

(<http://csmatters.org/pd-new>) P - 02

0bP - 0b10

# Diversity and Differentiated Instruction



## Unit Pedagogy

**Revision Date:** Sep 08, 2019

**Duration:** 75 50-minute sessions

### Lesson Summary

Summary: The teachers will learn about various ways to address and improve diversity in their classroom. They will then discuss and (potentially) record the strategies they plan to use in their classrooms.

Outcome:

- Teachers will understand the effects of implicit bias and ways to confront it.
- Teachers will understand the importance of diversity in the classroom and strategies to improve, as well as encourage, it.
- Teachers will understand that there are many resources for making a classroom accessible and the means to do so.
- Teachers will understand that there are many resources they can refer to if they have questions.
- Teachers will be able to use strategies to recruit diverse students.

Overview:

Time: 75 minutes

1. Recruiting for diversity (20 min)
2. Resources and barriers (40 min)
3. Discussion (15 min)

### Learning Objectives

### Teacher Resources

Diversity and Differentiated Instruction Folder (<https://drive.google.com/open?id=0B5vAY-fhOT-icWtmMDgwb1JoVjA>)

Challenging Implicit Bias:

<https://www.edutopia.org/blog/keys-to-challenging-implicit-bias-shane-safir>  
(<https://www.edutopia.org/blog/keys-to-challenging-implicit-bias-shane-safir>)

<http://neatoday.org/2015/09/09/when-implicit-bias-shapes-teacher-expectations/>  
(<http://neatoday.org/2015/09/09/when-implicit-bias-shapes-teacher-expectations/>)

Effects of Bias in the Classroom:

<http://time.com/3705454/teachers-biases-girls-education/> (<http://time.com/3705454/teachers-biases-girls-education/>)

Bias in Computer Science:

<http://fortune.com/2015/04/20/the-pervasive-bias-against-female-computer-science-majors/>  
(<http://fortune.com/2015/04/20/the-pervasive-bias-against-female-computer-science-majors/>)

Creating an Accessible Classroom:

<http://diversity.utexas.edu/disability/critical-ways-faculty-can-support-all-students-with-disabilities/>  
(<http://diversity.utexas.edu/disability/critical-ways-faculty-can-support-all-students-with-disabilities/>)

Series of modules for making computer science classroom more accessible for students with and without disabilities:

<http://www.catea.gatech.edu/scitrain/compsci/modules/introduction.php?version=free>  
(<http://www.catea.gatech.edu/scitrain/compsci/modules/introduction.php?version=free>)

STEM grants in Maryland: (could use these to get resources for disabled students)

<https://www.stemfinity.com/stem-grants-maryland> (<https://www.stemfinity.com/stem-grants-maryland>)

About encouraging more diverse students to participate in CS:

<https://docs.google.com/document/d/1gjcycPSgXPYRJtzyfjOdPa3bZ2EAK6uFpNRNBzZw8FY/edit>  
(<https://docs.google.com/document/d/13hQiWcmDf7CwR5wIK6bCRMMgN7vkqxkvTOLq-9eOY8I/edit>)

Access CS10K CBI Proceedings:

[https://drive.google.com/drive/folders/0B\\_7\\_HZ9tm7qLUzhyMm4zSHlrNVk](https://drive.google.com/drive/folders/0B_7_HZ9tm7qLUzhyMm4zSHlrNVk)  
(<https://drive.google.com/a/umbc.edu/file/d/0B5vAY-fhOT-iQXFYcUc1dGp4THc/view?usp=sharing>)

Access CS10K:

<https://drive.google.com/drive/folders/0B5vAY-fhOT-icWtmMDgwb1JoVjA>  
(<https://drive.google.com/drive/folders/0B5vAY-fhOT-icWtmMDgwb1JoVjA>)

Diversity PowerPoint:

[https://drive.google.com/drive/folders/0B\\_7\\_HZ9tm7qLUzhyMm4zSHlrNVk](https://drive.google.com/drive/folders/0B_7_HZ9tm7qLUzhyMm4zSHlrNVk)  
(<https://docs.google.com/presentation/d/1ExXbRGgp1NQU0ikd0xEmQd9qro4sda-96FSfgR9aZbM/edit>)

(<https://docs.google.com/presentation/d/1ExXbRGgp1NQU0ikd0xEmQd9qro4sda-96FSfgR9aZbM/edit>)

## Lesson Plan

TOTAL: 75 minutes

### Encouraging diverse learners (20 min)

12 min - The instructor will show the videos included in the "About encouraging more diverse students to participate in CS" document.

Discuss as a class: which strategies have you already tried? What were the results? What might you do differently? What ideas are the most appealing to try in the future? Note that the College Board has a recommendation for an open enrollment policy for all willing and academically prepared students.

### Resources to support diverse learners and barriers to diversity (40 min)

5 min - Go over some of the main points in the Access CS10K CBI proceedings, such as Quora.

35 min - The instructor will use the Diversity PowerPoint in the Teacher Resources section to present this lesson.

### Discussion (15 min)

Following this, the teachers will discuss the following:

- Solutions that have worked in their classroom
- Solutions that they would like to try in their classroom

Optionally, can have teachers journal about the solutions they will implement in the coming semester.

## Options for Differentiated Instruction

Could have teachers create a journal entry where they record the top three things they will do to improve and address diversity in their classroom.



(<http://www.umbc.edu/>)



(<http://www.umd.edu/>)



(<http://www.nsf.gov/>)

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