

iSTEM Lesson Planning Template

Grade/ Grade Band:	Topic:	Lesson # _____ in a series of _____ lessons
Brief Lesson Description:		
Performance Expectation(s):		
Specific Learning Outcomes:		

NARRATIVE/BACKGROUND INFORMATION

Prior Student Knowledge (prior relevant standards):

NGSS Science & Engineering Practices: <input type="checkbox"/> Asking questions (science) and defining problems (engineering) <input type="checkbox"/> Developing and using models <input type="checkbox"/> Planning and carrying out investigations <input type="checkbox"/> Analyzing and interpreting data <input type="checkbox"/> Using mathematics and computational thinking <input type="checkbox"/> Constructing explanations (science) and designing solutions (engineering) <input type="checkbox"/> Engaging in argument from evidence <input type="checkbox"/> Obtaining, evaluating, and communicating information	CCSSM Standards for Math Practice: 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning	CCSSM English Language Arts Capacities: E1. Demonstrate independence in reading complex texts, and writing and speaking about them. E2. Build a strong base of knowledge through content rich texts. E3. Obtain, synthesize, and report findings clearly and effectively in response to task and purpose. E4. Construct viable arguments and critique the reasoning of others. E5. Read, write, and speak grounded in evidence. E6. Use technology and digital media strategically and capably. E7. Come to understand other perspectives and cultures through reading, listening, and collaborations.
Disciplinary Core Ideas:	CCSSM Content Standards:	ELA Standards:

Crosscutting Concepts:

Patterns
 Cause and effect: Mechanism and explanation
 Scale, proportion, and quantity
 Systems and system models

 Energy and matter: Flows, cycles, and conservation
 Structure and function
 Stability and change

Possible Preconceptions/Misconceptions:

LESSON PLAN – 5-E Model

ENGAGE: Opening Activity – Access Prior Learning / Stimulate Interest / Generate Questions:

EXPLORE: Lesson Description – Materials Needed / Probing or Clarifying Questions:

EXPLAIN: Concepts Explained and Vocabulary Defined:

Vocabulary:

ELABORATE: Applications and Extensions:

EVALUATE:

Formative Monitoring (Questioning / Discussion):

Summative Assessment (Quiz / Project / Report):

Elaborate Further / Reflect: Enrichment:

