilities at the pre-math and early math levels will be studied and observed. The emphasis will be the educational assistant's role in observing children's responses to math lessons, and supporting and adapting learning experiences to meet individual learning goals. Awareness of approaches and strategies to remediate math learning will be examined.

2 credits, 30 hours of instruction

Instructor:

Amy Lyn MacDonald

Office hours:

Monday, 5:30 PM – 6:00 PM and 8:00 – 8:30 PM (CC212)

Hours of Instruction:

Monday, 6:00 PM – 8:00

Required Resources:

Making Math Meaningful to Canadian Students, k-8, 3rd Edition., Marian Small,
Nelson Publishing 2011

Course Outcomes:

Upon successful completion of this course, the student shall be able to:

- Review and become familiar with the areas of study covered in the Alberta provincial Program of Studies in mathematics.
- Demonstrate an awareness of the role math anxiety plays in the lives of children and adults.
- Recognize and document the math learning of individual children in response to a teacher-led math lesson.
- Reflect on concepts in math by Identifying, developing and implementing rich math tasks (under the direct supervision of a teacher) to encourage children's learning of those concepts based on the current curriculum being taught.
- Use tools for documenting children's learning such as scribing, graphs, and documentation panels.

- Review and apply methods for supporting children's math learning.

NOTE!! If class is cancelled, for any reason, assignments will be due and submitted at the **BEGINNING** of the following class.

METHOD OF EVALUATION:

Evaluation:

| | | |
|---|--|-------------------|
| <p>Assignment 1</p> <p>Math Autobiography (Introduction video assignment & written portion)</p> <p>Your first assignment involves the writing of your own autobiography. An autobiography is the story of a person's life, told by that person. What makes this autobiography special is that it is the story of your mathematical life. You will answer the following questions within the autobiography:</p> <p>Think about the first time you remember using or thinking about math in your early years. What did you like to do? What kind of math things did you play with? Who helped you realize the importance of math and numbers in your early life? Are there any amusing or cute math stories that you can share? Are there certain topics or skills in math that you particularly like or dislike? Describe them. How would you rank math among your other subjects in enjoyment or interest? How did your math teachers strengthen or hinder your experiences in math? What is your family's attitude toward math? A reflection of content from text and online class is also necessary (math anxiety & theorists). A further assignment outline and rubric will be provided.</p> | <p>Due Monday January 20th</p> | <p>10%</p> |
| <p>Assignment 2</p> <p>Math Picture Book Review (can be independent or collaborative)</p> <p>You will review a math picture book that would be useful to use in an elementary classroom to enhance or reinforce a mathematical concept. This assignment will provide you with an opportunity to develop critical thinking skills in evaluating picture books as a tool in the mathematic curriculum. Key elements include; the identification of the audience, the critical analysis of material, and impact of the book on your chosen audience.</p> <p>A further assignment outline and rubric will be provided.</p> | <p>Due Monday February 24th</p> | <p>20%</p> |
| <p>Assignment 3</p> <p>Resource and Manipulative Assignment</p> <p>In this assignment you will view a video and respond to the following questions. How does the lesson include ideas from your course readings and class discussions specific to geometry, measurement, or statistics & probability? You will find resources that would help the teacher develop the understanding of that concept further in a center based lesson, introductory or concluding lesson, re-teaching lesson, small group test preparation, etc. A further assignment outline and rubric will be provided.</p> | <p>Due Monday March 9th</p> | <p>20%</p> |

Assignment 4

Due **20%****Development of Practical Math Strategies (Rich task) and documentation**

Monday

April 6th

You will create a rich task for authentic use with K-9 students in a classroom. This task that you create must be aligned to the Alberta K-9 Mathematics Program of Studies and be suitable to use with a variety of students, of differing levels and needs. A summary and write up will be required for each task which must include photos or video of the task and how it is intended to be used. A further assignment sheet and rubric will be provided.

Ongoing assignment

Due dates

30%**Multimedia Math Journal (Both in class assignments where attendance is necessary and assigned through Moodle - ongoing throughout the term)**

to be determined

Using an online platform, you will solve a rich problem using concrete, semi-concrete and abstract representation to journal your understanding of mathematical concepts covered in the course. We will use an online platform to familiarize yourself with programs, digital tools, and strategies that are currently being used in schools in Alberta. Extra readings will be assigned with discussion posts to follow on Moodle. Blogging, photo's, discussion, and reflection will be required. Attendance and participation is necessary.

A grade of C- is required for progression or transfer.

Grading System

| Legend | | | |
|------------------|-------------|-----------|--------------|
| Percentage Scale | Alpha Grade | 4.0 Scale | Descriptor |
| 94-100 | A+ | 4.0 | Excellent |
| | A | 4.0 | |
| 90-93 | A- | 3.7 | |
| 86-89 | B+ | 3.3 | Good |
| 80-85 | B | 3.0 | |
| 75-79 | B- | 2.7 | |
| 70-74 | C+ | 2.3 | Satisfactory |
| 65-69 | C | 2.0 | |
| 60-64 | C- | 1.7 | |
| 56-59 | D+ | 1.3 | Poor |
| 50-55 | D | 1.0 | Minimum Pass |
| 0-49 | F | 0.0 | Failure |

Please Note:

You will be provided a schedule of topics the first day of class. Date and time allotted to each topic is subject to change. It is your responsibility as a student to contact the Office of the Registrar to complete the forms for Withdrawal or Change of Registration, and any other forms. Please refer to the list of important dates as noted in the Academic Schedule in the Keyano College Credit Calendar.

IMPORTANT DATES TO REMEMBER:

| Important Dates – WINTER 2019 | |
|--------------------------------------|---------------------------|
| First day of classes | January 6 |
| Reading Week – no classes | February 17 – February 21 |
| Last day of class | April 6 th |
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| | |
| | |

Performance Requirements**Student Responsibilities**

It is your responsibility as a student to contact the Office of the Registrar to complete the forms for Withdrawal or Change of Registration, and any other forms. Please refer to the list of important dates as noted in the Academic Schedule in the Keyano College credit calendar.

More specific details are found in the Student Rights and Student Code of Conduct section of the Keyano College credit calendar. It is the responsibility of each student to be aware of the guidelines outlined in the Student Rights and Student Code of Conduct Policies.

Student Attendance

Class attendance is useful for two reasons. First, class attendance maximizes a students' learning experience. Second, attending class is a good way to keep informed of matters relating to the administration of the course (e.g., the timing of assignments and exams). Ultimately, you are responsible for your own learning and performance in this course.

It is the responsibility of each student to be prepared for all classes. Students who miss classes are responsible for the material covered in those classes and for ensuring that they are prepared for the next class, including the completion of any assignments and / or notes that may be due.

Academic Misconduct

Students are considered to be responsible adults and should adhere to principles of intellectual integrity. Intellectual dishonesty may take many forms, such as:

- Plagiarism or the submission of another person's work as one's own
- The use of unauthorized aids in assignments or examinations (cheating)
- Collusion or the unauthorized collaboration with others in preparing work
- The deliberate misrepresentation of qualifications
- The willful distortion of results or data
- Substitution in an examination by another person
- Handing in the same unchanged work as submitted for another assignment
- Breach of confidentiality.

The consequences for academic misconduct range from a verbal reprimand to expulsion from the College. More specific descriptions and details are found in the Student Rights and Student Code of Conduct section of the Keyano College credit calendar. It is the responsibility of each student to be aware of the guidelines outlined in the Student Rights and Student Code of Conduct Policies.

In order to ensure your understanding of the concept of plagiarism, you must successfully complete the online tutorial found on ilearn.keyano.ca. Then print the certificate, sign it, and show it to each of your instructors. Your course work will not be graded until you show this signed certificate.

Specialized Supports

The Student Academic Support Services (SASS) department: Accessibility Services, Skill Centre and Wellness Services, work together to support student success at Keyano College.

Accessibility Services (CC167) supports student success through group and individualized instruction of learning, study and test taking strategies, and adaptive technologies. Students with documented disabilities, or who suspect a disability, can meet with the Learning Strategists to discuss accommodation of the learning barriers that they may be experiencing. Students who have accessed accommodations in the past are encouraged to visit our office at their earliest opportunity to discuss the availability of accommodations in their current courses. Individual appointments can be made by calling 780-791-8934

Skill Centre (CC119) provides a learning space where students can gather to share ideas, collaborate on projects and get new perspectives on learning from

our tutorial staff. Students visiting the centre have access to one-to-one or group tutoring, facilitated study groups, and assistance in academic writing. The Skill Centre's Peer Tutor program provides paid employment opportunities for students who have demonstrated academic success and want to share what they have learned. Tutoring is available free to any students registered at Keyano College on a drop in basis, from 9:00 am to 5:00 pm Monday through Friday. Additional evening hours are subject to tutor availability and are posted in the Skill Centre.

Wellness Services (CC260) offers a caring, inclusive, and respectful environment where students can access free group and individual support to meet academic and life challenges. Mental Health Coordinators offer a safe and confidential environment to seek help with personal concerns. The Mindfulness Room in CC260 is available as a quiet space for students to relax during regular office hours. Wellness Service welcomes students to participate in any of the group sessions offered throughout the academic year addressing such topics as Mindfulness and Test Anxiety. Individual appointments can be made by calling 780-791-8934.

Please watch your Keyano email for workshop announcements from our Student Academic Support Services team.