

Collaborative Design & Discussion

Unit #: APSDO-00103822
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Grade(s): 2
Subject(s): Informational Digital Literacy
Course(s): GR. 2 - INFORMATIONAL DIGITAL LITERACY

Unit Focus

In this unit, students will collaborate and use a design process to solve problems. Students will apply their learning through a variety of Makerspace projects and coding endeavors. Instructional materials include a range of Makerspace materials and coding platforms.

Stage 1: Desired Results

Established Goals	Transfer	
<p>Standards</p> <ul style="list-style-type: none"> • ISTE Standards (2016) <ul style="list-style-type: none"> ◦ <i>ISTE Standards for Students</i> <ul style="list-style-type: none"> ▪ Innovative Designer - Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions. <i>(4)</i> <ul style="list-style-type: none"> ▪ Students develop, test and refine prototypes as part of a cyclical design process. <i>(4.c)</i> ▪ Creative Communicator - Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals. <i>(6)</i> <ul style="list-style-type: none"> ▪ Students create original works or responsibly repurpose or remix digital resources into new creations. <i>(6.b)</i> ▪ Students publish or present content that customizes the message and medium for their intended audiences. <i>(6.d)</i> • AASL Standards Framework for Learning <ul style="list-style-type: none"> ◦ <i>Shared Foundations and Key Commitments: All Grades</i> <ul style="list-style-type: none"> ▪ INQUIRE <ul style="list-style-type: none"> ▪ Create: Generating products that illustrate learning. <i>(IDL.INQ.05)</i> ▪ Share: Providing constructive feedback. <i>(IDL.INQ.07)</i> ▪ Share: Acting on feedback to improve. <i>(IDL.INQ.08)</i> ▪ INCLUDE <ul style="list-style-type: none"> ▪ Create: Interacting with learners who reflect a range of perspectives. <i>(IDL.INC.04)</i> ▪ Share: Contributing to discussions in which multiple viewpoints on a topic are expressed. <i>(IDL.INC.08)</i> 	<p><i>What kinds of long-term, independent accomplishments are desired? Students will be able to independently use their learning to...</i></p> <p>T1 (T106) Develop and refine a solution to a student-generated question or challenging problem using a design process.</p> <p>T2 (T103) Collaborate with others toward common goal(s) where everyone has a voice in both design and ownership of the work.</p> <p>T3 (T4) Demonstrate fluency and precision in industry standard processes.</p>	
	Meaning	
	Understanding(s)	Essential Question(s)

<ul style="list-style-type: none"> ▪ COLLABORATE <ul style="list-style-type: none"> ▪ Think: Developing new understandings through engagement in a learning group. (IDL.COL.02) ▪ Grow: Actively contributing to group discussions. (IDL.COL.08) ▪ EXPLORE <ul style="list-style-type: none"> ▪ Create: Problem solving through cycles of design, implementation, and reflection. (IDL.EXP.04) ▪ Create: Persisting through self-directed pursuits by tinkering and making. (IDL.EXP.05) ▪ Grow: Iteratively responding to challenges. (IDL.EXP.09) ▪ ENGAGE <ul style="list-style-type: none"> ▪ Think: Responsibly applying information, technology, and media to learning. (IDL.ENG.01) 	<p><i>What specifically do you want students to understand? What inferences should they make? Students will understand that...</i></p> <p>U1 (U100) Deep learning requires an integration of quality resources with innovative spaces to stimulate creativity, intellectual curiosity, and lifelong learning.</p> <p>U2 (U700) Working to find creative solutions to a complex problem is an iterative process that requires perseverance and flexible thinking.</p> <p>U3 (U300) When presented with a challenge, the Design Process is an effective, iterative sequence that values information gained from both successes and failures to develop an innovative solution.</p> <p>U4 (U400) Effective collaborators recognize and leverage others' individual knowledge and skills to achieve a goal.</p>	<p><i>What thought-provoking questions will foster inquiry, meaning making, and transfer? Students will keep considering...</i></p> <p>Q1 (Q300) Input: What problem/need am I trying to solve (now)?</p> <p>Q2 (Q301) Input: What are the constraints and available resources?</p> <p>Q3 (Q402) What is our goal? How are we working together to reach it?</p> <p>Q4 (Q701) How do we design and test a solution? How can we use feedback to make a better design?</p> <p>Q5 (Q500) How do I say what is on my mind and do it in a respectful way?</p>
Acquisition		
Knowledge		Skill(s)
	<p><i>What facts and basic concepts should students know and be able to recall? Students will know...</i></p> <p>K1 That the design process is cyclical and requires perseverance</p> <p>K2 That improvements are a necessary component of design</p> <p>K3 That collaboration can be a beneficial element in successful designs</p>	<p><i>What discrete skills and processes should students be able to use? Students will be skilled at...</i></p> <p>S1 Providing and receiving constructive feedback to improve design</p> <p>S2 Persevering at problem-solving using a given set of tools</p>