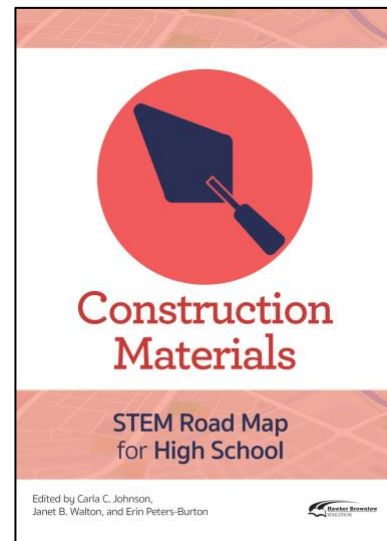


Construction Materials: STEM Road Map for High School

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Summary

What if you could challenge your high school students to gain an understanding of the feats of engineering required to build high-rise buildings – and maybe even improve them? With this volume in the STEM Road Map Curriculum Series, you can!

Construction Materials outlines a journey that will steer your students toward authentic problem-solving while grounding them in integrated STEM disciplines. The series is designed to meet the growing need to infuse real-world learning into F–12 classrooms.

This book is an interdisciplinary module that uses project-and problem-based learning. It gives students an inside look at the complex technologies and science behind the buildings they may take for granted. They'll examine micro- and macro-properties of construction materials, particularly those of high-rise buildings, through a unit divided into three sections that explore the following:

1. How high-rises are constructed, their influence on society and how to communicate complex ideas clearly
2. The factors involved in the collapse of the World Trade Center's Twin Towers in New York, with a focus on how engineers use structural failures to learn more about the designed world
3. Construction innovations that will prompt your students to propose new ways to construct high-rises

The STEM Road Map Curriculum Series is anchored in the Next Generation Science Standards, the Common Core State Standards and the Framework for 21st Century Learning. In-depth and flexible, *Construction Materials* can be used as a whole unit of in part to meet the needs of districts, schools and teachers who are charting a course toward an integrated STEM approach.

Other Resources

- *Wind Energy: STEM Road Map for Primary School* (NST5978)
- *Transportation in the Future: STEM Road Map for Primary School* (NST5961)
- *Harnessing Solar Energy: STEM Road Map for Primary School* (NST5954)
- *Amusement Park of the Future: STEM Road Map for the Middle Years* (NST5923)