

NATIONAL STANDARDS INDEX

KINDERGARTEN

Kindergarten Next Generation Science Standards Connections

K-PS3-1	Make observations to determine the effect of sunlight on Earth's surface.	You Are My Sunshine (Energy)
K-PS3-2	Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.	You Are My Sunshine (Energy)

Kindergarten Math Common Core State Standards Connections

K.MD.A.2	Directly compare two objects with measurable attribute in common, to see which object has "more of" / "less of" the attribute and describe the difference.	You Are My Sunshine (Energy)
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Kindergarten National Core Arts Standards

VA: Cr1.1.Ka	Engage in exploration and imaginative play with materials.	You Are My Sunshine (Energy)
VA: Cr2.3.Ka	Create art that represents natural and constructed environments.	You Are My Sunshine (Energy)

1st GRADE

1st Grade Next Generation Science Standards Connections

1-PS4-3	Plan and conduct investigation to determine the effect of placing objects made with different materials in the path of a beam of light.	You Are My Sunshine (Energy)
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K-2-ETS1-1	Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	You Are My Sunshine (Energy)
K-2-ETS1-2	Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	You Are My Sunshine (Energy)

1st Grade Math Common Core State Standards

1.MD.C.4	Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than another.	You Are My Sunshine (Energy)
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1st Grade National Council for the Social Studies Curriculum Standards

NCSS: I,c	Culture Social studies programs should include experiences that provide for the study of culture and cultural diversity, so that the learner can describe ways in which language, stories, folktales, music, and artistic creations serve as expressions of culture and influence behavior of people living in a particular culture.	You Are My Sunshine (Energy)
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1st Grade National Core Arts Standards

VA: Cr1.1.1a	Engage collaboratively in exploration and imaginative play with materials.	You Are My Sunshine (Energy)
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2nd GRADE

2nd Grade Next Generation Science Standards Connections

K-2-ETS1-1	Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	We Built This School (Cities)
K-2-ETS1-2	Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	We Built This School (Cities)

2nd Grade Math Common Core State Standards Connections

2.G.A.1	Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.	We Built This School (Cities)
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2nd Grade National Council for the Social Studies Curriculum Standards

NCSS: III,g	Describe how people create places that reflect ideas, personality, culture, and wants and needs as they design homes, playgrounds, classrooms, and the like.	We Built This School (Cities)
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2nd Grade National Core Arts Standards

VA: Cr1.1.2a	Brainstorm collaboratively multiple approaches to an art or design problem.	We Built This School (Cities)
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VA: Cr3.1.2a	Discuss and reflect with peers about choices made in creating artwork.	We Built This School (Cities)
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3rd GRADE

3rd Grade Next Generation Science Standards Connection

5-LS2-1	Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	Getting Dirty (Earth)
5-ESS2-1	Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.	Getting Dirty (Earth)

3rd Grade Math Common Core State Standards Connections

3.MD.B.3	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs.	Getting Dirty (Earth)
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3rd Grade National Council for the Social Studies Curriculum Standards

NCSS: III, h.	Social studies programs should include experiences that provide for the study of people, places, and environments, so that the learner can: examine the interaction of human beings and their physical environment, the use of land, building of cities, and ecosystem changes in selected locales and regions.	Getting Dirty (Earth)
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3rd Grade National Core Arts Standards

Cr2.1.3a	Create personally satisfying artwork using a variety of artistic processes and materials.	Getting Dirty (Earth)
Re.7.2.3a	Determine messages communicated by an image.	Getting Dirty (Earth)
Re9.1.3a	Evaluate an artwork based on given criteria.	Getting Dirty (Earth)
Cn11.1.3a	Recognize that responses to art change depending on knowledge of the time and place in which it was made.	Getting Dirty (Earth)

4th GRADE

4th Grade Next Generation Science Standards Connections

4-ESS2-1	Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.	Rock Me Like a Hurricane (Climate)
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4th Grade Math Common Core State Standards Connections

4.OA.A.3	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including word problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	Rock Me Like a Hurricane (Climate)
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4th Grade National Council for the Social Studies Curriculum Standards

NCSS: III,h	Examine the interaction of human beings and their physical environment, the use of land, building of cities, and ecosystem changes in selected locales and regions.	Rock Me Like a Hurricane (Climate)
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4th Grade National Core Arts Standards

Cr1.1.4a	Brainstorm multiple approaches to a creative art or design problem.	Rock Me Like a Hurricane (Climate)
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5th GRADE

5th Grade Next Generation Science Standards Connections

5-ESS1-1	Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.	Locally Grown (Earth)
5-ESS3-1	Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.	Let It Be (Cities), Saving Some Green (Climate), Trash to Cash (Energy)
3-5-ETS1-1	Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.	Locally Grown (Earth)
3-5-ETS1-2	Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	Let It Be (Cities), Diversity Makes Us Stronger (Cities), Locally Grown (Earth), Trash to Cash (Energy)

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5-LS1-1	Support an argument that plants get the materials they need for growth chiefly from air and water.	Locally Grown (Earth)
5-LS2-1	Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	Diversity Makes Us Stronger (Cities), Locally Grown (Earth)
5-PS1-3	Make observations and measurements to identify materials based on their properties.	Trash to Cash (Energy)
5-PS1-4	Conduct an investigation to determine whether the mixing of two or more substances results in new substances.	Trash to Cash (Energy)

5th Grade Math Common Core State Standards Connections

5.OA.1	Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	Saving Some Green (Climate)
5.OA.2	Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.	Saving Some Green (Climate)
5.NBT.5	Fluently multiply multi-digit whole numbers using the standard algorithm.	Saving Some Green (Climate)
5.NBT.6	Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	Saving Some Green (Climate)
5.NBT.7	Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and	Saving Some Green (Climate)

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	subtraction; relate the strategy to a written method and explain the reasoning used.	
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5th Grade National Council for the Social Studies Curriculum

NCSS: III,h	Examine the interaction of human beings and their physical environment, the use of land, building of cities, and ecosystem changes in selected locales and regions.	Trash to Cash (Energy)
NCSS: VII,h	Describe the relationship of price to supply and demand.	Saving Some Green (Climate), Locally Grown (Earth)
NCSS: VIII,a	Identify and describe examples in which science and technology have changed the lives of people, such as in homemaking, childcare, work, transportation, and communication.	Diversity Makes Us Stronger (Cities)
NCSS: X,c	Locate, access, organize, and apply information about an issue of public concern from multiple points of view.	Diversity Makes Us Stronger (Cities)
NCSS: X,d	Identify and practice selected forms of civic discussion and participation consistent with the ideals of citizens in a democratic republic.	Diversity Makes Us Stronger (Cities), Trash to Cash (Energy)
NCSS: X,g	Examine the influence of public opinion on personal decision-making and government policy on public issues.	Diversity Makes Us Stronger (Cities)

5th Grade National Core Arts Standards

VA: Cr1.1.5a	Combine ideas to generate an innovative idea for art-making.	Let it Be (Cities)
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VA: Cr1.2.5a	Identify and demonstrate diverse methods of artistic investigation to choose an approach for beginning a work of art.	Saving Some Green (Climate)
VA: Cr2.3.5a	Identify, describe, and visually document places and/or objects of personal significance.	Saving Some Green (Climate), Locally Grown (Earth)
VA: Re.7.1.5a	Compare one's own interpretation of a work of art with the interpretation of others.	Saving Some Green (Climate), Locally Grown (Earth)

6th GRADE

6th Grade Next Generation Science Standards Connections

MS-PS2-3	Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.	Potentially Perpetual (Cities)
MS-PS3-1	Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.	Potentially Perpetual (Cities)
MS-PS3-2	Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system.	Potentially Perpetual (Cities)
MS-PS3-3	Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.	The Answer is Blowing in the Wind (Energy), Windows to Efficiency (Energy)

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MS-PS3-5	Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.	Potentially Perpetual (Cities)
MS-ESS3-3	Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.	The Answer is Blowing in the Wind (Energy), In the Zone (Climate)
MS-ETS1-1	Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.	The Answer is Blowing in the Wind (Energy), In the 'Zone (Climate)
MS-ETS1-2	Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.	The Answer is Blowing in the Wind (Energy), In the 'Zone (Climate), Windows to Efficiency (Energy)
MS-ETS1-3	Analyze data from tests to determine similarities and differences among 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.	Windows to Efficiency (Energy)
MS-ETS1-4	Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.	In the 'Zone (Climate)

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MS-LS2-4	Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.	In the 'Zone (Climate)
MS-LS2-5	Evaluate competing design solutions for maintaining biodiversity and ecosystem services.	Guaran-treed Oxygen (Earth)
MS-ESS3-3	Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.	In the 'Zone (Climate)
MS-ESS3-4	Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.	Guaran-treed Oxygen (Earth)

6th Grade National Council for the Social Studies Curriculum Standards

NCSS: III,h	Examine the interaction of human beings and their physical environment, the use of land, building of cities, and ecosystem changes in selected locales and regions.	In the 'Zone (Climate), Guaran-treed Oxygen (Earth)
NCSS: VIII,a	Identify and describe examples in which science and technology have changed the lives of people, such as in homemaking, childcare, work, transportation, and communication.	Potentially Perpetual (Cities), Windows to Efficiency (Energy)
NCSS: VIII,b	identify and describe examples in which science and technology have led to changes in the physical environment, such as the building of dams and levees, offshore oil drilling, medicine from rain forests, and loss of rain forests due to extraction of resources or alternative uses.	Guaran-treed Oxygen (Earth)

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NCSS: IX,d	Explore causes, consequences, and possible solutions to persistent, contemporary, and emerging global issues, such as pollution and endangered species.	In the 'Zone (Climate)
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6th Grade National Core Arts Standards

VA: Cr1.1.6a	Combine concepts collaboratively to generate innovative ideas for creating art.	Potentially Perpetual (Cities), Guarant-treed Oxygen (Earth)
VA: Cr1.2.6a	Formulate an artistic investigation of personally relevant content for creating art.	In the 'Zone (Climate), Guarant-treed Oxygen (Earth)
VA: Cr2.1.6a	Demonstrate openness in trying new ideas, materials, methods, and approaches in making works of art and design.	The Answer is Blowing in the Wind (Energy), Potentially Perpetual (Cities), Windows to Efficiency (Energy)
VA: Cr2.3.6a	Design or redesign objects, places, or systems that meet the identified needs of diverse users.	The Answer is Blowing in the Wind (Energy), Potentially Perpetual (Cities)
VA: Pr5.1.6a	Individually or collaboratively, develop a visual plan for displaying works of art, analyzing exhibit space, the needs of the viewer, and the layout of the exhibit.	Potentially Perpetual (Cities), In the 'Zone (Climate)
VA: Re.7.2.6a	Analyze ways that visual components and cultural associations suggested by images influence ideas, emotions, and actions.	Guarant-treed Oxygen (Earth)

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VA: Cn10.1.6a	Generate a collection of ideas reflecting current interests and concerns that could be investigated in artmaking.	In the 'Zone (Climate)
VA: Cn11.1.6a	Analyze how art reflects changing times, traditions, resources, and cultural uses.	Guarant-treed Oxygen (Earth)

7th GRADE

7th Grade Next Generation Science Standards Connections

MS-PS1-3	Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.	Be the Change (Earth)
MS-LS2-1	Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.	Be the Change (Earth)
MS-LS2-3	Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.	Rot On (Earth)
MS-LS2-5	Evaluate competing design solutions for maintaining biodiversity and ecosystem services.	Rot On (Earth)
MS-ESS2-1	Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.	Rot On (Earth)

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MS-ESS3-2	Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.	Sustainably Sound (Climate)
MS-ESS3-3	Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.	Be the Change (Earth), Get Your Deposit Back (Cities), Rot On! (Earth), Energizing Your Lawn (Energy)
MS-ESS3-4	Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.	Be the Change (Earth), Get Your Deposit Back (Cities), Energizing Your Lawn (Energy)
MS-ETS1-1	Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.	Be the Change (Earth), Get Your Deposit Back (Cities), Sustainably Sound (Climate), Energizing Your Lawn (Energy)
MS-ETS1-3	Analyze data from tests to determine similarities and differences among 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.	Sustainably Sound (Climate)

7th Grade Math Common Core State Standards Connections

7.RP.1	Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.	Energizing Your Lawn (Energy)
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7.G.1	Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.	Energizing Your Lawn (Energy)
7.G.4	Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.	Energizing Your Lawn (Energy)
7.G.6	Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	Get your Deposit Back (Cities), Energizing Your Lawn (Energy)

7th Grade National Council for the Social Studies Curriculum Standards

NCSS: III,h	Examine the interaction of human beings and their physical environment, the use of land, building of cities, and ecosystem changes in selected locales and regions.	Get Your Deposit Back (Cities), Rot On! (Earth), Energizing Your Lawn (Energy)
NCSS: IX,d	Explore causes, consequences, and possible solutions to persistent, contemporary, and emerging global issues, such as pollution and endangered species.	Sustainably Sound (Climate)

7th Grade National Core Arts Standards

VA: Cr2.1.7a	Demonstrate persistence in developing skills with various materials, methods, and approaches in creating works of art or design.	Be the Change (Earth)
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VA: Cr2.3.7a	Apply visual organizational strategies to design and produce a work of art, design, or media that clearly communicates information or ideas.	Get Your Deposit Back (Cities)
VA: Cr3.1.7a	Reflect on and explain important information about personal artwork in an artist statement or another format.	Be the Change (Earth), Sustainably Sound (Climate)
VA: Pr5.1.7a	Based on criteria, analyze and evaluate methods for preparing and presenting art.	Energizing you Lawn (Energy)
VA: Re.7.1.7a	Explain how the method of display, the location, and the experience of an artwork influence how it is perceived and valued.	Be the Change (Earth)
VA: Re.7.2.7a	Analyze multiple ways that images influence specific audiences.	Be the Change (Earth), Sustainably Sound (Climate)
VA: Cn11.1.7a	Analyze how response to art is influenced by understanding the time and place in which it was created, the available resources, and cultural uses.	Be the Change (Earth)

8th GRADE

8th Grade Next Generation Science Standards Connections

MS-LS1-4	Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.	Mussel-ey Invaders (Cities)
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MS-LS1-5	Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.	Mussel-ey Invaders (Cities), Back to the Future (Earth)
MS-LS2-1	Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.	Back to the Future (Earth)
MS-LS2-2	Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.	Mussel-ey Invaders (Cities), Back to the Future (Earth)
MS-LS2-3	Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.	Back to the Future (Earth)
MS-LS2-4	Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.	Mussel-ey Invaders (Cities), Back to the Future (Earth), Reef-Lief (Energy)
MS-LS2-5	Evaluate competing design solutions for maintaining biodiversity and ecosystem services.	Mussel-ey Invaders (Cities), Back to the Future (Earth), Reef-Lief (Energy)
MS-ESS2-4	Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.	Lunar Energy (Climate)
MS-ESS3-3	Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.	The Temps They are A'Changin (Climate)

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MS-ESS3-5	Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.	The Temps They are A'Changin (Climate)
MS-ETS1-1	Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.	The Temps They are A'Changin (Climate), Mussel-ey Invaders (Cities), Lunar Energy (Climate), Reef-Lief (Energy)
MS-ETS1-2	Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.	Mussel-ey Invaders (Cities), Reef-Lief (Energy)
MS-ETS1-3	Analyze data from tests to determine similarities and differences among 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.	The Temps They are A'Changin (Climate), Mussel-ey Invaders (Cities), Lunar Energy (Climate)

8th Grade National Council for the Social Studies Curriculum Standards

NCSS: II,f	Use knowledge of facts and concepts drawn from history, along with elements of historical inquiry, to inform decision-making about and action-taking on public issues.	Back to the Future (Earth)
NCSS: III,c	Use appropriate resources, data sources, and geographic tools such as atlases, data bases, grid systems, charts, graphs, and maps to generate, manipulate, and interpret information.	Mussel-ey Invaders (Cities)

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NCSS: III,h	Examine the interaction of human beings and their physical environment, the use of land, building of cities, and ecosystem changes in selected locales and regions.	Back to the Future (Earth)
NCSS: III,j	Observe and speculate about social and economic effects of environmental changes and crises resulting from phenomena such as floods, storms, and drought.	Mussel-ey Invaders (Cities)
NCSS: VI,g	Explore the role of technology in communications, transportation, information-processing, weapons development, or other areas as it contributes to or helps resolve conflicts.	Lunar Energy (Climate)
NCSS: IX,d	Explore causes, consequences, and possible solutions to persistent, contemporary, and emerging global issues, such as pollution and endangered species.	Mussel-ey Invaders (Cities)

8th Grade National Core Arts Standards

VA: Cr1.1.8a	Document early stages of the creative process visually and/or verbally in traditional or new media.	Lunar Energy (Climate), Back to the Future (Earth)
VA: Cr1.2.8a	Collaboratively shape an artistic investigation of an aspect of present-day life using a contemporary practice of art and design.	Mussel-ey Invaders (Cities)
VA: Cr2.1.8a	Demonstrate willingness to experiment, innovate, and take risks to pursue ideas, forms, and meanings that emerge in the process of artmaking or designing.	Lunar Energy (Climate), Back to the Future (Earth)
VA: Cr2.2.8a	Demonstrate awareness of practices, issues, and ethics of appropriation, fair use, copyright, open source, and creative commons as they apply to creating works of art and design.	Back to the Future (Earth)

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VA: Cr2.3.8a	Select, organize, and design images and words to make visually clear and compelling presentations.	Temps, They are A'Changin (Climate), Lunar Energy (Climate), Reef-lief (Energy)
VA: Pr4.1.8a	Develop and apply criteria for evaluating a collection of artwork for presentation.	Lunar Energy (Climate)
VA: Pr5.1.8a	Collaboratively prepare and present selected theme based artwork for display, and formulate exhibition narratives for the viewer.	Temps, They are A'Changin (Climate), Reef-lief (Energy)
VA: Pr6.1.8a	Analyze why and how an exhibition or collection may influence ideas, beliefs, and experiences.	Temps, They are A'Changin (Climate), Mussel-ey Invaders (Cities), Lunar Energy (Climate)
VA: Cn10.1.8a	Make art collaboratively to reflect on and reinforce positive aspects of group identity.	Mussel-ey Invaders (Cities), Lunar Energy (Climate)

HIGH SCHOOL (9-12)

HS Next Generation Science Standards Connections

HS-LS2-2	Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.	Growing Pains (Earth)
HS-LS2-5	Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.	Shedding the Traditional (Cities)
HS-LS2-6	Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and	Growing Pains (Earth)

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	types of organisms in stable conditions, but changing conditions may result in a new ecosystem.	
HS-LS2-7	Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.	Shedding the Traditional (Cities), Choosing to Consume (Climate)
HS-LS4-6	Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.	Growing Pains (Earth)
HS-ETS1-1	Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.	Choosing to Consume (Climate)
HS-ETS1-3	Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts.	Shedding the Traditional (Cities), Choosing to Consume (Climate)

HS Math Common Core State Standards Connections

G-CO-12	Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.).	Smaller is Savvier (Energy)
G-GMD-4	Identify the shapes of two-dimensional cross-sections of three dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.	Smaller is Savvier (Energy)
G-MG-3	Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).	Smaller is Savvier (Energy)

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HS National Council for the Social Studies Curriculum Standards

NCSS: II,b	Demonstrate an ability to use correctly vocabulary associated with time such as past, present, future, and long ago; read and construct simple timelines; identify examples of change; and recognize examples of cause and effect relationships.	Growing Pains (Earth)
NCSS: III,c	Use appropriate resources, data sources, and geographic tools such as atlases, data bases, grid systems, charts, graphs, and maps to generate, manipulate, and interpret information.	Growing Pains (Earth)
NCSS: X,c	Locate, access, organize, and apply information about an issue of public concern from multiple points of view.	Growing Pains (Earth)
NCSS: I,a	Explore and describe similarities and differences in the ways groups, societies, and cultures address similar human needs and concerns.	Smaller is Savvier (Energy)
NCSS: I,d	Compare ways in which people from different cultures think about and deal with their physical environment and social conditions.	Shedding the Traditional (Cities)
NCSS: NCSS: VII,e	Suggest ways to monitor science and technology in order to protect the physical environmental, individual rights, and the common good.	Shedding the Traditional (Cities)
NCSS: VIII,d	Identify examples of laws and policies that govern scientific and technological applications, such as the Endangered Species Act and environmental protection policies.	Shedding the Traditional (Cities)
NCSS: VII,e	Suggest ways to monitor science and technology in order to protect the physical environmental, individual rights, and the common good.	Choosing to Consume (Climate)
NCSS: VIII,d	Identify examples of laws and policies that govern scientific and technological applications, such as the Endangered Species Act and environmental protection policies.	Choosing to Consume (Climate)

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HS Proficient National Core Arts Standards

VA: Cr1.2.1a	Shape an artistic investigation of an aspect of present-day life using a contemporary practice of art or design.	Smaller is Savvier (Energy)
VA: Pr6.1.1a	Analyze and describe the impact that an exhibition or collection has on personal awareness of social, cultural, or political beliefs and understandings.	Choosing to Consume (Climate)
VA: Re.7.1.1a	Hypothesize ways in which art influences perception and understanding of human experiences.	Choosing to Consume (Climate), Shedding the Traditional (Cities)
VA: Re8.1.1a	Interpret an artwork or collection of works, supported by relevant and sufficient evidence found in the work and its various contexts.	Choosing to Consume (Climate)
VA: Cn10.1.1a	Document the process of developing ideas from early stages to fully elaborated ideas.	Choosing to Consume (Climate)

HS Accomplished National Core Arts Standards

VA: Cr1.2.11a	Choose from a range of materials and methods of traditional and contemporary artistic practices to plan works of art and design.	Shedding the Traditional (Cities), Choosing to Consume (Climate)
VA: Cr2.1.11a	Through experimentation, practice, and persistence, demonstrate acquisition of skills and knowledge in a chosen art form.	Smaller is Savvier (Energy)

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VA: Cr2.3.IIa	Redesign an object, system, place, or design in response to contemporary issue.	Growing Pains (Earth), Smaller is Savvier (Energy), Shedding the Traditional (Cities)
VA: Pr5.1.IIa	Evaluate, select, and apply methods or processes appropriate to display artwork in a specific place.	Growing Pains (Earth)
VA: Re.7.2.IIa	Evaluate the effectiveness of an image or images to influence ideas, feelings, and behaviors of specific audiences.	Shedding the Traditional (Cities)
VA: Cn10.1.IIa	Utilize inquiry methods of observation, research, and experimentation to explore unfamiliar subjects through artmaking.	Growing Pains (Earth), Shedding the Traditional (Cities)

HS Advanced Grade National Core Arts Standards

VA: Cr1.1.IIIa	Visualize and hypothesize to generate plans for ideas and directions for creating art and design that can affect social change.	Growing Pains (Earth), Shedding the Traditional (Cities), Choosing to Consume (Climate)
VA: Cr3.1.IIIa	Reflect on, reengage, revise, and refine works of art or design considering relevant traditional and contemporary criteria as well as personal artistic vision.	Choosing to Consume (Climate)
VA: Pr6.1.IIIa	Curate a collection of objects, artifacts, or artwork to impact the viewer's understanding of social, cultural, and/or political experiences.	Shedding the Traditional (Cities)