A Multi-Day Learning Experience for Future-Focused Learning

Learning Experience Creator:
Subject Area:
Grade Level(s):
Title of Unit:
Title of Lesson:
Length of Extended Lesson (Days/Minutes Per Day):

> The directions are in **blue** and a variety of examples from multiple grade levels and content areas are provided in **green**.

Overview

Engaging Question(s):

Engaging Questions are broad, thought provoking, and open-ended, They stimulate students' curiosity, and support the learning intent of the lesson. They often begin with *why* or *how*. The purpose of these questions is to support continuous inquiry.

- Example from First Grade: Why is it important to understand observable patterns of motion between the Earth, moon, and sun?
- Example from Sixth Grade: Why did ancient Egypt become a powerful civilization? How did the geographical features of ancient Egypt influence the development of Egyptian religion?
- Example from Eighth Grade: How is the Constitution a living document?

Learning Experience Summary:

This summary provides an overview of the multi-day learning experience. Introducing a problem/solution component to this learning experience provides a greater opportunity for students to think critically and innovatively.

Example from Kindergarten: This learning experience focuses on what plants need to survive: light, water, carbon dioxide, soil, and nutrients. Before students can begin to think critically about the question, they must be familiar with plant structures and functions. This sequence includes developing prerequisite skills and vocabulary, applying the scientific process, exploring rich literature, and engaging in collaborative discussions about the content. It is recommended that students be familiarized with plant structures and functions for five days (a possible learning scope would be focusing on one structure per day- seed, root, leaf, stem, flower). Once students are well versed in the structures and functions of plants, it is critical that students are then introduced to plant needs through stories and informational texts. This sequence closes with the first scientific experiment of the year conducted by students in small groups designed to answer the question: What will happen to a plant if one of it's basic needs is altered or removed? Students will begin their science journals, recording their observations of their experiment.

Example from 7th Grade Math Intervention: Students will create a scale drawing of a building designed to meet the needs of the 21st century. They will apply knowledge of ratios and proportions in order to create an accurate, to-scale model that reflects reasonable, realistic dimensions for an actual building. On the first day, they will complete a discovery activity on unit conversions and build their understanding by choosing an activity from a choice board. On the second day, they will read two articles and reflect on how buildings can

be designed in creative ways to meet the needs of a changing environment and society. On the third, fourth and fifth days they will create their building and scale drawing through multiple revisions with peer feedback and present their work to the class. The presentations will also be videotaped and posted on the class Website.

Example of an Authentic Problem/ Solution Challenge for an Eleventh Grade American History Unit: After studying First Nations people and challenges to their cultural identity over time, students will present solutions to the problem many First Nations people face about how to maintain their cultural identity in the face of challenges from contemporary peoples, issues, and technical developments.

Standards Cluster for this Multi-Day Learning Experience (Multidisciplinary Emphasis)			
Prerequisite Skills and Concepts	Grade Level Discipline Standards:	BT/DOK	Extended Skills and Concepts
This section contains the prerequisite skills and concepts often found in previous grade levels' standards that are necessary in order for students to maser the Magnet Standards selected for the unit. This section is useful throughout the unit as instruction and learning opportunities are developed to meet the needs of all learners.	This section often contains ELA standards in elementary grades. In this section these standards are unpacked. If your state's standards are organized in a clear progression, unpacking is much more simple.	This is Blooms' Taxonomy and Depth of Knowledge. By determining this information in the standards, it is easier to accurately align learning experiences and assessments.	This section contains the skills and concepts found in grade level standards that are ahead of the grade level for which this unit is designed. These extended skills and concepts are noted so that students who have already mastered the current unit's standards can be challenged to extend their thinking throughout the unit as instruction and learning opportunities are developed to meet the needs of all learners.
Example: Students need to be able to • Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in text. • Refer to specific textual evidence when answering questions about a detail in the text. Draw inferences from the text.	RI.6.1: Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	(BT Level 4, Analysis; DOK Level 3, Strategic Thinking/Reasoning)	To extend students' skills and concepts, students can • Cite several pieces of textual evidence that supports an analysis of what the text says explicitly as well as inferences drawn from the text. • Analyze where the text leaves matters uncertain.

Supporting Standards From Other Disciplines:
Because future-focused learning emphasizes a multidisciplinary approach to thinking and learning, standards from science, social studies, math, visual arts, and other content areas will also be included in this extended lesson.

Formative Evidence of Student Learning

Pre-Assessment:
Prior to beginning a unit of study or multiday learning experience, it is important to gather information about students' levels of mastery of the standards identified for the lesson sequence. This may be a formal pre-assessment or an analysis of previous work completed by the student.

Evidence of Student Learning – Products/Performances (Allow for Multiple Means of Representation):	Rubrics (Insert a Link):
Throughout this multiday learning experience, students will demonstrate their mastery of the desired learning. This evidence may include a more formal post-assessment, but should also include an array of formative assessments (e.g., observations of student learning, journal entries, graphic organizers, oral presentations, and even interactive classroom activities, etc.). These products or performances should provide evidence that the standards identified for this extended lesson have been mastered to the selected BT and DOK levels. **Example from 7th grade math unit:** - Choice Board Product - Chat Stations - Formative Monitoring Checklist (Day 1 and Days 3-4) - Scale Drawing with Actual Dimensions and Conversions (Multiple Revisions) - Peer-to-Peer Feedback using Sentence Starters - Personal Reflection - Class Presentation	All constructed response items and performances require a rubric that is anchored on the standards identified for the unit. The answer key addresses any selected response items included on the assessment.

Teaching & Learning Progression

Progression Description (Include Transversal Competencies, Inquiry, Student Choice and Voice, Authentic Connections, and Formative Learning)	Resources (Texts, Audio/ Visual Materials, Digital Tools, Handouts, etc.)
This section provides a progression to follow as they plan for student learning. This is a great location to model inquiry-based teaching that puts students at the heart of leading their own learning. Include experiences that help students develop the transversal competencies. Also, allow students leeway for choice and the outlet to share their voices (ideas, perceptions) with an attentive audience. Provide an authentic connection to a real-world situation or problem. Components of formative learning should also be included in the suggested sequence (e.g., peer teaching and peer feedback, multiple opportunities for success, metacognitive reflection, student learning goals and action plans). Note the following example:	This section includes links to resources or embedded items that teachers may use during this Learning Sequence.

Teaching and Learning Progression for an Extended Lesson on Leonardo da Vinci

Lesson Sequence	Literature Review Link for Lesson Sequence
1. Inquiry-Based Learning: Have students seated in small groups for a **Discovering Leonardo** activity. The intent of this learning experience is for students to learn about Leonardo on their own as they observe, read, discuss, and write about Leonardo's accomplishments and insights. Resist the urge to tell students about Leonardo prior to this experience. Just introduce the activity. Each group member picks up a two-sided page with pictures of Leonardo's creations (i.e., painting, invention, city design, sculpture, etc.). They are given 10 minutes to quietly consider answers to the following questions in response to each creation. They are preparing for a short presentation to their group members about what they observed: 1. What do you observe in this picture? 2. What is your response to this picture? What do you think and/or feel when you look at it? Please explain your response. 3. What does this picture tell you about Leonardo da Vinci, the man? 4. If Leonardo da Vinci were here, what would you want to ask him? While they are observing, play Leonardo's musical composition: https://www.youtube.com/watch?v=JX3X_TQf2sA	Whenever possible, let students enter the learning process through inquiry or discovery. That not only gets the learner more engaged and focused on the learning, but also challenges deeper thinking. • Learning Through Inquiry • Preparing for Learning

For this progression, the resources are stored on the following webpage:

Link to Webpage for the Leonardo Lesson (Password: leonardo)

Teaching & Learning Progression

Progression Description (Include Transversal Competencies, Inquiry, Student Choice and Voice, Authentic Connections, and Formative Learning)		Resources (Texts, Audio/ Visual Materials, Digital Tools, Handouts, etc.)
Lesson Sequence	**Literature Review Link for Lesson Sequence**	
2. Collaboration: Students are given two minutes each with their table groups to answer the question, ""What did you discover about the man, Leonardo da Vinci, based on your observations of his work?" As one student is sharing his observations, another student on his right is recording the speaker's observation on a piece of poster paper. After two minutes, the next student in the group, moving clockwise, shares her observation and the poster is also passed so that any new observations can be recorded. At the end of the rotation, after everyone in the small table group has shared and after all the group's observations are included on the poster paper, each group displays their posters for the class. Through a gallery walk, each student in the class comments on their peers' posters using post-it notes. They also write down observations from their peers' posters that they want to add to their own. They return to their original group and update and display their posters.	Providing students with time to learn from one another in a collaborative activity helps them to develop the ability to engage with others, developing their social skills. You may also notice that in learning from one another, the students also improve academically. • Collaborating with Others • Social and Emotional Learning	
3. Read and Write: Students learn that Leonardo was referred to as a Renaissance Man. On a Webpage there are posted articles about Leonardo. There is also an article defining what it means to be a Renaissance Man. Each student is asked to write an informational paragraph about Leonardo as a Renaissance man in their ELA notebooks following this prompt: *Based on your observations and the articles your read, explain why Leonardo da Vinci is referred to as a Renaissance Man?* As students are writing their drafts, they have time for peer feedback using a familiar rubric. Note the importance of peer- and self-feedback and multiple drafts. To enhance the reading and writing experience students also have access to information about Leonardo's paints and paper, the golden ratio, and mirror writing. At stations, students can explore writing on rag paper with a quill pen as Leonardo did for his codices. Students can also practice mirror writing, the method Leonardo use to record details on his inventions.	Letting students gain more knowledge through reading for information and writing their thoughts, keeps them actively engaged in learning the skills and concepts in the standards. Providing time during the writing process for students to engage in peer- and self-feedback, develops self knowledge and continued growth. • Organizing Thinking • Effective Reading Comprehension Practices • Writing for Information • Argumentative Writing • Feedback	

Teaching & Learning Progression

Progression Description (Include Transversal Competencies, Inquiry, Student Choice and Voice, Authentic Connections, and Formative Learning)		Resources (Texts, Audio/ Visual Materials, Digital Tools, Handouts, etc.)
Lesson Sequence	**Literature Review Link for Lesson Sequence**	
4. **Authentic Connection Through Problem/Solution-Based Learning:** At this point, students are given a codex (bound tablet with blank pages) like Leonardo used for his inventions. On the Webpage, students have the opportunity to view a video and tour virtual museums that display Leonardo's codices and inventions. Students are then given the opportunity to search for any modern day problem that they want to propose an inventoin to solve. They draw up their invention, making careful notes about how their invention works and how it will be a solution for a contemporary problem. 5. **Showcase Learning:** Students showcase their inventions to other classes and set up a dislpay of their inventions in the library. For this activity, they can collaborate with another student or work alone.	Allow students choice and encourage them to share their ideas (voice) with others in a meaningful way. This not only provides for greater interest and engagement, but deeper learning and retention. When students present their learning to an audience and when they teach one another, the learning is retained. Also, allowing students to create an invention as an answer to a contemporary problem stimulates dynamic thinking (creativity and innovation) and empathy. • Problem/Solution-Based Learning • Using Digital Tools	

Differentiating Instruction		
General Instructional Practices That Support the Teaching and Learning Progression	**Modifications for Students Needing More Support (EL, Special Needs Students)**	**Modifications for Students Needing Additional Challenges**
These strategies should be clearly aligned with the Suggested Teaching & Learning Progression. They are included to provide options from which teachers can select in order to better meet the needs of a variety of learners. These strategies may be from the Kamm Solutions' Tables, or from other reputable sites that display well-researched instructional strategies. Examples: **Graphic Organizers:** Use the website, http://www.educationoasis.com, to provide students with graphic organizers that will help them to organize their writing for this unit. **Peer Editing/Feedback:** Provide students with the opportunity to discuss and share ideas with partners on how to improve their writing. Provide a peer-editing rubric to support this dialogue between students.	These strategies for students who need more support may be the same strategies as in the first column of this section with modifications to make them more accessible. They may also be different strategies. Examples: Check the following resources for terrific EL strategies: • http://kammsolutions.com/wp-content/uploads/2015/09/ELL_go-to-strategies.pdf	These strategies for students who may need additional challenge are selected to extend student learning. There are multiple approaches that can be used to support students who may benefit from the challenge of a higher degree of complexity on a task. For example, students who have already mastered the grade level standards may be offered a tiered assignment. Tiered assignments provide different work, not more or less work. They should be fair in terms of work expectations and time needed. Tiering can be based on complexity, content level, challenge of process, or product variation. Examples: This resource contains information about identifying, recruiting, and retaining gifted students.
Formative Learning		
Student Goal and Action Plan Template (Insert a Link): This section contains sample formative goal setting templates that students will use throughout this unit. Template samples may be found on the Kamm Solutions Website: https://kammsolutions.com/curriculum/assessment-and-formative-learning/.	PLCs' Inquiry, Inferences, and Next Steps: This section includes results, inferences about the results, and plans for next steps. PLCs or Collaborative Inquiry Teams will use the evidence about student learning in this extended lesson to remediate or extend each student's learning during subsequent learning opportunities.	