

# WPI Teaching Practicum

Forest Grove Middle School  
Grade 7

An Interactive Qualifying Project submitted to the Faculty of  
WORCESTER POLYTECHNIC INSTITUTE  
in partial fulfillment of the requirements for the  
Degree of Bachelor of Science

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WPI Teacher Preparation Program – Class of 2022

Link to e-Portfolio: <https://sites.google.com/view/meganbradytpp/home>

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**Abstract:**

Through A and B term of 2020, I completed my student teaching experience at Forest Grove Middle School towards earning my Massachusetts Education License in Middle School Science and completing my WPI IQP requirement. This experience allowed me to develop my teaching skills by creating and delivering lessons about various science topics to five classes of 7<sup>th</sup> grade students. In this portfolio, I reflect on my experiences as a student teacher, my teaching philosophy, and my proficiency in the essential CAP elements of teaching. The e-portfolio also contains examples of lesson materials which I created, student feedback, and student work.

**Acknowledgements:**

I would like to thank my mentor teacher, Alicia Simonti, for providing me with the opportunity to learn how to be an effective teacher by doing. Her passion for teaching was inspiring, and she taught me so much about how to engage students in science, support diverse learners, and create a positive classroom environment. I would also like to thank Shari Weaver and Terri Gerhardt for their guidance throughout this practicum. Without their advice, feedback on my teaching, and constant support, I would be half the teacher I am today.

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## References:

1. Almeida, P. A. (2012). Can I ask a question? the importance of classroom questioning. *Procedia – Social and Behavioral Sciences*, 31. 634-638.
2. CASEL. (2021). *Overview of SEL*. Collaborative for Academic, Social, and Emotional Learning (CASEL). [https://casel.org/overview-sel/#:~:text=Social%20and%20emotional%20learning%20\(SEL,maintain%20positive%20relationships%2C%20and%20make](https://casel.org/overview-sel/#:~:text=Social%20and%20emotional%20learning%20(SEL,maintain%20positive%20relationships%2C%20and%20make)
3. Chester, M. D. (2014). Building on 20 Years of Massachusetts Education Reform. *Massachusetts Department of Elementary and Secondary Education*. 1-22.
4. Driscoll, L., Berger, J. B., Hambleton, R. K., et al. (2005). Education Reform: Ten Years after the Massachusetts Education Reform Act of 1993. *Nonpartisan Education Review*, 1(1), 1-36.
5. EL Education. (2021). *Helping All Learners: Scaffolding*. EL Education. <https://eleducation.org/resources/helping-all-learners-scaffolding>
6. Even, R., Tirosh, D. (1995). Subject-matter knowledge and knowledge about students as sources of teacher presentations of the subject-matter. *Educational Studies in Mathematics*, 29. 1-20.
7. *Every Student Succeeds Act (ESSA)*. Every Student Succeeds Act (ESSA). <http://www.everystudentsucceedsact.org/>
8. Gibbs, K. (2014, September 10). *Diversity in STEM: What It Is and Why It Matters*. Scientific American. <https://blogs.scientificamerican.com/voices/diversity-in-stem-what-it-is-and-why-it-matters/>
9. Gross, H. (2020, April 22). *Perspective – During COVID-19, teachers can support students using Maslow’s hierarchy of needs*. EdNC. <https://www.ednc.org/perspective-during-covid-19-teachers-can-support-students-using-maslows-hierarchy-of-needs/>
10. Herrera, F. A., Hurtado, S., Garcia, G. A., Gasiewski, J. (2005). A Model for Redefining STEM Identity For Talented STEM Graduate Students. 2-30.

11. Hilppö, J., Stevens, R. (2020). "Failure is just another try": Re-framing failure in school through the FUSE studio approach. *International Journal of Educational Research*, 99. <https://doi.org/10.1016/j.ijer.2019.10.004>
12. Ladson-Billings, G. (2011). Is Meeting the Diverse Needs of All Students Possible?. *Kappa Delta Pi Record*, 47(1). 13-15.
13. Marzano, R. J. (2010). Art and Science of Teaching/High Expectations for All. *Giving Students Meaningful Work*, 68(1). 82-84.
14. Massachusetts Department of Elementary and Secondary Education. (2021, February 11). *CAP Resources*. Massachusetts Department of Elementary and Secondary Education. <https://www.doe.mass.edu/edprep/cap/resources.html?section=overview>
15. Massachusetts Department of Elementary and Secondary Education. *Forest Grove Middle*. Massachusetts School and District Profiles. <https://profiles.doe.mass.edu/general/general.aspx?topNavID=1&leftNavId=100&orgcode=03480415&orgtypecode=6>
16. Massachusetts Department of Elementary and Secondary Education. *Sheltered English Immersion Endorsements (SEI)*. Massachusetts Department of Elementary and Secondary Education. <https://www.doe.mass.edu/licensure/endorsements/sei.html>
17. Massachusetts Department of Elementary and Secondary Education. *Worcester*. Massachusetts School and District Profiles. <https://profiles.doe.mass.edu/general/general.aspx?topNavID=1&leftNavId=100&orgcode=03480000&orgtypecode=5>
18. MGH Institute of Health Professions. *Inclusive Teaching: An Approach to Meeting Diverse Learning Needs*. MGH Institute of Health Professions. <https://www.mghihp.edu/faculty-staff-faculty-compass-teaching/inclusive-teaching-approach-meeting-diverse-learning-needs>
19. Northern Illinois University Center for Innovative Teaching and Learning. (2012). *Instructional Scaffolding to Improve Learning*. Northern Illinois University. <https://www.niu.edu/citl/resources/guides/instructional-guide/instructional-scaffolding-to-improve-learning.shtml>

20. Rollins, M. (2020). *Diversity in STEM: What is it, why does it matter, and how do we increase it?*. Sea Grant California. <https://caseagrant.ucsd.edu/blogs/diversity-in-stem-what-is-it-why-does-it-matter-and-how-do-we-increase-it>
21. Singer, A., Montgomery, G., Schmoll, S. (2020). How to foster the formation of STEM identity: studying diversity in an authentic learning environment. *International Journal of STEM Education*, 7(57).
22. U.S. Department of Education. *Every Student Succeeds Act (ESSA)*. U.S. Department of Education. <https://www.ed.gov/essa?src=rn>
23. WETA Public Broadcasting. (2019). *ELL Strategies and Best Practices*. Colorín Colorado. <https://www.colorincolorado.org/ell-strategies-best-practices>
24. Worcester Public Schools. *Worcester Public Schools*. Worcester Public Schools, Massachusetts. <https://worcesterschools.org/>
25. WPI. *PBL in Higher Education*. Worcester Polytechnic Institute. <https://www.wpi.edu/project-based-learning/pbl-higher-education>