Lesson Title: Props Design
Grade Level: 8th grade
Subject: Intro to Technical Theatre and Design
Time Frame: 60 minutes

Learning Goals

	Learning Goals	How will they be met?
Content Specific Goals & Associated Standards	National Core Arts Standards: 1) Creating (anchor standards 1 and 2) 2) Performing/Presenting /Producing (anchor standard 4) 3) Responding (anchor standard 7) 4) Connecting (anchor standard 11)	1) Students are organizing and developing artist work and ideas 2) Students will analyze artistic work and then develop and refine their artistic techniques for the work as they are creating it. They will also be conveying meaning through the presentation of the artistic work. 3) Students are analyzing the script and interpreting it in the props 4) Students are relating their artistic designs with the cultural and social ideas of the script.
Technology-based Goals & ISTE Standards	1) Empowered Learner (1a) 2) Knowledge Constructor (3a) 3) Innovative Designer (4a and c) 4) Computational Thinker (5b)	1) Students are using technology to make choices to show their competency 2) Students are using technology to produce creative ideas for themselves and others 3) Students will use technology to aid in the design process (CAD program)

		4) Students will collect data from the script and then use digital tools (CAD system) to help creatively solve the problems created by the script, actors, and many other factors.
Other Goals	1) Learn what a prop is 2) How read a script to find out the information needed to design the prop 3) Becoming more comfortable using a CAD system	1) Talking about what a prop is and giving examples 2) Showing how to look for clues in the script about the props 3) Students actively using a CAD system

Materials Needed for the Lesson (tech & non-tech)

Computer (use in pairs)
Projector
Doc cam
TinkerCAD
Pencils
Sketch paper
Section of the script
3D printer

LESSON OVERVIEW

Share how the activities in the lesson will help to meet the learning goals. How will technology play a role in meeting the learning goals?

To start off, we will be talking about what a prop is, aided by a presentation showing pictures of different types of props (hand held, set dressing, etc). The technology will help give visuals because some props are too big to bring in or I do not have access to them.

Then we will be looking at the section of script that describes the prop. We will look through it and circle or highlight all of the information about the prop that the script provides (this could be aided by a doc cam).

Next, the students will partener up, each having a pencil and sketch paper and sharing a computer with a CAD system on it. They will draw out several versions of the prop on paper and then input it into a CAD system where they will problem solve issues with the prop and how it will be used on stage. The technology is helping in the design of the prop and in problem solving.

Finally, the pairs will pair up and share their ideas with the other pair, giving and receiving feedback on their props. Because their design is on a computer, it will be easier to share with others. Also they do not have to keep track of paper designs, they just need the computer.

This is the first day of probably two or three in this project of designing and building a prop, with them printing a 3D model of their prop from the CAD system as a conclusion to the project.

TRIPLE E FRAMEWORK CONSIDERATIONS

Share which technology tools you plan to integrate into the lesson. Describe how each tool will help to meet your learning goals. In addition, share the instructional practices you plan to develop in conjunction with the tool to optimize learning.

Name of Tool	**Tool 1: 3D printer**		**Tool 2: Projector**		**Tool 3: CAD**	
Learning goal(s) met by using the tool.	Innovative Designer, Knowledge Constructor		Connecting		Innovative Designer, Knowledge Constructor	
How will the tool be used? *Teams, pairs, individual, or other?*	Pairs		All the class together		Pairs	
Tool Integration for ENGAGEMENT in the Learning*						
Include score in right column (0=No; 1=Somewhat; 2=Yes) and score total for ENGAGEMENT	More time on learning; less distraction	1	More time on learning; less distraction	2	More time on learning; less distraction	2
	Motivates students to begin learning	2	Motivates students to begin learning	2	Motivates students to begin learning	2
	Supports shift in behavior to active social learning	1	Supports shift in behavior to active social learning	1	Supports shift in behavior to active social learning	2
	SCORE	4	SCORE	5	SCORE	6
Teaching Moves to support ENGAGEMENT	Students will be using technology in pairs so that can help hold each other accountable with the time.		A great teaching tool that will help the students to visually see what I am talking about		Students will be using technology in pairs so that they can collaborate and reflect as they go.	
Tool Integration for ENHANCEMENT of the Learning Goals*						
Include score in right column (0=No; 1=Somewhat; 2=Yes) and score total for ENHANCEMENT	More sophisticated understanding of the learning goals	1	More sophisticated understanding of the learning goals	1	More sophisticated understanding of the learning goals	2
	Scaffolds, differentiates, or personalizes learning	2	Scaffolds, differentiates, or personalizes learning	0	Scaffolds, differentiates, or personalizes learning	2
	Supports student demonstration of understanding in new	2	Supports student demonstration of understanding in new	2	Supports student demonstration of understanding in new	2

Adapted from Kolb (2017) Triple E Lesson Planning Template

	ways, not possible before		ways, not possible before		ways, not possible before	
	SCORE	5	SCORE	3	SCORE	6
Teaching moves to support ENHANCEMENT	It takes it past just seeing a 3D model on a computer screen. It adds something to the lesson that could not be done easily without technology.		Using technology as a tool, rather than the instructor. It allows me to show more and varied types of props and adds to just a lecture.		It allows the students to go past just a pen and paper design. Each pair has a different design	
Tool Integration to EXTEND the Learning Goals*						
Include score in right column (0=No; 1=Somewhat; 2=Yes) and score total for EXTENSION	Supports learning outside of the typical school day	2	Supports learning outside of the typical school day	1	Supports learning outside of the typical school day	2
	Bridges school learning & everyday life (authentic experiences)	2	Bridges school learning & everyday life (authentic experiences)	1	Bridges school learning & everyday life (authentic experiences)	2
	Builds authentic life/soft skills	1	Builds authentic life/soft skills	1	Builds authentic life/soft skills	2
	SCORE	5	SCORE	3	SCORE	6
Teaching moves to support EXTENSION	Acknowledge that a 3D printer is used outside of a school and is something that is not normally taught in a school setting, but on a job. (prepares for the future)		The projector is something that is used fairly frequently in class; however, its use extends past the class into real world settings. (draws on prior knowledge)		Using a CAD system is challenging and is something that is used fairly frequently in a real world setting (using the same tools inside of class that they would use outside of class)	
LESSON SET UP. How will I prepare for each piece of technology being integrated in this lesson?						
Setting up Accounts Differentiating Personalizing Creating models or mentor	Check on the printer to make sure it is working and available for all students. Have a plan for when the students get to print their designs and a plan to help each pair as they need it.		Log in and make sure that the PPT is working and correct for the class that I am teaching.		Know how to log in. Have a video created walking them through steps if they need to review it. Also have help	

Adapted from Kolb (2017) Triple E Lesson Planning Template

ASSESSMENT: **How will you assess the activities happening through the tool?**			
Monitoring/Observations Formative & Informal assessments Summative assessment	I will be working with each group to make sure that they are working well with the printer and seeing if they need any help. I will be calling up the pairs to print when it is their turn.	I will be watching for class participation when I am using the projector to see if they are learning about props.	I will be walking around to help answer questions about the CAD system and help them problem-solve when they need it.

ASSESSMENT DISCUSSION:
Overall, this lesson uses technology well. It does not seem like it detracts from the lesson, but adds something to it. The use of technology helps to connect what is being learned in school to the outside world, as well as doing things that would be a lot harder to do without the use of technology.

PROCEDURES: What is the minute-to-minute activity that will be happening in the lesson? Describe what the teacher is going to do and say, as well as what the students are going to do.

Time stamp and General Description	What are the students going to do?	What is the teacher going to say and do?
DAY1 0-2: walk in and get set up	Sitting at their desks ready to learn	Walk in and get set up. Say hi to the students, say what we are going to be working on, ect.
2-15: Props PPT	Interact with the PPT about props, answer questions, identify props, ect.	Go through the PPT and teach about props. Ask the students questions to make sure they know what a prop is.
15-18: prep CAD	Break up into pairs and get a laptop, pull up CAD	Break students up into pairs and tell them to get the laptops and open CAD
18-30: CAD basics	Go through CAD basics	Teach and help students with CAD basics
30-35: Script hand out	Receive scripts and listen to directions	Talk about the project, hand out scripts, ask if there are any questions and answer them
35-50 : Design work	Draw out on paper ideas for the prop, take the one they like the most and	Go around and see how the students are doing, answer questions, general check

	start putting it into CAD	ins, ect.
50-60: share and feedback	Break of into groups of 2 pairs and share their ideas, give feedback	Break the pairs off into pairs or pairs
60: end of class	Put away computers and paper	Pack up and leave classroom
DAY 2&3: 0-2: walk in and get set up	Get ready for class	Get set up
2-45: work time	Work on designs, ask questions, share with other groups if want to	Answer questions
45-60: prep for 3D printer	Prep CAD designs for printing	Help students with prep
DAY 4: 0-2: walk in and get ready	Get ready for class	Get ready for class
2-45: get ready to print and print	Finish designs and print them off	Answer questions, call up groups when they are ready to print
45-60: present props	Present their props and listen to other's presentations	Watch the presentations

*Resources from Kolb(2017) to support the Triple E Framework
Triple E Measurement Tool (Chapter 7)
Instructional Strategies (Chapter 9)