



## Teaching Mathematical Common Core Standards Successfully

### Mathematical Practice Standard #5

EDUO 9546 One Semester Unit/Credit

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### Public Syllabus

*Note: This is a Public syllabus of the course. For a fully detailed syllabus, please email the instructor*

### Course Overview

This course guides the teacher towards information that will help in the successful preparation, implementation and evaluation of a classroom lesson that fulfills mathematical practice #5 (Make sense of problems and persevere in solving them.)

### Course Objectives:

Relating to the Common Core **Mathematical Practice Standard #5**, the teacher will be able to:

1. explain the standard to people of varying abilities, ages & education
2. use different materials to teach the standard
3. develop an effective time line within a teaching plan
4. create assessment processes that evaluates the ability of the students to grasp the standard
5. analyze this class experience as to how well it helped prepare to teach the mathematical standard

### Course Relation to CCS or other Professional Standards

CCSS.MATH.PRACTICE.MP5 Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

## How to Submit Coursework

Each completed assignment in this course is submitted to the instructor for review. Follow directions at the end of each assignment on how to prepare and in which Moodle Dropbox to place completed work. Name each file submitted with your last name and (i.e. BrownAssignment). Make sure you place your full name and course number at the top of each document page. You will receive feedback from your instructor within 5 days indicating successful completion of the assignment or the need for revision. Assignment grades will be averaged for the final course grade.

**Grading assessment rubrics for written projects and for presentation projects are found in this document.**

## Course Assignments

**Please submit all assignments in one document to the course dropbox.**

### Assignment 1: Showing Understanding

After reading and studying the following websites answer 1a, 1b, and 1c

- <http://www.corestandards.org/Math/Practice/>
- <https://www.scholastic.com/teachers/blog-posts/meghan-everette/guide-8-mathematical-practice-standards/>
- <http://www.insidemathematics.org/common-core-resources/mathematical-practice-standards/standard-2-reason-abstractly-quantitatively>

1a. – 1c. Write out a brief but appropriate explanation of Mathematical Practice #2 to each of the following:  
a. the students in your class  
c. a colleague

After looking over the following websites, answer 1d.

- <https://www.google.com/search?q=mathematical+practice+standard+1&tbm=isch&tbo=u&source=univ&sa=X&ei=ZBaNVKO3J5GxogThkIKwDg&ved=0CFAQsAQ&biw=1175&bih=834>
- <http://www.debbiewaggoner.com/math-practice-standards.html>

1e. Which one of the seven website resources helped you the most in understanding standard #2? Explain.

### Assignment 2: Lesson Plan

Follow the parts 2a-2e below to create a mathematical practice #1 standard lesson plan.

#### 2a. Description of Students/Class

Describe the students for whom this lesson plan is intended. This may be for an actual group of students, or it may be for a future class. This description should include some or all of the following: academic and language abilities, learning modalities, different intelligences, cultural differences, maturity.

#### 2b. Classroom Management

2b.1 what classroom management and community building strategies will you use for providing a safe classroom that will encourage risk taking?

## 2c. Elements of the Plan

Identify elements listed below that will be used in this teaching plan. Provide description and examples of how each of them will be woven throughout the plan and how each relates with the others in teaching the math standard. In addition, relate each element to 2a (students), & 2b (management). If any of the elements listed below (except 2c.5) are not used, explain why.

2c.1 Text books

2c.2 Materials and resources (print, video, audio, online, visual, other)

2c.5 Other

## 2d. Assessment

2d.1 strategies used to assess pre-knowledge

2d.4 how will you use the results of the assessments in 5.1-3 to design future classroom planning?

## 2e. Instructions

Write out instructions so another teacher can easily follow this lesson plan without additional communication.

## Assignment 3: Critique of the Overall Experience

Situation: You have become known for your ability to teach the Common Core Mathematical Practice Standard #2. Your professional organization has asked you to be on a panel of eight teachers. Each will give a short discourse on one of the Mathematical Practice Standards. For assignment 3, write the introduction and conclusion of your address and outline the body of your talk and relate how this class helped you to become a recognized expert.

### 3a. Introduction

### 3b. Outline of the body

## Course Assessment Rubric

<b>Exceeds Expectations Exemplary: A+ to A-</b>	<b>Meets Standards B+ to B-</b>	<b>Unacceptable: resubmit</b>
Excellent understanding of the mathematical standard is shown.  Lesson plan is thorough and teaches the standard and provides students the opportunity to use the principals of the standard outside the classroom.  The assessment processes well easily evaluate the degree in which the students understand the mathematical standard and will indicate specific areas that need improvement. The class evaluation is thoughtful, meaningful and memorable.	Understanding of the mathematical standard is shown.  Lesson plan is thorough and teaches the standard.  The assessment processes evaluate the degree in which the students understand the mathematical standard.  The class evaluation is adequate.	Shows little or no understanding of the mathematical standard.  Lesson plan is incomplete and does not adequately teach the standard.  The assessment processes do not relate to the understanding of the mathematical standard.  The class evaluation is disorganized and meaningless.

- You are allowed 9 months to complete the course. Course questions? Contact your instructor by email.
- For questions involving your registration please contact us at [support@dominicanCAonline.com](mailto:support@dominicanCAonline.com) or call (800) 626-5080. To change your address, link to your Dominican Store account at [https://www.dominicanaonlinestore.com/store/index.php?main\\_page=login](https://www.dominicanaonlinestore.com/store/index.php?main_page=login)
- For Dominican Self-Guided course information, link to <http://dominicancaonline.com/Dominican-CA-Online-FAQ>