Grade: 6

Subject: Science

Unit
Optics

Essential Question #1	**What color combinations can be created by using mirrors to mix red, blue and green light beams?**
Essential Question #2	**Identify what happens when colored and white light beams pass through various types of water (colored, sugar, etc…)**
Essential Question #3	**Explain why objects appear differently under an ultraviolet and strobe light?**
Essential Question #4	
Essential Question #5	

Grade: 6

Subject: Science

Unit: Optics

Essential Question #1

What color combinations can be created by using mirrors to mix red, blue and green light beams?

		CT LEVEL
Objective/Skill #1	**SWBAT manipulate color light beams to form new colors.**	**AP**
Objective/Skill #2	**SWBAT create a hidden message to demonstrate how colors absorb light differently.**	**S**
Objective/Skill #3		
Objective/Skill #4		
Objective/Skill #5		

Activities that you may opt to use with objectives/skills being taught above

Optics ESTEC Kit that includes lessons, mirrors, boxes to reflect light beams, etc.

Grade: 6

Subject: Science

Unit: Optics

Essential Question #2

Identify what happens when colored and white light beams pass through various types of water (colored, sugar, etc…)

		CT LEVEL
Objective/Skill #1	**SWBAT analyze how water changes the path of a light beam as it passes through a jar of water, colored water, sugar, etc…**	**AN**
Objective/Skill #2	**SWBAT compare refraction of plain water with colored and sugar water.**	**E**
Objective/Skill #3		
Objective/Skill #4		
Objective/Skill #5		

Activities that you may opt to use with objectives/skills being taught above

Optics ESTEC Kit that includes lessons, mirrors, boxes to reflect light beams, etc.

Grade: 6

Subject: Science

Unit: Optics

Essential Question #3
Explain why objects appear differently under an ultraviolet and strobe light?

		CT LEVEL
Objective/Skill #1	**SWBAT observe the effects of UV light on different colored objects.**	**AN**
Objective/Skill #2	**SWBAT contrast the effects of strobe and black lights.**	**E**
Objective/Skill #3	**SWBAT interpret the effect of light on the motion of objects.**	**E**
Objective/Skill #4		
Objective/Skill #5		

Activities that you may opt to use with objectives/skills being taught above
Optics ESTEC Kit that includes lessons, mirrors, boxes to reflect light beams, etc.

Grade: 6

Subject: Science

Unit
Looking at Liquids

Essential Question #1	**What are the different properties of liquids?**
Essential Question #2	**How can surface tension be measured?**
Essential Question #3	
Essential Question #4	
Essential Question #5	

Grade: 6

Subject: Science

Unit: Looking at Liquids

Essential Question #1
What are the different properties of liquids?

		CT LEVEL
Objective/Skill #1	**Determine the cohesiveness of different liquids.**	**E**
Objective/Skill #2	**Contrast the viscosity of liquids.**	**E**
Objective/Skill #3	**Analyze the rate of absorption of various liquids.**	**AN**
Objective/Skill #4	**Compare and contrast drop prints to drop sizes of various liquids.**	**AN**
Objective/Skill #5	**Utilize various measuring devices to establish weight and volume of various liquids.**	**AP**

Activities that you may opt to use with objectives/skills being taught above
Looking at Liquids ESTEC kit.
Pan balance, graduated cylinder, triple beam balance

Grade: 6

Subject: Science

Unit: Looking at Liquids

Essential Question #2
How can surface tension be measured?

		CT LEVEL
Objective/Skill #1	**Compare the surface tension of various liquids.**	**AN**
Objective/Skill #2	**Hypothesize the strength of surface tension of various liquids.**	**S**
Objective/Skill #3	**Create a graph showing the surface tensions of various liquids.**	**S**
Objective/Skill #4		
Objective/Skill #5		

Activities that you may opt to use with objectives/skills being taught above
Looking at Liquids ESTEC kit.

Grade: 6

Subject: Science

Unit
Rocketry

Essential Question #1	**How do we construct an object that can maintain a straight and stable trajectory?**
Essential Question #2	**What physical properties effect rocket launch and flight?**
Essential Question #3	**What are the essential safety procedures that must be followed for a successful rocket launch?**
Essential Question #4	
Essential Question #5	

Grade: 6

Subject: Science

Unit: Rocketry

Essential Question #1

How do we construct an object that can maintain a straight and stable trajectory?

		CT LEVEL
Objective/Skill #1	**Build a stable model rocket.**	**S**
Objective/Skill #2	**Identify the basic components of a model rocket and a model rocket engine.**	**C**
Objective/Skill #3	**Observe that some interactions which give off energy may require some energy to start the interaction.**	**AN**
Objective/Skill #4	**Prove the importance of fins for the stability of a rocket.**	**E**
Objective/Skill #5		

Activities that you may opt to use with objectives/skills being taught above

Rocketry ESTEC kit.

Grade: 6

Subject: Science

Unit: Rocketry

Essential Question #2
What physical properties effect rocket launch and flight?

		CT LEVEL
Objective/Skill #1	**Analyze the effects of weight, design, wind and drag on a rocket.**	**AN**
Objective/Skill #2	**Observe how the amount of thrust effects the altitude of a rocket's flight.**	**AN**
Objective/Skill #3	**Measure the height of the apogee of the rocket's flight.**	**E**
Objective/Skill #4	**Construct a prototype rocket showing the effects of stability.**	**S**
Objective/Skill #5		

Activities that you may opt to use with objectives/skills being taught above
Rocketry ESTEC kit.

Grade: 6

Subject: Science

Unit: Rocketry

Essential Question #3
What are the essential safety procedures that must be followed for a successful rocket launch?

		CT LEVEL
Objective/Skill #1	**Examine the Model Rocket Safety Code.**	**AN**
Objective/Skill #2	**Outline the correct procedure for construction of a model rocket.**	**AN**
Objective/Skill #3	**Observe the procedure for setting up a safe rocket launch site.**	**AN**
Objective/Skill #4		
Objective/Skill #5		

Activities that you may opt to use with objectives/skills being taught above
Rocketry ESTEC kit.

Grade: 6

Subject: Science

Unit
Small Things

Essential Question #1	**How will students use magnification tools to learn about and observe microorganisms living in a variety of aquatic environments?**
Essential Question #2	
Essential Question #3	
Essential Question #4	
Essential Question #5	

Grade: 6

Subject: Science

Unit: Small Things

Essential Question #1
How will students use magnification tools to learn about and observe microorganisms living in a variety of aquatic environments?

		CT LEVEL
Objective/Skill #1	**Learn the properties and use of magnification tools.**	**C**
Objective/Skill #2	**Analyze how different environmental conditions promote diversity in microorganisms.**	**AN**
Objective/Skill #3	**Identify and label the characteristics of different microorganisms.**	**AN**
Objective/Skill #4		
Objective/Skill #5		

Activities that you may opt to use with objectives/skills being taught above

Small Things ESTEC Kit

Grade: 6

Subject: Science

Unit
Heating and Cooling

Essential Question #1	**How does the composition affect the heating and cooling of various metals and nonmetals?**
Essential Question #2	
Essential Question #3	
Essential Question #4	
Essential Question #5	

Grade: 6

Subject: Science

Unit: Heating and Cooling

Essential Question #1
How does the composition affect the heating and cooling of various metals and nonmetals?

		CT LEVEL
Objective/Skill #1	**Investigate how heat is transferred through a metal rod.**	**AP**
Objective/Skill #2	**Analyze the effect of solid versus hollow rods on speed of heating.**	**AN**
Objective/Skill #3		
Objective/Skill #4		
Objective/Skill #5		

Activities that you may opt to use with objectives/skills being taught above

Heating and Cooling ESTEC Kit

Grade: 6

Subject: Science

Unit
Scientific Method

Essential Question #1	**What are the steps of the scientific method?**
Essential Question #2	
Essential Question #3	
Essential Question #4	
Essential Question #5	

Grade: _____6_____

Subject: __Science _

Unit: __Scientific Method

Essential Question #1
What are the steps of the scientific method?

		CT LEVEL
Objective/Skill #1	**Apply the scientific method.**	**AP**
Objective/Skill #2	**Construct an independent controlled study.**	**S**
Objective/Skill #3		
Objective/Skill #4		
Objective/Skill #5		

Activities that you may opt to use with objectives/skills being taught above

Heating and Cooling ESTEC Kit

Grade: 6

Subject: Science

Unit
Solar System

Essential Question #1	**What are the major celestial bodies within the Earth's solar system?**
Essential Question #2	
Essential Question #3	
Essential Question #4	
Essential Question #5	

Grade: 6

Subject: Science

Unit: Solar System

Essential Question #1
What are the major celestial bodies within the Earth's solar system?

		CT LEVEL
Objective/Skill #1	**Identify the major celestial bodies and their position in the solar system.**	**AN**
Objective/Skill #2	**Explain how gravity affects the major celestial bodies and their movements in the solar system.**	**AN**
Objective/Skill #3	**Explain the effects of revolution and rotation on the Earth and its moon.**	**AN**
Objective/Skill #4		
Objective/Skill #5		

Activities that you may opt to use with objectives/skills being taught above
Finger Lakes BOCES Intermediate Solar System Packet and Activities

Grade: 6

Subject: Science

Unit
Animal/Plant Adaptations

Essential Question #1	**What are the basic properties of plant and animal cells?**
Essential Question #2	
Essential Question #3	
Essential Question #4	
Essential Question #5	

Grade: 6

Subject: Science

Unit: Animal /Plant Adaptations

Essential Question #1
What are the basic properties of plant and animal cells?

		CT LEVEL
Objective/Skill #1	**Compare and contrast plant and animal cells.**	**AN**
Objective/Skill #2	**Diagram and explain the major parts of a plant and an animal cell.**	**AN**
Objective/Skill #3	**Differentiate between the different types of plant and animal cells.**	**AN**
Objective/Skill #4	**Explain the processes of mitosis and meiosis.**	**E**
Objective/Skill #5		

Activities that you may opt to use with objectives/skills being taught above

Destinations in Science