The Urban Calculation – What Makes a Successful City? | Grades 3–5				
	NextGen Science Standards (NGSS)	Common Core State Standards (CCSS)	National Council Framework for Social Studies	Common Core Math Standards (CCMS)
Primary Benchmark/ Standard	**Influence of Science, Engineering, and Technology on Society and the Natural World** **3- 5-ETS1-1** People's needs and wants change over time, as do their demands for new and improved technologies.	**Reading Standard 7** Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.	**NCSS-1** analyze and explain the ways groups, societies, and cultures address human needs and concerns	Develop an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers
Secondary Benchmark/ Standard	Engineers improve existing technologies or develop new ones to increase their benefits, decrease known risks, and meet societal demands. (3-5-ETS1-2)	**Speaking and Listening Standards Comprehension and Collaboration** **1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.	**NCSS D2.Geo.8.3-5.** Explain how human settlements and movements relate to the locations and use of various natural resources.	New York State Standards **2.9b** Members of a community specialize in different types of jobs that provide goods and/or services to the community. Community

The Urban Calculation	What About Waste?	Grades 6–8			
	NextGen Science Standards (NGSS)	Common Core State Standards (CCSS)	National Council Framework for Social Studies	Common Core Math Standards (CCMS)
Primary Benchmark/ Standard	**MS-ETS1-3.** Analyze data from tests to determine similarities and differences amon g several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.	**Comprehension and Collaboration 1.** Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.	**NCSS 4.** Recognize relationships between patterns and processes. **5.** Describe how human activities alter places and regions.	Understand ratio concepts and use ratio reasoning to solve problems.
Secondary Benchmark/ Standard	**MS-ETS1-2.** Evaluate competing solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.	**Reading Standard 1** Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.	**D2. Geo.4.6-8** Explain how cultural patterns and economic decisions influence environments and the daily lives of people in both nearby and distant places. **D2. Geo.9.6-8.** Evaluate the influences of long-term human-induced environmental change on spatial patterns of conflict and cooperation.	New York State Standards **Geographic Reasoning_7** Distinguish human activities and human-made features from "environments" (natural events or physical features—land, air, and water—that are not directly made by humans) and describe the relationship between human activities and the environment.

The Urban Calculation | City Beneath the City | Grades 9–12				
	NextGen Science Standards (NGSS)	Common Core State Standards (CCSS)	National Council Framework for Social Studies	Common Core Math Standards (CCMS)
Primary Benchmark/ Standard	**Obtaining, Evaluating, and Communicating Information** Critically read scientific literature adapted for classroom use to determine the central ideas or conclusions and/or to obtain scientific and/or technical information to summarize complex evidence, concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.	**Speaking and Listening Standard 1.** Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.	**NCSS | SCIENCE, TECHNOLOGY, AND SOCIETY** Provide opportunities for learners to make judgments about how science and technology have transformed the physical world and human society and our understanding of time, space, place, and human-environment interactions.	Reason quantitatively and use units to solve problems Apply ratios, rates, percentages, and unit conversions in the context of complicated measurement problems involving quantities with derived or compound units (such as mg/mL, kg/m^3, acre-feet, etc.).
Secondary Benchmark/ Standard	**Engaging in Argument from Evidence** Respectfully provide and/or receive critiques on scientific arguments by probing reasoning and evidence, challenging ideas and conclusions,	**Reading Standard 7** Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.	**D2.Geo.8.9-12.** Evaluate the impact of economic activities and political decisions on spatial patterns within and among urban, suburban, and rural regions.	New York State Standards **Civic Participation 2.** Participate in activities that focus on a classroom, school, community, state, or national issue or problem.