Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Animal Habitats	BuildIt		Follow drawings, printed instructions, and mock-up models to build a product	Technology	The Designed World
Animal Habitats	BuildIt		Use tools, materials, and equipment properly and safely	Technology	The Designed World
Animal Habitats	Can'tWe All Just Get Along?		Describe how animal interactions affect the ability of organisms to acquire their life requirements	Science	Life Science
Animal Habitats	Can'tWe All Just Get Along?		Describe how animal interactions affect the ability of organisms to acquire their life requirements	Science	Life Science
Animal Habitats	Chances Are		Identify Fabonacci Sequence	Math	8.SP Statistics and Probability
Animal Habitats	Designing a Refuge		Use scaling techniques	Math	7.RP Ratios and Proportional Relationships
Animal Habitats	Designing a Refuge		Gather information from a database	Science	Science and Technology
Animal Habitats	Designing a Refuge		Combine various strategies to design a product	Science	Science and Technology
Animal Habitats	Designing a Refuge		Use scaling techniques	Science	Science and Technology
Animal Habitats	Designing a Refuge		Gather information from a database	Science	Science in Personal and Social Perspectives
Animal Habitats	Designing a Refuge		Combine various strategies to design a product	Science	Science in Personal and Social Perspectives
Animal Habitats	Designing a Refuge		Build a presentation model	Science	Science in Personal and Social Perspectives
Animal Habitats	Designing a Refuge		Gather information from a database	Technology	Design
Animal Habitats	Designing a Refuge		Combine various strategies to design a product	Technology	Design
Animal Habitats	Designing a Refuge		Build a presentation model	Technology	Design
Animal Habitats	Designing a Refuge		Use scaling techniques	Technology	Design
Animal Habitats	Designing a Refuge		Gather information from a database	Technology	Design
Animal Habitats	Designing a Refuge		Combine various strategies to design a product	Technology	Design
Animal Habitats	Designing a Refuge		Build a presentation model	Technology	Design
Animal Habitats	Designing a Refuge		Use scaling techniques	Technology	Design
Animal Habitats	Designing a Refuge		Gather information from a database	Technology	The Designed World
Animal Habitats	Documentations and Proposal		Document their design work through the use of various drawings	Technology	Design
Animal Habitats	Documentations and Proposal		Read drawings to create a bill of material	Technology	Design

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Animal Habitats	Documentations and Proposal		Organize and present information using a variety of methods to persuade an audience	Technology	Design
Animal Habitats	Documentations and Proposal		Document their design work through the use of various drawings	Technology	Design
Animal Habitats	Documentations and Proposal		Read drawings to create a bill of material	Technology	Design
Animal Habitats	Documentations and Proposal		Organize and present information using a variety of methods to persuade an audience	Technology	Design
Animal Habitats	Documentations andProposal		Organize and present information using a variety of methods to persuade an audience	Technology	The Designed World
Animal Habitats	Eggciting Investigations		Predict when, how, and why osmosis will occur in a given ecosystem under certain conditions	Science	Life Science
Animal Habitats	Eggciting Investigations		Predict when, how, and why osmosis will occur in a given ecosystem under certain conditions	Science	Life Science
Animal Habitats	Give Me Space		Determine the potential carrying capacity of a habitat using the relationship of area of the base of a rectangular prism to volume	Math	7.G Geometry
Animal Habitats	Give Me Space		Graph functions on a graphing calculator	Math	8.F Functions
Animal Habitats	Give Me Space		Plot data points and determine lines of best fit	Math	8.F Functions
Animal Habitats	Hello, We're Here		Make a plan for monitoring the impact the device will have on a given animal species	Technology	Technology and Society
Animal Habitats	Hello, We're Here		Develop a procedure for installing a device in a natural habitat	Technology	Design
Animal Habitats	Hello, We're Here		Make a plan for monitoring the impact the device will have on a given animal species	Technology	Design
Animal Habitats	Keeping Track of Animals		Use various technologies to gather information	Science	Science as Inquiry
Animal Habitats	Keeping Track of Animals		Organize information into a database format	Science	Science as Inquiry
Animal Habitats	Keeping Track of Animals		Sort a database to display desired information	Science	Science as Inquiry
Animal Habitats	Keeping Track of Animals		Use various technologies to gather information	Science	Science in Personal and Social Perspectives

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Animal Habitats	Keeping Track of Animals		Organize information into a database format	Science	Science in Personal and Social Perspectives
Animal Habitats	Keeping Track of Animals		Sort a database to display desired information	Science	Science in Personal and Social Perspectives
Animal Habitats	Keeping Track of Animals		Use various technologies to gather information	Technology	The Designed World
Animal Habitats	Keeping Track of Animals		Organize information into a database format	Technology	The Designed World
Animal Habitats	Keeping Track of Animals		Sort a database to display desired information	Technology	The Designed World
Animal Habitats	Patterns in Data I	Exponential Patterns	Produce and interpret functions that demonstrate exponential changes	Math	8.F Functions
Animal Habitats	Patterns in Data I	Exponential Patterns	Develop actuarial tables for an animal based on life expectancies	Math	8.F Functions
Animal Habitats	Patterns in Data II	Compiling Data About a Controlled Experiment	Analyze the results of an experiment using DAPIC	Math	7.SP Statistics and Probability
Animal Habitats	Patterns in Data II	Compiling Data About a Controlled Experiment	Analyze the results of an experiment using DAPIC	Math	7.SP Statistics and Probability
Animal Habitats	Patterns in Data II	Compiling Data About a Controlled Experiment	Analyze the results of an experiment using DAPIC	Science	Science as Inquiry
Animal Habitats	Patterns in Data III		Determine the ratio and percentage of dominant and recessive traits	Math	7.RP Ratios and Proportional Relationships
Animal Habitats	Patterns in Data III		Determine the ratio and percentage of dominant and recessive traits	Math	7.SP Statistics and Probability
Animal Habitats	Patterns in Data III		Determine the ratio and percentage of dominant and recessive traits	Math	7.SP Statistics and Probability
Animal Habitats	Patterns in Data III		Determine the ratio and percentage of dominant and recessive traits	Science	Life Science
Animal Habitats	Physical and Behavioral Traits		Identify behaviors and indicate how they allow survival in the organism's habitat	Science	Life Science
Animal Habitats	Physical and Behavioral Traits		Identify physical adaptations and indicate how they allow survival in the organism's habitat	Science	Life Science
Animal Habitats	Population Growth		Determine the optimum conditions for growth of a given organism through experimentation	Science	Life Science
Animal Habitats	Population Growth		Determine the optimum conditions for growth of a given organism through experimentation	Science	Life Science

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Animal Habitats	Share the Air		Design, adjust, or describe a closed ecosystem that will allow a carbon dioxide/oxygen cycle to exist	Science	Life Science
Animal Habitats	Size of Population		Set up a ratio and rename as a percent	Math	7.RP Ratios and Proportional Relationships
Animal Habitats	Size of Population		Use sampling techniques to determine carrying capacity of a habitat	Math	7.SP Statistics and Probability
Animal Habitats	Size of Population		Use sampling techniques to determine carrying capacity of a habitat	Math	7.SP Statistics and Probability
Animal Habitats	Size of Population		Use sampling techniques to determine carrying capacity of a habitat	Science	Life Science
Animal Habitats	Survival		Analyze a given situation using the requirements that are necessary to sustain life	Science	Life Science
Animal Habitats	Survival		Analyze a given situation using the requirements that are necessary to sustain life	Science	Life Science
Animal Habitats	Survival		Analyze a given situation using the requirements that are necessary to sustain life	Science	Science in Personal and Social Perspectives
Animal Habitats	Wildlife Management		Gather data and design a product to solve a problem	Technology	Design
Animal Habitats	Wildlife Management		Gather data and design a product to solve a problem	Technology	Design
Animal Habitats	Wildlife Management		Assess the application of technological knowledge and abilities on the environment	Science	Science in Personal and Social Perspectives
Animal Habitats	Wildlife Management		Assess the application of technological knowledge and abilities on the environment	Technology	Technology and Society
Animal Habitats	Wildlife Management		Assess the application of technological knowledge and abilities on the environment	Technology	Design
Animal Habitats	Wildlife Management		Gather data and design a product to solve a problem	Science	Science and Technology
Animal Habitats	Wildlife Management		Assess the application of technological knowledge and abilities on the environment	Science	Science and Technology
Communication Pathways	Codes I		Encode and decode messages based on data	Math	8.F Functions

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Communication Pathways	Codes II		Use a tracking method for large amounts of data	Math	8.F Functions
Communication Pathways	Codes III		Recognize errors in compressed data	Math	8.F Functions
Communication Pathways	Color My World		Describe from sender to receiver how light and color is transmitted	Science	Physical Science
Communication Pathways	Current Communications		Differentiate between series and parallel circuits and how they work	Science	Physical Science
Communication Pathways	Current Communications		Design and build an electrical communication device	Science	Science and Technology
Communication Pathways	Current Communications		Differentiate between series and parallel circuits and how they work	Technology	The Designed World
Communication Pathways	Current Communications		Differentiate between series and parallel circuits and how they work	Technology	The Designed World
Communication Pathways	Current Communications		Design and build an electrical communication device	Technology	The Designed World
Communication Pathways	Good Vibrations		Describe how magnetism, electronic current, and vibrations function to produce sound waves	Science	Physical Science
Communication Pathways	Good Vibrations		Describe how magnetism, electronic current, and vibrations function to produce sound waves	Technology	The Designed World
Communication Pathways	Good Vibrations		Describe how magnetism, electronic current, and vibrations function to produce sound waves	Technology	The Designed World
Communication Pathways	I Can See Clearly Now		Predict how the movement of light changes due to reflection	Science	Physical Science
Communication Pathways	I Can See Clearly Now		Describe how refraction affects our visual perception of objects	Science	Physical Science
Communication Pathways	Lasers		Compare laser light to ordinary light	Science	Physical Science
Communication Pathways	Lasers		Describe the various applications of lasers, particularly in communication	Science	Science and Technology
Communication Pathways	Lasers		Compare laser light to ordinary light	Technology	The Designed World
Communication Pathways	Lasers		Describe the various applications of lasers, particularly in communication	Technology	The Designed World
Communication Pathways	Lasers		Encode and decode a message using an analog device	Technology	The Designed World
Communication Pathways	Light Waves		Determine the equation that models the cyclic data produced by lights	Math	8.F Functions
Communication Pathways	Light Waves		Determine the amplitude, frequency, and period for data	Math	8.F Functions

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Communication Pathways	Making Waves		Use the properties of waves to predict the outcome when changing variables in a wave experiment	Science	Physical Science
Communication Pathways	Matrices I		Construct matrices to organize data	Math	8.EE Expressions and Equations
Communication Pathways	Matrices I		Determine the sum of two matrices	Math	8.EE Expressions and Equations
Communication Pathways	Matrices II		Calculate the product of matrices	Math	8.EE Expressions and Equations
Communication Pathways	Matrices II		Interpret matrices	Math	8.EE Expressions and Equations
Communication Pathways	Nothing But the Fax		Encode, send, and decode messages	Technology	The Designed World
Communication Pathways	Nothing But the Fax		Illustrate the operation of a fax machine as a communication device	Technology	The Designed World
Communication Pathways	Pathway toCircuits		Identify pathways as connected graphs	Math	7.G Geometry
Communication Pathways	Pathway toCircuits		Identify the components of a Eulerian circuit and a Hamiltonian circuit	Math	7.G Geometry
Communication Pathways	Pathway toCircuits		Determine strategies for finding efficient Eulerian and Hamiltonian circuits	Math	7.G Geometry
Communication Pathways	Please Tell Me Where We Are		Illustrate and describe the process for electronic navigations systems	Technology	The Designed World
Communication Pathways	Please Tell Me Where We Are		Compare LORAN and GPS navigation systems	Technology	The Designed World
Communication Pathways	Please Tell Me Where We Are		Illustrate and describe the process for electronic navigations systems	Technology	The Designed World
Communication Pathways	Please Tell Me Where We Are		Compare LORAN and GPS navigation systems	Technology	The Designed World
Communication Pathways	Putting Light to Work		Describe the basic operation of optoelectronics and some of its applications	Science	Science and Technology
Communication Pathways	Putting Light to Work		Identify selected electronic components and describe their function	Technology	The Designed World
Communication Pathways	Putting Light to Work		Describe the basic operation of optoelectronics and some of its applications	Technology	The Designed World
Communication Pathways	Putting Light to Work		Encode and decode a message using a digital (on/off) device	Technology	The Designed World
Communication Pathways	Sound	Hear and There	Design and build a musical instrument that produces multiple wavelengths of pitches	Science	Science and Technology
Communication Pathways	Sound	Hear and There	Distinguish among important properties of sound, including amplitude, frequency, and wavelength in various situations	Science	Physical Science
Communication Pathways	Sound Waves		Calculate the amplitude, wavelength, frequency, and period of a sound wave	Math	8.F Functions

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Communication Pathways	Sound Waves		Determine the relationships of the graph y=a sin bx to sound waves	Math	8.F Functions
Communication Pathways	Sound Waves		Analyze sound produced by a single tone	Science	Physical Science
Communication Pathways	The Same…or Different?		Compare the properties and operations of numbers systems using different base systems	Math	6.NS The Number System
Communication Pathways	The Same…or Different?		Compare the properties and operations of numbers systems using different base systems	Math	7.NS The Number System
Communication Pathways	The Same…or Different?		Compare the properties and operations of numbers systems using different base systems	Math	8.EE Expressions and Equations
Forecasting	BalancingAct		Observe, collect, and record data in numerical and graphical forms	Science	Science as Inquiry
Forecasting	BalancingAct		Use the principle of center of mass to balance an object	Science	Physical Science
Forecasting	Balancingwith the Property of Opposites and the Property of Reciprocals		Solve equations using the property of opposites and the property of reciprocals	Math	7.EE Expressions and Equations
Forecasting	Collecting Like Terms		Collect like terms in an equation	Math	7.EE Expressions and Equations
Forecasting	Data Can Fly		Test the accuracy of general rules developed through research	Science	Science as Inquiry
Forecasting	Describing the Movement of a Pendulum		Observe, collect, and record data in numerical and graphical forms	Science	Science as Inquiry
Forecasting	Describing the Movement of a Pendulum		Determine the effect of changing one variable in the pendulum system	Science	Science as Inquiry
Forecasting	Describing the Movement of a Pendulum	How Cold is Cold?	Determine the effect of changing one variable in the pendulum system	Science	Physical Science
Forecasting	Get a Lift From Data		Design and conduct experiments to determine aerodynamic characteristics such as lift and drag of various shapes	Science	Physical Science
Forecasting	Get a Lift From Data	How Cold is Cold?	Design and conduct experiments to determine aerodynamic characteristics such as lift and drag of various shapes	Technology	Nature of Technology
Forecasting	Get a LiftFrom Data		Determine the airflow around objects of various shapes	Technology	The Designed World
Forecasting	How Hot is Hot		Use the equation to determine the Fahrenheit or Celsius temperature when the other is known	Math	7.RP Ratios and Proportional Relationships

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Forecasting	How Hot is Hot		Determine the mathematical equation from plotted data	Science	Science as Inquiry
Forecasting	How Hot is Hot		Use the equation to determine the Fahrenheit or Celsius temperature when the other is known	Science	Science as Inquiry
Forecasting	How Hotis Hot		Determine the mathematical equation from plotted data	Math	6.EE Expressions and Equations
Forecasting	How Hotis Hot		Determine the mathematical equation from plotted data	Math	7.EE Expressions and Equations
Forecasting	How Hotis Hot	How Cold is Cold?		Math	6.EE Expressions and Equations
Forecasting	I Have…Who Has?		Translate an English expression into an algebraic expression using a variable	Math	7.EE Expressions and Equations
Forecasting	Larger Data		Use a ratio to enlarge a product	Math	7.RP Ratios and Proportional Relationships
Forecasting	Larger Data		Use a ratio to enlarge a product	Science	Science and Technology
Forecasting	Larger Data		Use a ratio to enlarge a product	Technology	Design
Forecasting	Larger Data		Use a ratio to enlarge a product	Technology	Design
Forecasting	Larger Data	How Cold is Cold?	Construct a product using specifications	Technology	Design
Forecasting	Larger Data		Construct a product using specifications	Technology	Design
Forecasting	Larger Data		Control the flight of an airplane by adjusting moveable control surfaces	Technology	The Designed World
Forecasting	Organizing the Data		Use various methods for organizing data	Math	6.EE Expressions and Equations
Forecasting	Organizing the Data		Select the best method for communicating quantitative and qualitative information	Math	7.SP Statistics and Probability
Forecasting	Organizing the Data		Select the best method for communicating quantitative and qualitative information	Math	7.SP Statistics and Probability
Forecasting	Organizing the Data		Use various methods for organizing data	Science	Science as Inquiry
Forecasting	Organizing the Data		Select the best method for communicating quantitative and qualitative information	Science	Science as Inquiry
Forecasting	Organizing the Data		Select the best method for communicating quantitative and qualitative information	Technology	Nature of Technology
Forecasting	Patterns in Coordinate Planes		Name points on the coordinate grid using ordered pairs	Math	6.EE Expressions and Equations
Forecasting	Patterns in Coordinate Planes		Name points on the coordinate grid using ordered pairs	Math	7.EE Expressions and Equations
Forecasting	Pressure and Volume		Observe, collect, and record data in numerical and graphical forms	Science	Science as Inquiry
Forecasting	Pressure and Volume	How Cold is Cold?	Predict the effect of changing the pressure or volume of a gas	Science	Physical Science

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Forecasting	Putting Data to Work	How Cold is Cold?	Identify relationships between physical characteristics data and performance data	Math	7.G Geometry
Forecasting	Putting Data to Work		Formulate general rules regarding relationships between physical characteristics data and performance data	Science	Science and Technology
Forecasting	Putting Data to Work		Design and build a product based on research	Science	Science and Technology
Forecasting	Putting Data to Work		Identify relationships between physical characteristics data and performance data	Technology	Design
Forecasting	Putting Data to Work		Formulate general rules regarding relationships between physical characteristics data and performance data	Technology	Design
Forecasting	Putting Data to Work		Design and build a product based on research	Technology	Design
Forecasting	Putting Data to Work		Design and build a product based on research	Technology	Design
Forecasting	Salt, Water, and Ice		Draw best-fit lines and use graphs to make predictions	Math	6.EE Expressions and Equations
Forecasting	Salt, Water, and Ice		Observe, collect, and record data in numerical and graphical forms	Science	Science as Inquiry
Forecasting	Salt, Water, and Ice		Draw best-fit lines and use graphs to make predictions	Science	Science as Inquiry
Forecasting	Salt, Water, and Ice		Predict the effects of variable on the temperature of a salt and water mixture	Science	Physical Science
Forecasting	Similarities and Differences in Graphs		Describe slope of a line on a coordinate graph	Math	6.EE Expressions and Equations
Forecasting	Similarities and Differences in Graphs		Describe slope of a line on a coordinate graph	Science	Science as Inquiry
Forecasting	Slope		Describe the relationship between the coordinates of any two points on a line and the slope (rate of change)	Math	7.EE Expressions and Equations
Forecasting	Stretching Exercises		Observe, collect, and record data in numerical and graphical forms	Science	Science as Inquiry
Forecasting	Stretching Exercises		Predict the effect of variables on the elasticity of a spring or rubber band	Science	Physical Science
Forecasting	The Art of Balancing		Solve equations using the balance method	Math	7.EE Expressions and Equations
Forecasting	We Need Data		Gather and record quantitative data	Science	Science as Inquiry
Forecasting	We Need Data		Gather and record qualitative data	Science	Science as Inquiry
Forecasting	We NeedData		Gather and record quantitative data	Technology	Nature of Technology
Forecasting	We NeedData		Gather and record qualitative data	Technology	Nature of Technology

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Forecasting	What's Your Speed		Determine rate formula	Math	6.NS The Number System
Forecasting	What's Your Speed		Draw a best-fit line for a set of plotted data points	Math	6.EE Expressions and Equations
Forecasting	What's Your Speed		Describe patterns using the best-fit line	Math	6.EE Expressions and Equations
Forecasting	What's Your Speed		Determine rate formula	Math	6.EE Expressions and Equations
Forecasting	What's Your Speed		Translate equations into graph form	Math	7.EE Expressions and Equations
Forecasting	What's Your Speed		Draw a best-fit line for a set of plotted data points	Math	7.EE Expressions and Equations
Forecasting	What's Your Speed		Describe patterns using the best-fit line	Math	7.EE Expressions and Equations
Human Settlements	Building a SustainableHuman Settlement		Create a sustainable human settlement that includes residential, commercial, and industrial zones	Technology	The Designed World
Human Settlements	Design a City		Design a sustainable city with the essential services and zones	Science	Science in Personal and Social Perspectives
Human Settlements	Design a City		Design a sustainable city with the essential services and zones	Technology	The Designed World
Human Settlements	Energy Detectives		Identify energy conversions and use them in order to solve problems	Science	Physical Science
Human Settlements	Energy Detectives		Identify energy conversions and use them in order to solve problems	Technology	The Designed World
Human Settlements	Essential City		(given parameters) Design systems that provide fresh water collection and distribution, waste water collection and treatment, storm water collections and disposal, energy production and distribution, and transportation	Technology	The Designed World
Human Settlements	Essential City		(given parameters) Design systems that provide fresh water collection and distribution, waste water collection and treatment, storm water collections and disposal, energy production and distribution, and transportation	Technology	The Designed World
Human Settlements	Essentials of a Settlement		Identify resources that promote sustainability in a given community	Technology	The Designed World
Human Settlements	Generating Electricity With an Eye on Sustainability		Analyze the advantages and disadvantages of various methods of electrical generation including environmental impacts	Science	Physical Science

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Human Settlements	Generating Electricity With an Eye on Sustainability		Analyze the advantages and disadvantages of various methods of electrical generation including environmental impacts	Science	Science in Personal and Social Perspectives
Human Settlements	Getting to Know H2O		Design experiments which will identify water by its unique properties	Science	Science as Inquiry
Human Settlements	H2O and ??? Measuring Using Parts Per Million (ppm)		Calculate parts per million	Math	8.F Functions
Human Settlements	H2O and ??? Measuring Using Parts Per Million (ppm)		Calculate area and volume of various shapes	Math	8.G Geometry
Human Settlements	H2O and ??? Measuring Using PartsPer Million (ppm)		Describe the relationships between one and one million	Math	6.NS The Number System
Human Settlements	H2O and ??? Measuring Using PartsPer Million (ppm)		Calculate area and volume of various shapes	Math	7.G Geometry
Human Settlements	Heating and Cooling		Use heating and cooling concepts to design a home to allow for more efficient use of energy resources	Science	Physical Science
Human Settlements	Heating and Cooling		Use heating and cooling concepts to design a home to allow for more efficient use of energy resources	Science	Science and Technology
Human Settlements	Heating and Cooling		Use heating and cooling concepts to design a home to allow for more efficient use of energy resources	Technology	The Designed World
Human Settlements	Heating and Cooling		Use heating and cooling concepts to design a home to allow for more efficient use of energy resources	Technology	The Designed World
Human Settlements	Human Structures		Design and build pneumatic structures and geodesic domes	Technology	The Designed World
Human Settlements	Investigating Potentialand Kinetic Energy		Identify the amounts of potential and kinetic energy of an object in a given situation	Science	Physical Science
Human Settlements	Investigating Potentialand Kinetic Energy		Identify the amounts of potential and kinetic energy of an object in a given situation	Technology	The Designed World

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Human Settlements	Shapes, Angles, and Structures		Identify the shapes and forms in architecture and determine characteristics of structural stability	Math	7.G Geometry
Human Settlements	Shapes, Angles, and Structures		Develop conjectures about relationships among angles	Math	7.G Geometry
Human Settlements	Shapes, Angles, and Structures		Develop conjectures about relationships among triangles and cause for structural stability	Math	7.G Geometry
Human Settlements	Shapes, Angles, and Structures		Identify the shapes and forms in architecture and determine characteristics of structural stability	Math	8.G Geometry
Human Settlements	Shapes, Angles, and Structures		Develop conjectures about relationships among angles	Math	8.G Geometry
Human Settlements	Tessellate a Structural Design		Calculate the measures and relationship of angles and polygons	Math	7.G Geometry
Human Settlements	Tessellate a Structural Design		Calculate the measures and relationship of angles and polygons	Math	8.G Geometry
Human Settlements	Tessellate a Structural Design		Describe the relationship of the number of sides of a polygon and the measures of the angles	Math	8.G Geometry
Human Settlements	Tessellate a Structural Design		Tessellate polygons and use properties of forms to construct a tessellations design	Math	8.G Geometry
Human Settlements	The Capacity of Water-Carrying Structures		Determine the relationship between lateral surface area and volume for a triangular prism, a square prism, and a cylinder	Math	7.G Geometry
Human Settlements	The Capacity of Water-Carrying Structures		Determine the benefits and drawbacks of carrying capacity of different water carrying structures	Math	8.NS The Number System
Human Settlements	The Capacity of Water-Carrying Structures		Determine the relationship between lateral surface area and volume for a triangular prism, a square prism, and a cylinder	Math	8.G Geometry
Human Settlements	The Capacity of Water-Carrying Structures		Determine the benefits and drawbacks of carrying capacity of different water carrying structures	Math	8.G Geometry
Human Settlements	What Goes Up Must Come Down		Describe how water moves in an ecosystem	Science	Physical Science
Human Settlements	What Goes Up Must Come Down		Describe how water moves in an ecosystem	Science	Life Science

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Human Settlements	Why Here?		Identify natural and human-made resources which influence global and national populations patterns	Science	Science in Personal and Social Perspectives
Human Settlements	Why Here?		Identify natural and human-made resources which influence global and national populations patterns	Science	Science in Personal and Social Perspectives
Living on the Edge	A Tour of Your Trash		Convert between fractions, decimals, and percents to solve problems	Math	6.RP Ratios and Proportional Relationships
Living on the Edge	A Tour of Your Trash		Convert between fractions, decimals, and percents to solve problems	Math	6.RP Ratios and Proportional Relationships
Living on the Edge	A Tour of Your Trash		Calculate area and volume of various shapes	Math	6.G Geometry
Living on the Edge	A Tour of Your Trash		Calculate area and volume of various shapes	Math	7.G Geometry
Living on the Edge	A Tour of Your Trash		Develop an understanding of large numbers by recognizing and appropriately using exponential scientific and calculator notation	Math	8.EE Expressions and Equations
Living on the Edge	A Tour of Your Trash		Model and solve conceptualized problems using various representations, such as graphs, tables and equations	Math	8.EE Expressions and Equations
Living on the Edge	Alternative Ways		Identify renewable energy resources	Science	Physical Science
Living on the Edge	Alternative Ways		Describe the characteristics of series and parallel circuits	Science	Physical Science
Living on the Edge	Alternative Ways		Illustrate how energy can be converted from one form to another	Science	Physical Science
Living on the Edge	Alternative Ways		Describe the type of direct energy conversion devices that can be made to minimize negative social, cultural, and environmental impacts in our world	Science	Physical Science
Living on the Edge	Alternative Ways		Describe the type of direct energy conversion devices that can be made to minimize negative social, cultural, and environmental impacts in our world	Science	Science and Technology
Living on the Edge	Alternative Ways		Describe the type of direct energy conversion devices that can be made to minimize negative social, cultural, and environmental impacts in our world	Science	Science in Personal and Social Perspectives

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Living on the Edge	Alternative Ways		Describe the type of direct energy conversion devices that can be made to minimize negative social, cultural, and environmental impacts in our world	Technology	Technology and Society
Living on the Edge	Alternative Ways		Describe the type of direct energy conversion devices that can be made to minimize negative social, cultural, and environmental impacts in our world	Technology	Technology and Society
Living on the Edge	Alternative Ways		Identify renewable energy resources	Technology	The Designed World
Living on the Edge	Alternative Ways		Describe the characteristics of series and parallel circuits	Technology	The Designed World
Living on the Edge	Alternative Ways		Illustrate how energy can be converted from one form to another	Technology	The Designed World
Living on the Edge	Alternative Ways		Describe the type of direct energy conversion devices that can be made to minimize negative social, cultural, and environmental impacts in our world	Technology	The Designed World
Living on the Edge	Alternative Ways		Describe the characteristics of series and parallel circuits	Technology	The Designed World
Living on the Edge	ATour of Your Trash		Use ratios and proportions to represent quantitative relationships	Math	7.RP Ratios and Proportional Relationships
Living on the Edge	Control Your Environment		Design, build, and use a human-made ecosystem	Science	Science and Technology
Living on the Edge	Control Your Environment		Design, build, and use a human-made ecosystem	Science	Science in Personal and Social Perspectives
Living on the Edge	Control Your Environment		Design, build, and use a human-made ecosystem	Technology	Design
Living on the Edge	Control Your Environment		Design, build, and use a human-made ecosystem	Technology	Design
Living on the Edge	Driving on Empty		Design a device utilizing appropriate technology	Science	Science and Technology
Living on the Edge	Driving on Empty		Define appropriate technology	Science	Science and Technology
Living on the Edge	Driving on Empty		Define appropriate technology	Science	Science in Personal and Social Perspectives
Living on the Edge	Driving on Empty		Define appropriate technology	Technology	Nature of Technology
Living on the Edge	Driving on Empty		Define appropriate technology	Technology	Technology and Society
Living on the Edge	Driving on Empty		Design a device utilizing appropriate technology	Technology	Design
Living on the Edge	Driving on Empty		Design a device utilizing appropriate technology	Technology	Design

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Living on the Edge	Driving on Empty		Design a device utilizing appropriate technology	Technology	Design
Living on the Edge	Fall Haul		Create appropriate graphical representations of data	Math	6.EE Expressions and Equations
Living on the Edge	Fall Haul		Develop real-life meaning for integers	Math	7.NS The Number System
Living on the Edge	Fall Haul		Model and solve conceptualized problems using various representations, such as graphs, tables and equations	Math	7.EE Expressions and Equations
Living on the Edge	Growing Up		Describe the process of seed germination	Science	Life Science
Living on the Edge	Growing Up		Select the best soil types for seeds to grow beyond the germination process	Science	Life Science
Living on the Edge	Growing Up		Select the best soil types for seeds to grow beyond the germination process	Science	Life Science
Living on the Edge	Made to Order		Understand and use appropriate terminology to describe theoretical and experimental outcomes	Math	7.SP Statistics and Probability
Living on the Edge	Made to Order		Understand and use appropriate terminology to describe theoretical and experimental outcomes	Math	7.SP Statistics and Probability
Living on the Edge	Made to Order		Understand and use appropriate terminology to describe theoretical and experimental outcomes	Science	Science as Inquiry
Living on the Edge	Millions and Millions of Species		Describe how different animal and plant species live together in an ecosystem	Science	Life Science
Living on the Edge	Millions and Millions of Species		Describe the factors that limit and promote population growth	Science	Life Science
Living on the Edge	Millions and Millionsof Species		Compare general characteristics of living organisms including classifications systems use to organize and sort them	Science	Life Science
Living on the Edge	Needing Each Other		Trace how all living creatures acquire energy form the sun	Science	Physical Science
Living on the Edge	Needing Each Other		Trace how all living creatures acquire energy from the sun	Science	Life Science
Living on the Edge	Needing Each Other		Trace how all living creatures acquire energy form the sun	Science	Life Science
Living on the Edge	Needing Each Other		Identify species that depend on oxygen and those that produce oxygen	Science	Life Science
Living on the Edge	Needing Each Other		Describe how balance between organisms and resources can be maintained in a given ecosystem	Science	Life Science

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Living on the Edge	Needing Each Other		Describe how balance between organisms and resources can be maintained in a given ecosystem	Technology	Design
Living on the Edge	Needing Each Other		Describe how balance between organisms and resources can be maintained in a given ecosystem	Technology	The Designed World
Living on the Edge	The Balancing Act		Construct a scaled map	Math	7.RP Ratios and Proportional Relationships
Living on the Edge	The Balancing Act		Develop an understanding of population density	Math	7.G Geometry
Living on the Edge	The Balancing Act		Formulate questions, design studies, and collect data about characteristics within one population	Math	7.SP Statistics and Probability
Living on the Edge	The Balancing Act		Use conjectures to formulate new questions and utilize reason skills to reach logical conclusions	Math	7.SP Statistics and Probability
Living on the Edge	The Balancing Act		Formulate questions, design studies, and collect data about characteristics within one population	Math	7.SP Statistics and Probability
Living on the Edge	The Balancing Act		Use conjectures to formulate new questions and utilize reason skills to reach logical conclusions	Math	7.SP Statistics and Probability
Living on the Edge	The Balancing Act		Formulate questions, design studies, and collect data about characteristics within one population	Science	Science as Inquiry
Living on the Edge	The Balancing Act		Use conjectures to formulate new questions and utilize reason skills to reach logical conclusions	Science	Science as Inquiry
Living on the Edge	The Balancing Act		Develop an understanding of population density	Science	Life Science
Living on the Edge	The Booming World…The DepletingResources		Describe the global distribution of natural resources	Science	Science in Personal and Social Perspectives
Living on the Edge	The Booming World…The DepletingResources		Identify various ways that technology and its uses affect humans	Science	Science in Personal and Social Perspectives
Living on the Edge	The Booming World…The DepletingResources		Describe the global distribution of natural resources	Technology	Nature of Technology
Living on the Edge	The Booming World…The DepletingResources		Identify various ways that technology and its uses affect humans	Technology	Technology and Society
Living on the Edge	The Booming World…The DepletingResources		Describe the global distribution of natural resources	Technology	The Designed World

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Living on the Edge	To Be or Not to Be (Organic)		Describe how populations can increase at rapid rates without disease, as is the case in agriculture	Science	Life Science
Living on the Edge	To Be or Not to Be (Organic)		Explain how disease affects plants at the cellular level	Science	Life Science
Living on the Edge	To Be or Not to Be (Organic)		Compare the effects of organic and manufactured products used in promoting plant growth	Science	Science and Technology
Living on the Edge	To Be or Not to Be (Organic)		Compare the effects of organic and manufactured products used in promoting plant growth	Science	Science in Personal and Social Perspectives
Living on the Edge	ToBe or Not to Be (Organic)		Describe how populations can increase at rapid rates without disease, as is the case in agriculture	Technology	Design
Living on the Edge	ToBe or Not to Be (Organic)		Compare the effects of organic and manufactured products used in promoting plant growth	Technology	The Designed World
Living on the Edge	ToBe or Not to Be (Organic)		Describe how populations can increase at rapid rates without disease, as is the case in agriculture	Technology	The Designed World
Living on the Edge	What Should We Do With All the Garbage?		Identify and trace a product's lifecycle from inception to disposal	Technology	Nature of Technology
Living on the Edge	What Should We do With All the Garbage?		Identify and trace a product's lifecycle from inception to disposal	Technology	Technology and Society
Living on the Edge	What Should We Do With All the Garbage?		Identify and trace a product's lifecycle from inception to disposal	Technology	The Designed World
Living on the Edge	What Should We Do With All the Garbage?		List several alternative routes for waste products to reenter as useful products	Technology	The Designed World
Living on the Edge	What's That Smell?		Describe the conditions that must be present for a plant to grow	Science	Life Science
Living on the Edge	What's That Smell?		Identify nutrients that promote plant growth that are typically found in soil	Science	Life Science
Living on the Edge	What's That Smell?		Describe the conditions that must be present for a plant to grow	Technology	The Designed World
Living on the Edge	What's That Smell?		Identify nutrients that promote plant growth that are typically found in soil	Technology	The Designed World
Manufacturing	Blue Stick Estimation		Estimate length in metric or standard measure	Math	7.RP Ratios and Proportional Relationships
Manufacturing	Blue Stick Estimation		Estimate length in metric or standard measure	Math	7.G Geometry

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Manufacturing	Blue Stick Estimation		Measure for precision using metric or standard measure	Math	7.G Geometry
Manufacturing	Blue Stick Estimation		Measure for precision using metric or standard measure	Science	Science as Inquiry
Manufacturing	Chemical Properties of Materials		Identify and control the variables that lead to corrosion	Science	Science as Inquiry
Manufacturing	Chemical Properties of Materials		Classify materials as acidic, basic, or neutral, based on observable characteristics	Science	Physical Science
Manufacturing	Chemical Properties of Materials		Determine if substances react based on visual evidence	Science	Physical Science
Manufacturing	Chemical Properties of Materials		Identify and control the variables that lead to corrosion	Science	Physical Science
Manufacturing	Chemical Properties of Materials		Identify and control the variables that lead to corrosion	Technology	Design
Manufacturing	Chemical Properties of Materials		Identify and control the variables that lead to corrosion	Technology	Design
Manufacturing	Choices for a Product		Choose the best material based on their thermal, electrical, magnetic, optical, mechanical, chemical and/or physical properties when given the needs of a project and a list of available materials	Science	Science and Technology
Manufacturing	Choices for a Product		Choose the best material based on their thermal, electrical, magnetic, optical, mechanical, chemical and/or physical properties when given the needs of a project and a list of available materials	Technology	Design
Manufacturing	Choices for a Product		Choose the best material based on their thermal, electrical, magnetic, optical, mechanical, chemical and/or physical properties when given the needs of a project and a list of available materials	Technology	Design
Manufacturing	Color Separation		Select, identify, or produce materials based on their composition, cost , and use	Science	Science and Technology
Manufacturing	Color Separation		Select, identify, or produce materials based on their composition, cost , and use	Technology	Design
Manufacturing	Color Separation		Select, identify, or produce materials based on their composition, cost , and use	Technology	Design
Manufacturing	Combining and Interchangeable Parts		Explain the need for interchangeable parts	Technology	The Designed World

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Manufacturing	Combining and Interchangeable Parts		Identify the differences among components, subassemblies, and finished products	Technology	The Designed World
Manufacturing	Conducting Market Research	A Survey	Prepare, administer, and evaluate a market survey for a selected product	Technology	Technology and Society
Manufacturing	DowelRod Strength verses Diameter and Weathering		Conduct investigations to test materials to determine their strength, flammability, porosity, resistance to scratches, and/or adhesive nature	Science	Physical Science
Manufacturing	DowelRod Strength verses Diameter and Weathering		Conduct investigations to test materials to determine their strength, flammability, porosity, resistance to scratches, and/or adhesive nature	Science	Science and Technology
Manufacturing	DowelRod Strength verses Diameter and Weathering		Conduct investigations to test materials to determine their strength, flammability, porosity, resistance to scratches, and/or adhesive nature	Technology	Design
Manufacturing	DowelRod Strength verses Diameter and Weathering		Conduct investigations to test materials to determine their strength, flammability, porosity, resistance to scratches, and/or adhesive nature	Technology	Design
Manufacturing	Impact Study on Protozoa		Identify some of the environmental effects on materials and/or the behavior of living things in the environment under normal or extreme conditions	Science	Science and Technology
Manufacturing	Impact Study on Protozoa		Identify some of the environmental effects on materials and/or the behavior of living things in the environment under normal or extreme conditions	Science	Science in Personal and Social Perspectives
Manufacturing	Impact Study on Protozoa		Identify some of the environmental effects on materials and/or the behavior of living things in the environment under normal or extreme conditions	Technology	Technology and Society
Manufacturing	Joining and Fastening		Conduct investigations to test materials to determine their strength, flammability, porosity, resistance to scratches, and/or adhesive nature	Science	Science as Inquiry

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Manufacturing	Joining and Fastening		Conduct investigations to test materials to determine their strength, flammability, porosity, resistance to scratches, and/or adhesive nature	Science	Physical Science
Manufacturing	Joining and Fastening		Conduct investigations to test materials to determine their strength, flammability, porosity, resistance to scratches, and/or adhesive nature	Science	Science and Technology
Manufacturing	Joining and Fastening		Conduct investigations to test materials to determine their strength, flammability, porosity, resistance to scratches, and/or adhesive nature	Technology	Design
Manufacturing	Joining and Fastening		Conduct investigations to test materials to determine their strength, flammability, porosity, resistance to scratches, and/or adhesive nature	Technology	Design
Manufacturing	Levelsof Acceptable Standards		Express, using percentage, the number of acceptable parts and unacceptable parts within the tolerance interval	Math	7.SP Statistics and Probability
Manufacturing	Levelsof Acceptable Standards		Express, using percentage, the number of acceptable parts and unacceptable parts within the tolerance interval	Math	7.SP Statistics and Probability
Manufacturing	Manufacturing Geoboards by Processing Materials		Design a process for making a small manufactured prototype using standard stock	Technology	The Designed World
Manufacturing	Manufacturing Systems		Participate in roles of Total Quality Management subsystems	Math	8.SP Statistics and Probability
Manufacturing	Manufacturing Systems		Participate in roles of Total Quality Management subsystems	Technology	The Designed World
Manufacturing	Materials and Processes		Design, build, and use jigs and fixtures to control a tool and/or work piece during manufacturing processing	Technology	Design
Manufacturing	Materials and Processes		Design, build, and use jigs and fixtures to control a tool and/or work piece during manufacturing processing	Technology	Design
Manufacturing	Materials and Processes		Design, build, and use jigs and fixtures to control a tool and/or work piece during manufacturing processing	Technology	The Designed World

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Manufacturing	Materials Impact Study		Determine appropriate methods of storage of materials and disposal of waste products	Science	Science in Personal and Social Perspectives
Manufacturing	Materials Impact Study		Identify some of the environmental effects on materials and/or the behavior of living things in the environment under normal or extreme conditions	Science	Science in Personal and Social Perspectives
Manufacturing	Materials Impact Study		Determine appropriate methods of storage of materials and disposal of waste products	Technology	Technology and Society
Manufacturing	Materials Impact Study		Identify some of the environmental effects on materials and/or the behavior of living things in the environment under normal or extreme conditions	Technology	Technology and Society
Manufacturing	Materials Impact Study		Determine appropriate methods of storage of materials and disposal of waste products	Technology	Technology and Society
Manufacturing	Materials of Manufacturing		Classify sample materials according to their observable characteristics	Science	Physical Science
Manufacturing	Materials of Manufacturing		Classify sample materials according to four categories used in manufacturing	Science	Physical Science
Manufacturing	Materials of Manufacturing		Classify sample materials according to four categories used in manufacturing	Technology	The Designed World
Manufacturing	Measuring For Geoboards		Multiply any combinations of while numbers, fractions, and mixed numbers	Math	6.NS The Number System
Manufacturing	Measuring For Geoboards		Multiply any combinations of while numbers, fractions, and mixed numbers	Math	7.NS The Number System
Manufacturing	Measuring With Fractions		Calculate equivalent forms of whole numbers, fractions, and mixed numbers	Math	6.NS The Number System
Manufacturing	Measuring With Fractions		Add and subtract any combination of whole numbers, fractions, and mixed numbers	Math	6.NS The Number System
Manufacturing	Measuring With Fractions		Calculate equivalent forms of whole numbers, fractions, and mixed numbers	Math	7.NS The Number System
Manufacturing	Measuring With Fractions		Add and subtract any combination of whole numbers, fractions, and mixed numbers	Math	7.NS The Number System
Manufacturing	Other Physical Properties		Classify sample materials according to their thermal, electrical, magnetic, optical, and mechanical properties	Science	Physical Science

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Manufacturing	Physical Properties of Materials		Determine the volume of a material by calculations and by water displacement	Math	6.G Geometry
Manufacturing	Physical Properties of Materials		Determine the volume of a material by calculations and by water displacement	Math	7.G Geometry
Manufacturing	Physical Properties of Materials		Determine the density of a material	Math	7.G Geometry
Manufacturing	Physical Properties of Materials		Determine the volume of a material by calculations and by water displacement	Math	8.G Geometry
Manufacturing	Physical Properties of Materials		Determine the density of a material	Math	8.G Geometry
Manufacturing	Physical Properties ofMaterials		Determine the volume of a material by calculations and by water displacement	Science	Science as Inquiry
Manufacturing	Physical Properties ofMaterials		Determine the density of a material	Science	Science as Inquiry
Manufacturing	Pilot Run		Analyze problems discovered in the pilot production run	Technology	Design
Manufacturing	Pilot Run		Organize and operate a pilot production run	Technology	The Designed World
Manufacturing	Pilot Run		Analyze problems discovered in the pilot production run	Technology	The Designed World
Manufacturing	Playing the Nails		Divide any combination of whole numbers, fractions, and mixed numbers	Math	6.NS The Number System
Manufacturing	Playing the Nails		Divide any combination of whole numbers, fractions, and mixed numbers	Math	7.NS The Number System
Manufacturing	Product Design and Development		Explain and use a design process	Science	Science and Technology
Manufacturing	Product Design and Development		Prepare and administer a market survey for the selected product	Technology	Technology and Society
Manufacturing	Product Design and Development		Explain and use a design process	Technology	Design
Manufacturing	Product Design and Development		Explain and use a design process	Technology	Design
Manufacturing	Product Design and Development		Design and build a mock-up and prototype of a product	Technology	Design
Manufacturing	Product Design and Development		Design and make packaging for the selected product	Technology	Design
Manufacturing	Product Design and Development		Design and build a mock-up and prototype of a product	Technology	Design
Manufacturing	Product Design and Development		Design and make packaging for the selected product	Technology	Design

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Manufacturing	Product Testing		Identify some of the environmental effects on materials and/or the behavior of living things in the environment under normal or extreme conditions	Science	Science and Technology
Manufacturing	Product Testing		Identify some of the environmental effects on materials and/or the behavior of living things in the environment under normal or extreme conditions	Science	Science in Personal and Social Perspectives
Manufacturing	Product Testing		Identify some of the environmental effects on materials and/or the behavior of living things in the environment under normal or extreme conditions	Technology	Technology and Society
Manufacturing	Production Run		Participate in a manufacturing production run and produce a set number of products	Technology	The Designed World
Manufacturing	Program Evaluation and Review Technique		Construct a PERT chart to improve production efficiency of the IMaST product	Math	7.EE Expressions and Equations
Manufacturing	Program Evaluation and Review Technique		Construct a PERT chart to improve production efficiency of the IMaST product	Technology	Nature of Technology
Manufacturing	Program Evaluation and Review Technique		Construct a PERT chart to improve production efficiency of the IMaST product	Technology	The Designed World
Manufacturing	Similarity		Determine the properties of parallelograms and triangles	Math	7.G Geometry
Manufacturing	Similarity		Determine the properties of parallelograms and triangles	Math	8.G Geometry
Manufacturing	Similarity		Use geometry to find the Pythagorean Theorem	Math	8.G Geometry
Manufacturing	Statistical Process Control		Calculate the break even point	Math	7.RP Ratios and Proportional Relationships
Manufacturing	Statistical Process Control		Determine a retail price for the IMaST product	Math	7.EE Expressions and Equations
Manufacturing	Statistical Process Control		Calculate the break even point	Math	7.SP Statistics and Probability
Manufacturing	Statistical Process Control		Calculate the break even point	Math	7.SP Statistics and Probability
Manufacturing	Statistical Process Control		Calculate the break even point	Technology	The Designed World
Manufacturing	Statistical Process Control		Determine a retail price for the IMaST product	Technology	The Designed World
Manufacturing	The Importance of Planning Ahead		Use Geoboards to find the area of triangles and parallelograms	Math	6.G Geometry
Manufacturing	The Importance of Planning Ahead		Develop rules about finding the area of triangles and parallelograms	Math	6.G Geometry

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Manufacturing	The Importance of Planning Ahead		Use Geoboards to find the area of triangles and parallelograms	Math	7.G Geometry
Manufacturing	The Importance of Planning Ahead		Develop rules about finding the area of triangles and parallelograms	Math	7.G Geometry
Manufacturing	The Nature of Polymers		Conduct investigations of the interactions of materials by collecting information and controlling variables to establish desired properties	Science	Science as Inquiry
Manufacturing	The Nature of Polymers		Conduct investigations of the interactions of materials by collecting information and controlling variables to establish desired properties	Science	Physical Science
Manufacturing	Wood Finish Testing		Conduct investigations to test materials to determine their strength, flammability, porosity, resistance to scratches, and/or adhesive nature	Science	Science and Technology
Manufacturing	Wood Finish Testing		Conduct investigations to test materials to determine their strength, flammability, porosity, resistance to scratches, and/or adhesive nature	Technology	Design
Manufacturing	Wood Finish Testing		Conduct investigations to test materials to determine their strength, flammability, porosity, resistance to scratches, and/or adhesive nature	Technology	Design
Manufacturing	WoodFinish Testing		Identify some of the environmental effects on materials and/or the behavior of living things in the environment under normal or extreme conditions	Science	Science and Technology
Manufacturing	WoodFinish Testing		Identify some of the environmental effects on materials and/or the behavior of living things in the environment under normal or extreme conditions	Science	Science in Personal and Social Perspectives
Manufacturing	WoodFinish Testing		Identify some of the environmental effects on materials and/or the behavior of living things in the environment under normal or extreme conditions	Technology	Technology and Society
Patterns Above Us	Atmospheric Layers		Use scientific notation	Math	6.NS The Number System
Patterns Above Us	Atmospheric Layers		Use scientific notation	Science	Science as Inquiry
Patterns Above Us	Atmospheric Layers		Describe and compare the layers in the atmosphere	Science	Earth and Space Science

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Patterns Above Us	Clean and Green		Select appropriate graphical representations	Math	6.EE Expressions and Equations
Patterns Above Us	Clean and Green		Evaluate the effectiveness of natural, technological, and regulatory means of restoring and protecting the atmosphere	Math	7.SP Statistics and Probability
Patterns Above Us	Clean and Green		Determine personal and/or social actions that would result in reduced formation of pollution	Math	7.SP Statistics and Probability
Patterns Above Us	Clean and Green		Determine personal and/or social actions that would result in reduced formation of pollution	Math	7.SP Statistics and Probability
Patterns Above Us	Clean and Green		Determine personal and/or social actions that would result in reduced formation of pollution	Math	8.SP Statistics and Probability
Patterns Above Us	Clean and Green		Formulate conclusions regarding the usefulness of plants to reduce pollutants in our air based on observations and research	Science	Science as Inquiry
Patterns Above Us	Clean and Green		Formulate conclusions regarding the usefulness of plants to reduce pollutants in our air based on observations and research	Science	Life Science
Patterns Above Us	Clean and Green		Evaluate the effectiveness of natural, technological, and regulatory means of restoring and protecting the atmosphere	Science	Life Science
Patterns Above Us	Clean and Green		Evaluate the effectiveness of natural, technological, and regulatory means of restoring and protecting the atmosphere	Science	Earth and Space Science
Patterns Above Us	Clean and Green		Determine personal and/or social actions that would result in reduced formation of pollution	Science	Science in Personal and Social Perspectives
Patterns Above Us	Clean and Green		Evaluate the effectiveness of natural, technological, and regulatory means of restoring and protecting the atmosphere	Technology	Technology and Society
Patterns Above Us	Clean and Green		Evaluate the effectiveness of natural, technological, and regulatory means of restoring and protecting the atmosphere	Technology	Technology and Society
Patterns Above Us	Clean and Green		Determine personal and/or social actions that would result in reduced formation of pollution	Technology	Technology and Society

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Patterns Above Us	Lost in the Ozone		Illustrate and explain the composition of air pollution	Science	Life Science
Patterns Above Us	Lost in the Ozone		Describe the sources and levels of pollutions in the atmosphere and the effects pollutions has on living things	Science	Life Science
Patterns Above Us	Lost in the Ozone		Illustrate and explain the composition of air pollution	Science	Earth and Space Science
Patterns Above Us	Lost in the Ozone		Describe the sources and levels of pollutions in the atmosphere and the effects pollutions has on living things	Science	Science in Personal and Social Perspectives
Patterns Above Us	Lost in the Ozone		Describe the sources and levels of pollutions in the atmosphere and the effects pollutions has on living things	Technology	Technology and Society
Patterns Above Us	Lost in the Ozone		Describe the sources and levels of pollutions in the atmosphere and the effects pollutions has on living things	Technology	The Designed World
Patterns Above Us	Lost in the Ozone		Describe the sources and levels of pollutions in the atmosphere and the effects pollutions has on living things	Technology	The Designed World
Patterns Above Us	On in a Million		Use fractions in measurement	Math	6.RP Ratios and Proportional Relationships
Patterns Above Us	On in a Million		Use fractions in measurement	Math	6.NS The Number System
Patterns Above Us	On in a Million		Use fractions in measurement	Math	7.G Geometry
Patterns Above Us	One in a Million		Compute with fractions	Math	6.NS The Number System
Patterns Above Us	One in a Million		Calculate parts per million (ppm)	Science	Science as Inquiry
Patterns Above Us	One in a Million		Devise and apply a rating scale to measure concentrations	Science	Science as Inquiry
Patterns Above Us	One in a Million		Calculate parts per million (ppm)	Science	Physical Science
Patterns Above Us	One in a Million		Devise and apply a rating scale to measure concentrations	Science	Physical Science
Patterns Above Us	The Air That I Breathe		Calculate the area of a circle	Math	6.G Geometry
Patterns Above Us	The Air That I Breathe		Determine what fraction of the atmosphere is oxygen	Science	Earth and Space Science
Patterns Above Us	The Air That I Breathe		Calculate the area of a circle	Math	8.NS The Number System
Patterns Above Us	The Air That I Breathe		Calculate the volume of a cylinder	Math	8.G Geometry
Patterns Above Us	The Air That I Breathe		Calculate the area of a circle	Math	8.G Geometry
Patterns Above Us	The Air That I Breathe		Determine what fraction of the atmosphere is oxygen	Science	Science as Inquiry
Patterns Above Us	The Air That I Breathe		Describe the oxidation process	Science	Physical Science

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Patterns Around Us	Go With the Flow		Display and interpret data using a line plot graph	Math	6.EE Expressions and Equations
Patterns Around Us	Go With the Flow		Calculate flow rate	Math	6.EE Expressions and Equations
Patterns Around Us	Go With the Flow		Describe relationships among units of liquid measure and convert from one unit to another	Math	6.G Geometry
Patterns Around Us	Go With the Flow		Display and interpret data using a line plot graph	Math	7.SP Statistics and Probability
Patterns Around Us	Go With the Flow		Display and interpret data using a line plot graph	Math	7.SP Statistics and Probability
Patterns Around Us	Go With the Flow		Display and interpret data using a line plot graph	Math	8.F Functions
Patterns Around Us	Now You See It, Now You Don't		Display data in a line graph	Math	6.EE Expressions and Equations
Patterns Around Us	Now You See It, Now You Don't		Display data in a line graph	Math	8.EE Expressions and Equations
Patterns Around Us	Now You See It, Now You Don't		Describe water as a solvent	Science	Physical Science
Patterns Around Us	Now You See It, Now You Don't		Explain how materials can be removed from water	Technology	Technology and Society
Patterns Around Us	Now You See It, Now You Don't		Explain how materials can be removed from water	Technology	The Designed World
Patterns Around Us	Testing, Testing, 1,2, Water?		Calculate the density of liquids	Math	6.EE Expressions and Equations
Patterns Around Us	Testing, Testing, 1,2, Water?		Gather and display data in a bar graph	Math	6.EE Expressions and Equations
Patterns Around Us	Testing, Testing, 1,2, Water?		Calculate the density of liquids	Math	7.EE Expressions and Equations
Patterns Around Us	Testing, Testing, 1,2, Water?		Identify physical and chemical properties of various water and sol samples	Science	Physical Science
Patterns Around Us	What Did You Do With All That Water?		Calculate the payback period for water-conserving devices	Math	6.EE Expressions and Equations
Patterns Around Us	What Did You Do With All That Water?		Collect and display quantitative data in a variety of forms including bar graphs, line graphs, line plots, and stem-and-leaf plots	Math	6.EE Expressions and Equations
Patterns Around Us	What Did You Do With All That Water?		Describe the advantages and disadvantages of different data displays	Math	6.EE Expressions and Equations
Patterns Around Us	What Did You Do With All That Water?		Identify the most appropriate display of a given set of data	Math	6.EE Expressions and Equations

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Patterns Around Us	What Did You Do With All That Water?		Describe various methods and devices for water conservation	Technology	Technology and Society
Patterns Around Us	What Did You Do With All That Water?		Describe various methods and devices for water conservation	Technology	The Designed World
Patterns Below Us	Feeling The Heat Under Pressure		Express ratios with fractions, decimals, and percents	Math	6.RP Ratios and Proportional Relationships
Patterns Below Us	Feeling the Heat Under Pressure		Express ratios with fractions, decimals, and percents	Math	7.RP Ratios and Proportional Relationships
Patterns Below Us	Feeling The Heat Under Pressure		Explain what the concentrations of a solution means	Science	Physical Science
Patterns Below Us	Feeling The Heat Under Pressure		Describe the rock cycle and forces involved	Science	Earth and Space Science
Patterns Below Us	Feeling The Heat Under Pressure		Determine how and why geological forces are constructive or destructive	Science	Earth and Space Science
Patterns Below Us	Feeling The Heat Under Pressure		Determine how and why geological forces are constructive or destructive	Technology	Nature of Technology
Patterns Below Us	Feeling The Heat Under Pressure		Determine how and why geological forces are constructive or destructive	Technology	The Designed World
Patterns Below Us	Stake Your Claim		Identify and add integers	Math	6.NS The Number System
Patterns Below Us	Stake Your Claim		Calculate the volume of a rectangular prism	Math	6.G Geometry
Patterns Below Us	Stake Your Claim		Identify and add integers	Math	7.NS The Number System
Patterns Below Us	Stake Your Claim		Calculate the volume of a rectangular prism	Math	7.G Geometry
Patterns Below Us	Stake Your Claim		Describe the location and natural state of several raw materials	Science	Earth and Space Science
Patterns Below Us	Stake Your Claim		Analyze environmental concerns related to the natural resource extraction methods	Technology	Technology and Society
Patterns Below Us	Stake Your Claim		Describe the location and natural state of several raw materials	Technology	The Designed World
Patterns Below Us	Time Changes Everything		Relate the magnitude of large numbers using concrete examples	Math	6.NS The Number System
Patterns Below Us	Time Changes Everything		Describe the effects that natural forces have on the earth's surface	Science	Earth and Space Science
Patterns Below Us	Time Changes Everything		Describe how changes in the Earth's layers occur over time	Science	Earth and Space Science
Patterns Below Us	What's Shakin'?		Solve problems involving scale factors, using ratios and proportions	Math	6.RP Ratios and Proportional Relationships
Patterns Below Us	What's Shakin'?		Determine the area of a circle	Math	6.G Geometry

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Patterns Below Us	What's Shakin'?		Solve problems involving scale factors, using ratios and proportions	Math	7.RP Ratios and Proportional Relationships
Patterns Below Us	What's Shakin'?		Determine the area of a circle	Math	8.NS The Number System
Patterns Below Us	What's Shakin'?		Determine the area of a circle	Math	8.G Geometry
Patterns Below Us	What's Shakin'?		Use scales to describe the strength of an earthquake	Science	Science as Inquiry
Patterns Below Us	What's Shakin'?		Use scales to describe the strength of an earthquake	Science	Physical Science
Patterns Below Us	What's Shakin'?		Use scales to describe the strength of an earthquake	Science	Earth and Space Science
Patterns Below Us	What's Shakin'?		Analyze the causes of plate movements and connect these ideas to changes on the Earth's surface	Science	Earth and Space Science
Patterns Below Us	What's Shakin'?		Analyze the causes of plate movements and connect these ideas to changes on the Earth's surface	Science	Earth and Space Science
Patterns Below Us	What's Shakin'?		Use scales to describe the strength of an earthquake	Science	Science and Technology
Patterns Below Us	What's Shakin'?		Use scales to describe the strength of an earthquake	Technology	The Designed World
Patterns Below Us	What's Shakin'?		Critique construction methods for appropriate use in earthquake-prone areas	Technology	The Designed World
Patterns in Weather	How Do We Know?		Calculate the area of a rectangle	Math	6.G Geometry
Patterns in Weather	How Do We Know?		Describe the effects that land and water have on air temperature	Science	Earth and Space Science
Patterns in Weather	How Do We Know?		Use satellite images to track patterns of change in the weather patterns	Technology	The Designed World
Patterns in Weather	What Can We Expect?		Observe, record, and interpret data from weather instruments to predict patterns in weather events	Science	Science as Inquiry
Patterns in Weather	What Can We Expect?		Explain how water condenses	Science	Physical Science
Patterns in Weather	What Can We Expect?		Describe the design and operation of various weather instruments and explain how they are calibrated	Science	Science and Technology
Patterns in Weather	What Can We Expect?		Describe the design and operation of various weather instruments and explain how they are calibrated	Technology	The Designed World
Patterns in Weather	Where Do We Go?		Change fractions to percents	Math	6.RP Ratios and Proportional Relationships

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Patterns in Weather	Where Do We Go?		Explain relative humidity	Science	Earth and Space Science
Patterns in Weather	Why Does It Change?		Estimate and measure angles between 0 and 180 degrees	Math	7.G Geometry
Patterns in Weather	Why Does It Change?		Describe the relationship between revolutions and rotations of the earth and show how it determines the time of day and the seasons	Science	Earth and Space Science
Patterns in Weather	Why Does It Change?		Explain the importance of the angle of the sun's rays in architectural design	Technology	The Designed World
Patterns in Weather	How Do We Know?		Use satellite images to track patterns of change in the weather patterns	Science	Science as Inquiry
Patterns of Mobility	Don't Fence Me In		Identify and use greatest common factor to solve problems	Math	6.NS The Number System
Patterns of Mobility	How to Sort		Develop a classification system for a given group of items	Science	Physical Science
Patterns of Mobility	How to Sort		Use standard classification systems in mathematics, science, and technology	Science	Physical Science
Patterns of Mobility	How to Sort		Use standard classification systems in mathematics, science, and technology	Technology	Nature of Technology
Patterns of Mobility	Movin' On		Communicate size and distance relationships with scale drawings	Math	6.RP Ratios and Proportional Relationships
Patterns of Mobility	Time Travel		Identify and use least common multiple to solve problems	Math	6.NS The Number System
Patterns of Mobility	Time Travel		Design things that use mechanical and human motions	Science	Science and Technology
Patterns of Mobility	Time Travel		Describe the development of transportation technologies	Technology	Nature of Technology
Patterns of Mobility	Time Travel		Describe the development of transportation technologies	Technology	The Designed World
Patterns of Mobility	Walk This Way		Describe what a ratio means in a given context	Math	6.RP Ratios and Proportional Relationships
Patterns of Mobility	Walk This Way		Identify equivalent ratios	Math	7.RP Ratios and Proportional Relationships
Patterns of Mobility	Walk This Way		Identify prime and composite numbers	Math	7.NS The Number System
Patterns of Mobility	Walk this way		Design things that use mechanical and human motions	Technology	Design
Patterns of Mobility	Don't Fence Me In		Describe and compare structure and function of living organisms to their space needs	Science	Life Science

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Patterns of Mobility	Movin' On		Compare and contrast migratory and mobility patterns to an animal's structure and function	Science	Life Science
Patterns of Mobility	Time Travel		Design things that use mechanical and human motions	Science	Life Science
Patterns of Mobility	Walk this way		Describe human mobility	Science	Life Science
Patterns Within Us	Copycat		Describe how hereditary information is transferred in the reproduction of a species	Science	Life Science
Patterns Within Us	Copycat		Explain genetic engineering	Science	Science and Technology
Patterns Within Us	Copycat		Discuss appropriate applications of genetic engineering	Science	Science in Personal and Social Perspectives
Patterns Within Us	Copycat		Discuss appropriate applications of genetic engineering	Technology	Technology and Society
Patterns Within Us	Copycat		Explain genetic engineering	Technology	The Designed World
Patterns Within Us	I've Got to be Me		Predict the chances of specific traits occurring in offspring when the parents' traits are known	Math	7.SP Statistics and Probability
Patterns Within Us	I've Got to be Me		Predict the chances of specific traits occurring in offspring when the parents' traits are known	Math	7.SP Statistics and Probability
Patterns Within Us	I've Got to be Me		Describe the passing of hereditary traits through generations	Science	Life Science
Patterns Within Us	I've Got to be Me		Describe how plants reproduce	Science	Life Science
Patterns Within Us	I've Got to be Me		Predict the chances of specific traits occurring in offspring when the parents' traits are known	Science	Life Science
Patterns Within Us	Small, Smaller, Smallest		Express probabilities using fractions	Math	6.SP Statistics and Probability
Patterns Within Us	Small, Smaller, Smallest		Compare structure and function of plant and animal cells	Science	Life Science
Patterns Within Us	Small, Smaller, Smallest		Explain how advances in scientific tools can lead to discovery	Science	Science and Technology
Patterns Within Us	Small, Smaller, Smallest		Explain how advances in scientific tools can lead to discovery	Technology	Nature of Technology
Patterns Within Us	Small, Smaller, Smallest		Explain how advances in scientific tools can lead to discovery	Technology	Technology and Society
Patterns Within Us	What's Your Type?		Work flexibly with fractions, decimals, and percents	Math	6.NS The Number System
Patterns Within Us	What's Your Type?		Multiply fractions	Math	6.SP Statistics and Probability

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Patterns Within Us	What's Your Type?		Work flexibly with fractions, decimals, and percents	Math	6.SP Statistics and Probability
Patterns Within Us	What's Your Type?		Identify all of the possible outcomes for a given event and calculate each outcome's probability for that situation	Math	7.SP Statistics and Probability
Patterns Within Us	What's Your Type?		Identify all of the possible outcomes for a given event and calculate each outcome's probability for that situation	Math	7.SP Statistics and Probability
Shaping Our World	Adapting		Explain the buoyancy principle	Science	Physical Science
Shaping Our World	Adapting		Apply knowledge to design and develop an amphibious vehicle	Science	Science and Technology
Shaping Our World	Adapting		Explain the buoyancy principle	Technology	Nature of Technology
Shaping Our World	Adapting		Apply knowledge to design and develop an amphibious vehicle	Technology	Design
Shaping Our World	Adapting		Apply knowledge to design and develop an amphibious vehicle	Technology	Design
Shaping Our World	Adapting		Apply knowledge to design and develop an amphibious vehicle	Technology	The Designed World
Shaping Our World	Dying to Live		Explain the relationship between environmental changes and the extinction of living organisms	Science	Life Science
Shaping Our World	Dying to Live		Explain the relationship between environmental changes and the extinction of living organisms	Science	Life Science
Shaping Our World	Dying to Live		Describe human actions that cause changes in living organisms over a long period of time	Science	Science and Technology
Shaping Our World	Dying to Live		Describe human actions that cause changes in living organisms over a long period of time	Technology	Technology and Society
Shaping Our World	Dying to Live		Describe human actions that cause changes in living organisms over a long period of time	Technology	Design
Shaping Our World	Living in Another World		Compare shapes, symmetry, transformations, and movements in microorganisms to common geometric forms.	Math	7.G Geometry

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Shaping Our World	Living in Another World		Use spatial sense and geometric visualization to draw tessellations and construct three-dimensional models of microorganisms	Math	7.G Geometry
Shaping Our World	Living in Another World		Use spatial sense and geometric visualization to draw tessellations and construct three-dimensional models of microorganisms	Math	8.G Geometry
Shaping Our World	Living in Another World		Use spatial sense and geometric visualization to draw tessellations and construct three-dimensional models of microorganisms	Science	Science as Inquiry
Shaping Our World	Living in Another World		Compare shapes, symmetry, transformations, and movements in microorganisms to common geometric forms.	Science	Life Science
Shaping Our World	Living in Another World		Use spatial sense and geometric visualization to draw tessellations and construct three-dimensional models of microorganisms	Science	Life Science
Shaping Our World	Living in Another World		Describe the relationship between the structure of microorganisms and plant cells	Science	Life Science
Shaping Our World	Living in Another World		Compare shapes, symmetry, transformations, and movements in microorganisms to common geometric forms.	Science	Life Science
Shaping Our World	Living in Another World		Compare shapes, symmetry, transformations, and movements in microorganisms to common geometric forms.	Science	Science in Personal and Social Perspectives
Shaping Our World	Navigating		Use road maps to identify possible travel routes	Technology	The Designed World
Shaping Our World	Navigating		Design, draw, and propose possible bike routes in the local community	Technology	The Designed World
Shaping Our World	Navigating		Use road maps to identify possible travel routes	Technology	The Designed World
Shaping Our World	Orienteering		Determine a scale for a map	Math	6.RP Ratios and Proportional Relationships

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Shaping Our World	Orienteering		Solve problems that arise in other content areas (specifically social studies) relating to orienteering	Math	6.G Geometry
Shaping Our World	Orienteering		Estimate distances	Math	6.G Geometry
Shaping Our World	Orienteering		Determine a scale for a map	Math	7.RP Ratios and Proportional Relationships
Shaping Our World	Packaging		Calculate the surface area of a rectangular prism	Math	6.G Geometry
Shaping Our World	Packaging		Calculate the volume of a rectangular prism	Math	6.G Geometry
Shaping Our World	Packaging		Calculate the minimum surface area needed for a container when the volume is constant	Math	6.G Geometry
Shaping Our World	Packaging		Calculate the surface area of a rectangular prism	Math	7.G Geometry
Shaping Our World	Packaging		Calculate the volume of a rectangular prism	Math	7.G Geometry
Shaping Our World	Packaging		Calculate the minimum surface area needed for a container when the volume is constant	Math	7.G Geometry
Shaping Our World	Packaging		Calculate the minimum surface area needed for a container when the volume is constant	Technology	The Designed World
Shaping Our World	Perspective of Dimensions		Identify the characteristics of the five regular polyhedrons	Math	7.G Geometry
Shaping Our World	Perspective of Dimensions		Explain why polyhedrons can be classified together	Math	7.G Geometry
Shaping Our World	Perspective of Dimensions		Solve problems using visualizations, spatial reasoning, and geometric modeling	Math	7.G Geometry
Shaping Our World	Perspective of Dimensions		Solve problems using visualizations, spatial reasoning, and geometric modeling	Math	7.G Geometry
Shaping Our World	Pushing		Given a purpose and constraints, design, sketch, and build a vehicle that will perform according to specifications	Science	Science as Inquiry
Shaping Our World	Pushing		Given a purpose and constraints, design, sketch, and build a vehicle that will perform according to specifications	Science	Physical Science
Shaping Our World	Pushing		Given a purpose and constraints, design, sketch, and build a vehicle that will perform according to specifications	Science	Science and Technology

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Shaping Our World	Pushing		Given a purpose and constraints, design, sketch, and build a vehicle that will perform according to specifications	Technology	Design
Shaping Our World	Pushing		Given a purpose and constraints, design, sketch, and build a vehicle that will perform according to specifications	Technology	Design
Shaping Our World	Pushing		Given a purpose and constraints, design, sketch, and build a vehicle that will perform according to specifications	Technology	Design
Shaping Our World	Pushing		Given a purpose and constraints, design, sketch, and build a vehicle that will perform according to specifications	Technology	Design
Shaping Our World	Pushing		Given a purpose and constraints, design, sketch, and build a vehicle that will perform according to specifications	Technology	The Designed World
Shaping Our World	Pushing		Given a purpose and constraints, design, sketch, and build a vehicle that will perform according to specifications	Technology	The Designed World
Shaping Our World	Searching for Evidence		Create a model of a fossil and describe how fossils provide important evidence of life long ago	Science	Science as Inquiry
Shaping Our World	Searching for Evidence		Create a model of a fossil and describe how fossils provide important evidence of life long ago	Science	Life Science
Shaping Our World	Searching for Evidence		Describe the mold and cast method of fossil production	Science	Earth and Space Science
Shaping Our World	Searching for Evidence		Explain the important role that carbon plays in determining the age and history of the Earth's inhabitants	Science	Earth and Space Science
Shaping Our World	Suspending		Identify the attraction and repulsion of magnets	Science	Physical Science
Shaping Our World	Suspending		Design and build a magnetic levitation device	Science	Science and Technology
Shaping Our World	Suspending		Design and build an air-cushioned vehicle	Science	Science and Technology
Shaping Our World	Suspending		Design and build a magnetic levitation device	Technology	Design
Shaping Our World	Suspending		Design and build an air-cushioned vehicle	Technology	Design
Shaping Our World	Suspending		Design and build a magnetic levitation device	Technology	Design
Shaping Our World	Suspending		Design and build an air-cushioned vehicle	Technology	Design

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Shaping Our World	Suspending		Identify the attraction and repulsion of magnets	Technology	The Designed World
Shaping Our World	Suspending		Design and build a magnetic levitation device	Technology	The Designed World
Shaping Our World	Suspending		Design and build an air-cushioned vehicle	Technology	The Designed World
Shaping Our World	Traveling Around		Explain the meaning of ratios as they are used in the scale of topographical and relief maps	Math	7.RP Ratios and Proportional Relationships
Shaping Our World	Traveling Around		Explain the meaning of ratios as they are used in the scale of topographical and relief maps	Science	Science as Inquiry
Shaping Our World	Traveling Around		Use topographical maps to plan a route for a given purpose	Science	Science as Inquiry
Shaping Our World	Traveling Around		Describe the different perspectives topographical and relief maps provide	Science	Science in Personal and Social Perspectives
Shaping Our World	Trying Out Triangles		Describe, classify, and understand relationships among types of triangles using their defining properties	Math	7.G Geometry
Shaping Our World	Trying Out Triangles		Understand relationships among the angles and side lengths of similar triangles	Math	7.G Geometry
Shaping Our World	Trying Out Triangles		Draw triangles with specified properties, such as side lengths or angle measures	Math	7.G Geometry
Systems	Bouncing Balls		Collect, graph, and discuss data based on an experiment	Math	8.SP Statistics and Probability
Systems	Bouncing Balls		Determine if the relationship between variables is direct variation	Math	8.SP Statistics and Probability
Systems	Don’t Bring Me Down		Predict the effect of gravity on objects in a system	Science	Physical Science
Systems	Don’t Bring Me Down		Predict the effect of gravity on objects in a system	Science	Earth and Space Science
Systems	Earth-Moon-Sun Interactions		Predict the effects of Earth, moon, sun interactions	Science	Earth and Space Science
Systems	Input, Process, Output	Does It Work?	Use a systems model (input, process, output, feedback) to solve equations and determine the limits placed on a system	Math	8.EE Expressions and Equations
Systems	Looking at Relationships		Determine the effect of changing one variable on other variables	Math	7.SP Statistics and Probability
Systems	Looking at Relationships		Determine the effect of changing one variable on other variables	Math	7.SP Statistics and Probability
Systems	Looking at Relationships		Identify relationships among variables	Math	8.SP Statistics and Probability

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Systems	Looking at Relationships		Determine the effect of changing one variable on other variables	Math	8.SP Statistics and Probability
Systems	Macro Systems		Distinguish between natural and human-made (technological) systems	Science	Science and Technology
Systems	Macro Systems		Classify common devices into one of three technological systems	Technology	Nature of Technology
Systems	Macro Systems		Distinguish between natural and human-made (technological) systems	Technology	Nature of Technology
Systems	Macro Systems		Analyze and describe the function of technological systems used in everyday life	Technology	Nature of Technology
Systems	Orbital Systems		Draw an ellipse and calculate its eccentricity	Math	8.G Geometry
Systems	Orbital Systems		Describe the relationship between the length of the major axis, the distance between the foci, the eccentricity, and the shape of an ellipse	Math	8.G Geometry
Systems	Providing Feedback		Design and build a parabolic reflector	Science	Physical Science
Systems	Providing Feedback		Design and build a parabolic reflector	Science	Science and Technology
Systems	Providing Feedback		Define a closed loop and open look feedback system	Technology	Nature of Technology
Systems	Providing Feedback		Design and build a parabolic reflector	Technology	The Designed World
Systems	Say It With Words, Pictures, Tables, and Symbols		Generalize sequential patterns to form algebraic expressions	Math	8.EE Expressions and Equations
Systems	Say It With Words, Pictures, Tables, and Symbols		Generalize sequential patterns to form algebraic expressions	Math	8.F Functions
Systems	Should I Stayor Should I Go?		Apply Newton's laws of motion to describe how forces affect a given system of objects or events	Science	Physical Science
Systems	Systems Are Complex		Break a given complex system into subsystems	Technology	Nature of Technology
Systems	Systems Are Complex		Describe the function of each subsystem and how each contributes to the overall system	Technology	Nature of Technology
Systems	Systems AreComplex		Break a given complex system into subsystems	Technology	The Designed World

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Systems	Systems AreComplex		Describe the function of each subsystem and how each contributes to the overall system	Technology	The Designed World
Systems	That Model Looks Good!		Produce a model for a system that compares various attributes of objects within the system	Science	Earth and Space Science
Systems	Unearthing the Code		Identify the components and functions of a mathematical system	Math	8.F Functions
Systems	We Had Joy, We Had Fun, We Had Seasons in the Sun		Describe why the seasons occur and predict seasons in different locations on the Earth	Science	Earth and Space Science
Systems	We Had Joy,We Had Fun, We Had Seasons in the Sun		Describe why the seasons occur and predict seasons in different locations on the Earth	Science	Earth and Space Science
Systems	What's In a System?		Identify how the basic system parts relate to one another and to natural systems	Science	Science and Technology
Systems	What's In a System?		Identify the basic parts common to all technological systems	Technology	Nature of Technology
Systems	What's In a System?		Identify how the basic system parts relate to one another and to natural systems	Technology	Nature of Technology
Systems	Where Are All the Parts?		Analyze the parts and functions of biological systems	Science	Life Science
Systems	Where Shall We Meet?		Translate word problems to system of equations and solve by graphing	Math	8.EE Expressions and Equations
Systems	Where Shall We Meet?		Translate word problems to system of equations and solve by graphing	Math	8.SP Statistics and Probability
The Body Works	Added Zip		Make a food product using a production technique	Science	Science and Technology
The Body Works	Added Zip		List several food supplement ingredients and explain how they are used by the body	Science	Science in Personal and Social Perspectives
The Body Works	Added Zip		List several food supplement ingredients and explain how they are used by the body	Technology	Design
The Body Works	Added Zip		List several food supplement ingredients and explain how they are used by the body	Technology	The Designed World
The Body Works	Added Zip		List several food supplement ingredients and explain how they are used by the body	Technology	The Designed World

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
The Body Works	Added Zip		Make a food product using a production technique	Technology	The Designed World
The Body Works	Added Zip		Make a food product using a production technique	Technology	The Designed World
The Body Works	Added Zip		Construct a package for a product	Technology	The Designed World
The Body Works	Body Shop		Describe the X-ray process	Science	Science and Technology
The Body Works	Body Shop		Describe the X-ray process	Technology	The Designed World
The Body Works	Body Shop		Explain various methods for immobilizing a broken bone	Technology	The Designed World
The Body Works	Body Shop		Explain how an image can be produced on photographic paper	Technology	The Designed World
The Body Works	Circulating Blood		Measure lung capacity	Science	Science as Inquiry
The Body Works	Circulating Blood		Illustrate and explain how the circulatory and respiratory systems work together	Science	Life Science
The Body Works	Circulating Blood		Make a simple stethoscope	Science	Science and Technology
The Body Works	Circulating Blood		Make a simple stethoscope	Technology	The Designed World
The Body Works	Digestion		Illustrate and describe the human digestive system	Science	Life Science
The Body Works	Digestion		Explain how other internal structures (pancreas, liver, gallbladder) interact with the human digestive system	Science	Life Science
The Body Works	Digestion		Explain how other internal structures (pancreas, liver, gallbladder) interact with the human digestive system	Science	Science in Personal and Social Perspectives
The Body Works	Energy in Motion		Explain how bones and joints allow movement	Science	Life Science
The Body Works	Energy in Motion		Illustrate how muscles make joints move	Science	Life Science
The Body Works	Energy in Motion		Describe the operation of a solenoid and its similarities and differences to muscles	Science	Science and Technology
The Body Works	Energy in Motion		Design a robot that will perform a gripping function	Technology	Design
The Body Works	Energy in Motion		Design a robot that will perform a gripping function	Technology	Design
The Body Works	Energy in Motion		Describe the operation of a solenoid and its similarities and differences to muscles	Technology	The Designed World
The Body Works	Energy in Motion		Describe the operation of a solenoid and its similarities and differences to muscles	Technology	The Designed World
The Body Works	Fit for Life		Describe, scientifically, the health benefits of aerobic capacity	Science	Science in Personal and Social Perspectives

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
The Body Works	Fit for Life		Formulate a personal aerobic fitness plan	Science	Science in Personal and Social Perspectives
The Body Works	Fit for Life		Describe, scientifically, the health benefits of aerobic capacity	Science	Science in Personal and Social Perspectives
The Body Works	HowMuch Makes One		Solve proportions	Math	6.RP Ratios and Proportional Relationships
The Body Works	HowMuch Makes One		Solve proportions	Math	7.RP Ratios and Proportional Relationships
The Body Works	Nutrition		Describe how nutrients are used to provide energy for human growth and development	Science	Physical Science
The Body Works	Nutrition		Describe how nutrients are used to provide energy for human growth and development	Science	Life Science
The Body Works	Nutrition		Describe how nutrients are used to provide energy for human growth and development	Science	Science in Personal and Social Perspectives
The Body Works	Nutrition		Determine the nutritional content of a healthy meal	Science	Science in Personal and Social Perspectives
The Body Works	Operation Order		Apply the order of operations involving addition, subtraction, multiplication, and division	Math	7.EE Expressions and Equations
The Body Works	Percents Are Everywhere		Explain the effects of decreasing and increasing by a percent	Math	7.NS The Number System
The Body Works	Resisting Diseases		Describe how immunizations work	Science	Life Science
The Body Works	Resisting Diseases		Describe how immunizations work	Science	Life Science
The Body Works	Resisting Diseases		Identify advances and innovations in medical technologies	Science	Science and Technology
The Body Works	Resisting Diseases		Describe how immunizations work	Science	Science in Personal and Social Perspectives
The Body Works	Resisting Diseases		Identify advances and innovations in medical technologies	Technology	Technology and Society
The Body Works	Resisting Diseases		Identify advances and innovations in medical technologies	Technology	The Designed World
The Body Works	Resisting Diseases		Describe how immunizations work	Technology	The Designed World
The Body Works	Resisting Diseases		Design a brochure	Technology	The Designed World
The Body Works	Symbols and Shortcuts		Generalize a mathematical pattern and write it as an expression and an equation using variables	Math	6.EE Expressions and Equations

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
The Body Works	Symbols and Shortcuts		Generalize a mathematical pattern and write it as an expression and an equation using variables	Math	7.EE Expressions and Equations
The Body Works	The Beat is On		Identify functions as linear or nonlinear using tables, graphs, and equations	Math	8.F Functions
The Body Works	The Right Kind of Fuel		Use the commutative property of addition and multiplication to simplify computations with integers, fractions and decimals	Math	7.NS The Number System
The Body Works	The Right Kind of Fuel		Use the associative property of addition and multiplication to simplify computations with integers, fractions, and decimals	Math	7.NS The Number System
The Body Works	Tobacco Kills		Identify the social and psychological factors leading to tobacco use	Science	Science in Personal and Social Perspectives
The Body Works	Tobacco Kills		Identify the long term effects of tobacco use	Science	Science in Personal and Social Perspectives
The Body Works	Tobacco Kills		Identify the long term effects of tobacco use	Science	Science in Personal and Social Perspectives
The Body Works	Workout		Explain relationships among force, distance, work, time, and power	Science	Physical Science
The Body Works	Workout		Design under constraint	Science	Science and Technology
The Body Works	Workout		Design under constraint	Technology	Design
The Body Works	Workout		Design under constraint	Technology	Design
The Body Works	Workout		Design under constraint	Technology	Design
The Body Works	Workout		Design under constraint	Technology	Design
The Body Works	Workout		Explain relationships among force, distance, work, time, and power	Technology	The Designed World
Tools for Learning	Learning to Communicate		Record ideas in a journal	Science	Science as Inquiry
Tools for Learning	Learning to Communicate		Design and make a product	Science	Science and Technology
Tools for Learning	Learning to Communicate		Design and make a product	Technology	Design
Tools for Learning	Show Me the Numbers		Convert data tables into an appropriate chart or graph	Math	8.EE Expressions and Equations
Tools for Learning	Show Me the Numbers		Find a pattern in a set of data	Math	6.EE Expressions and Equations
Tools for Learning	Show Me the Numbers		Make inferences from data collected	Math	6.EE Expressions and Equations
Tools for Learning	Show Me the Numbers		Make inferences from data collected	Science	Science as Inquiry
Tools for Learning	Show Me the Numbers		Make inferences from data collected	Technology	Design
Tools for Learning	The Need for Speed		Calculate averages	Math	6.NS The Number System
Tools for Learning	The Need for Speed		Generalize patterns to deduce formulas	Math	6.EE Expressions and Equations
Tools for Learning	The Need for Speed		Identify patterns in a table of numbers	Math	6.EE Expressions and Equations

Module	Learning Cycle 1	Learning Cycle 2	IMaST Objective	Subject	Category
Tools for Learning	The Need for Speed		Calculate averages	Math	6.SP Statistics and Probability
Tools for Learning	The Need for Speed		Calculate averages	Math	7.EE Expressions and Equations
Tools for Learning	What's the Best Advantage		Change variables to discover information	Science	Science as Inquiry
Tools for Learning	What's the Best Advantage		Use data tables to organize information	Science	Science as Inquiry
Tools for Learning	What's the Best Advantage		Change variables to discover information	Science	Science as Inquiry
Tools for Learning	What's the Best Advantage		Change variables to discover information	Science	Physical Science
Tools for Learning	What's the Best Advantage		Use information gathered to design a solution to a problem	Science	Science and Technology
Tools for Learning	What's the Best Advantage		Use information gathered to design a solution to a problem	Technology	The Designed World
Forecasting	What's Your Speed		Determine rate formula	Math	7.EE Expressions and Equations