6-8 Modules Overview

	MODULE	DRIVING QUESTION	CONCEPTS
PHYSICAL SCIENCE	1 Matter and Its Properties	How can we as food scientists create foods with unique flavors?	*Thermal Energy and Phase Change, Structure and Properties of Matter, Chemical Reactions*
	2 Thermal Energy Transfer	How can we as architects construct a model house to minimize heat transfer?	*Introduction to Thermal Energy, Thermal Energy Transfer, Flow of Energy, Minimizing Thermal Energy Transfer*
	3 Force and Motion	How can we as sports scientists improve the efficiency of a competitor in an athletic event?	*Describing and Measuring Motion and Force, Relationships Between Force and Motion, Work and Simple Machines, Energy*
	4 Non-Contact Forces	How can we as engineers design and build functional toys?	*Force Fields, Electrostatics and Electric Currents, Magnetism, Electromagnetism*
	5 Waves	How can we as engineers design a concert experience for others to enjoy?	*Wave Properties, Sound, Light, Using Waves to Transfer Information*
LIFE SCIENCES	6 From Cells to Systems	How can we as medical professionals help others understand, prevent, and treat disease?	*Cells, Cell Structure and Function, Systems and System Models, Information Processing*
	7 Biochemistry	How can we as engineers produce energy from algae using models from nature?	*Chemical Reactions, Photosynthesis, Respiration, Cycling of Matter, Planning and Carrying Out Investigations*
	8 Ecosystems	How can we as resource managers protect and improve biodiversity and ecosystem services?	*Introduction to Ecosystems, Cycling of Matter and Flow of Energy in Ecosystems, Ecosystem Dynamics, Functioning and Resilience*
	9 Reproduction and Genetics	How can we as science journalists help consumers make informed decisions about what they eat and the choices they make?	*Inheritance of Traits, Impact of Mutations on Structure and Function of Organisms, Factors Affecting Growth of Organisms, Artificial Selection*
	10 Life Over Time	How can we as inventors and engineers gain inspiration from nature to develop solutions?	*Evidence of Common Ancestry and Diversity of Life, Evolution by Means of Natural Selection, Adaptation*
EARTH AND SPACE SCIENCE	11 Space Systems	How can we as space scientists analyze data to plan a space mission?	*Day, Night, and the Seasons, The Moon, Gravity, Properties of the Solar System*
	12 Geologic time	How can we as geoscientists and engineers use data to decide where and how to build structures to minimize damage from earthquakes, volcanoes and tsunamis?	*Geologic Time and Evidence for Change, Plate Tectonics*
	13 Cycles on Earth	How can we as citizens use our understanding of Earth processes and resource distribution to make informed decisions about how we consume Earth materials?	*The Rock Cycle, Mineral Formation and Classification, The Water Cycle, Weathering and Erosion Shape the Geosphere*
	14 Weather and Climate	How can we as engineers choose a viable source of alternative energy for any location?	*Understanding and Measuring the Weather, Predicting the Weather and Extreme Weather Events, Climate, Climate Change*
	15 Human Impacts	How can we persuade others to help solve environmental problems?	*Earth's Systems Through a Farming Case Study, Impacts on Earth's Systems, Reducing Impacts and Restoring Systems*