



THE UNIVERSITY OF BRITISH COLUMBIA
Faculty of Education

Master of
Educational
Technology
Program



What Can You Do To Make Your Community a Better Place

Lesson Plan- Grade 6

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THE UNIVERSITY OF BRITISH COLUMBIA

Vancouver Campus

Master of Educational Technology

Intermediate Lesson Plan

Grade(s): 6	Date(s): Beginning of the school year	Duration: 180minutes - Full morning
Lesson Topic/Title: What can you do to make your community a better place		
Subjects: ADST / PHE	Number of Students: 24	
Big Ideas: Design can be responsive to identified needs. (ADST 6) Social Justice (non curricular) - Designing for others can improve the community as a whole		
Curricular Competencies: ADST - Understand context, define, ideate, prototype to create a working concept that will solve a design problem. ADST - Identify and use appropriate tools, technologies, and materials for production.		

PHE - Explore strategies for promoting the health and well-being of the community.

Social Justice -
 Designing from a variety of historical and cultural contexts
 Develop healthy interpersonal skills
 Designing in response to current events situations that involve social responsibility

Content Objectives (From BC curriculum):

General Objectives:	Specific Objectives:
ADST - Define, Ideate, Prototype PHE - Social and community health	ADST - Identify key features or potential users and their requirements ADST - Generate potential ideas and add to others' ideas ADST - Evaluate personal, social, and environmental impacts and ethical considerations Choose an idea to pursue ADST - Simple computer-aided drafting programs - Arts - processes, materials, movements, technologies, tools, strategies, and techniques to support creative works ADST - Construct a first version of the product or a prototype, as appropriate, making changes to tools, materials, and procedures as needed PHE - Explore strategies for promoting the health and well-being of the school and community PHE - Describe and assess strategies for promoting mental well-being, for self and others

21st CENTURY COMPETENCIES: *Which COMPETENCIES will be addressed and how?* Critical thinking and Problem Solving/Creativity and Innovation/Collaboration/Communication/Global Citizenship/Metacognition and Reflection

Critical thinking - Students will generate an idea based on the previous 4 lessons and this one to come up with a concept that will make their community a better place. They will use the inquiry process to ask and see answers to additional questions based on their "wonders" from the padlet reflections. They will be encouraged to use interviews, observations, internet research and discussion to generate sound understandings for the empathy stage as well as a well thought out idea.

Creativity and Innovation - Students will be utilizing 3D modeling software (Tinkercad) or no-tech crafting materials for this project and will have the opportunity to think abstractly and metaphorically.

Collaboration - Students will be encouraged to work in groups of two and generate ideas collaboratively as well as divide tasks to make their group work productively and incorporate ideas from all the group members.

Communication - Students will be asked to share the design, concept and intentions of their designs with the rest of the group

Maker Mentality - Students will be encouraged to iterate through the design process by returning to the 'empathy' stage so they can assess if their intended design is achieving the intended goals. They will also be asked to reiterate the prototype and test phases to practice improving a concept. The goal of encouraging the maker mentality is to disrupt the traditional linear school narrative with one that cycles back on itself.

LEARNING GOAL(S) I can... I will....

I can define a problem within my community and generate an idea of my own thinking or pulling from the learning and others ideas

I can use Tinkercad or low tech tools to design a model in 3D that demonstrates my concept.

I can create a design that supports the health and well-being of my school and community and/or the mental well being for myself and others.

I can create something that gives me purpose and and helps me define my identity because it has a personal connection to my own life.

I can use the inquiry-approaches to problem solving such as questioning, communicating and researching.

I am mindful of intersectionality and how this can affect how the end user will use my design

I can create something that is culturally responsible and is respectful to the culture where it is intended to be used.

PRIOR KNOWLEDGE *Prior to this lesson, students will be able to...*

Students will have gone through the first four lessons and will have plenty of examples to draw on for context.

Students will have used Tinkercad in previous lessons.

Students who have experience with VR will be given the option to create their concept using a VR tool such as Tilt Brush, SculptVR or using a computer on CoSpaces

Equity, Diversity, Inclusion, Decolonization, Anti-Racism (EDIDA) Frameworks-

Considerations:

- *How are you going to ensure that this lesson utilizes the EDIDA frameworks to create an inclusive space for your students?*
 - **Equity** - *Students will have access to all the tools and resources they need and each have their own account in Tinkercad*

- **Diversity** - The open ended project will allow students to explore their own identity and area of interest based on their own context, while also being encouraged to invite and accept others (Example: buddy bench)
 - **Inclusion** - Students will be randomly paired with at least one other partner and given strategies to include both people's ideas through ways of communicating (both listening and speaking with intent) Open ended and include parameters for students who need structure.
 - **Decolonization** - The First People's Principles of Learning will be displayed and encouraged throughout the entire unit, which relates directly to most of the FPPL values.
 - **Anti-racism** - The project will take place in a safe space. Many concepts earlier on in the unit may involved students' personal context and culture. These will be celebrated and respected at the teacher modeling level and reinforced in the classroom environment.
- Consider what materials you will use
 - Whiteboards, crafting materials and computers will be the primary tool in this lesson. Students will be reminded about respecting and conserving these materials as to not generate more waste and overuse of resources.
 - How will you ensure all voices are included and heard?
 - Students will be given at least three opportunities where they are encouraged to share.
 - Whip around - after the first few minutes of brainstorming every group will have 10 seconds to offer a title level description of their idea.
 - Pair-Share - Part way through the project students will be paired with another group to share and review their ideas, progress as well as tips and tricks
 - Final share - Students will be asked to share a brief (1-2min presentation) about their concept, process and next steps.
 - From what lens will the content be delivered?
 - The unit is primarily centered in the inclusive lens by seeking ways to acknowledge accept and utilize multiple skills from students and the community.
 - The students will be drawing on their own experiences ("Adolescent Learner" lens)
 - The teacher will model their own examples, thought process and ideation
 - Outside examples in the form of story (text and video) will be brought in to support ideation and process.
 - How will you present and implement the content in a way that is culturally responsive and relevant?
 - Through story - important in local culture
 - The student centered approach that draws on their own context and story will likely lead to a relevant experience.

DIFFERENTIATED INSTRUCTION *What will I do to assist and/or differentiate instruction for individual learners? (Materials, Delivery, Outcome)*

Students will have the option to use the following tools to design their concepts based on their personal preference and experience.

Hightech - VR creation tools (Tilt Brush, SculptVR) or computer tools

Low tech - Tinkercad 3D modeling software

No-tech crafting materials Multiple modalities will be used throughout including

- Teacher delivery
- Videos and texts
- Peer sharing (inter and intra-group support and review)
- Focus on process (Can students generate an idea and begin to follow through to a communicable concept - i.e. "It doesn't matter if students make it to a refined final product during this lesson.

Accommodations: (PLEASE REFER TO THE INCLUSION GUIDE)

Built in through the way that students have choice in their execution (VR, Tinkercad, Craft)

Group flexibility - Students will be encouraged to work in groups of two but it will be acceptable for them to work individually or in groups of three if they are able to communicate a task designation plan.

MATERIALS:

Computers, Crafting materials (Tape, Glue, Pipe cleaners, corks, cotton balls, popsicle sticks, straws, various strings, playdough/plasticine, natural materials)
If available: VR headsets with appropriate software loaded, CoSpace (license dependent)

INTRODUCTION/MINDS-ON

Group drama provocation - Thinking about objects differently drama activity

1. The class is divided into groups of 4-6
2. Each group is given a common location as their prompt. House, hospital, school, train, playground..., or for more natural places, forest, water, sky, park, desert.
3. Each group is given a SINGLE random object: dice, one chair, hairbrush, music stand, stool, pencil. (Anything that is available)
4. Groups are not allowed any other props beyond the one object and themselves.
5. The goal is for the group to demonstrate their location utilizing the prop and improvisation to construct the idea for the audience. (Example: Using the brush to represent a tree. They are not allowed to say their location at anytime.
6. Each group is given 30 seconds to present a short scene before the audience attempts to guess.

SUPERHEROES TO THE RESCUE - Enhancing everyday objects

Adapted from - <https://www.dramatrunk.com/improv-game-superhero-rescue>

How to play superheroes to the rescue

Players:

Create a group of 4-6 volunteer students who will be in the scene.

One student starts by watching or experiencing a crisis unfold acting it out as a solo improvisation. Have the class come up with a made up crisis ("All the chocolate in the world has disappeared" "a meteor is

CRITICAL GUIDING QUESTIONS:

Did the the drama game generate creative thinking and prime the students for the remaining lessons?

Were students able to respect the activity by listening and preparing themselves for accepting new and abstract ideas?

<p>heading towards earth"). The crisis can be big or small ("you can't find your shoes").</p> <p>After about 10 seconds, they say: "If only ...[] was here to help me". (Shoelace Man/woman/person/ hero...)</p> <p>The first superhero answers the call, enters and introduces themselves and their special powers. (Have no fear _____ is here)</p> <p>The two characters proceed with the scene, discussing how they are going to solve the crisis using the first superhero's mediocre powers. .</p> <p>The superhero then introduces the second superhero the same way: "If only ...[superhero] was here to help us"</p> <p>And so forth until all the students are in the scene.</p> <p>Once all of the superheroes are in the scene, they attempt to solve the crisis and bring the scene to an end.</p> <p>Alternative:</p> <p>If students are having difficulty coming up with new superheroes, allocate each student a silly superhero before they start.</p> <p>Debrief: discussion surrounding how objects can be used for different purposes and have value in new contexts or be modified to enhance a situation.</p>	
<p>ACTION-LEARNING EXPERIENCES:</p> <p>A) Review of areas that we are drawing from. Recap lessons 1-4 (Myself, community, issues) and highlight examples of missing pieces, issues or areas for growth from discussions and Padlet activity from former lessons. These are areas that we can draw from for project ideas in lesson 5.</p>	<p>CRITICAL GUIDING QUESTIONS:</p> <p>What else can you think of that has been enhanced to make your community a better place?</p> <p>Where is there room for improvement?</p>

<p>B) Review examples Makey Makey water fountain - https://www.youtube.com/watch?v=bl_0BfPIJYc&feature=emb_logo</p> <p>Buddy Bench https://www.youtube.com/watch?v=Ob2OsHYQ7PM</p> <p>C) Whiteboard rapid design ideation (2min per section)</p> <ul style="list-style-type: none"> a) highlight what you know (From first four lessons) b) branch out missing pieces/questions/wonders c) generate multiple ideas to solve/answer these d) decide on an idea e) whiteboard sketch the idea with labels f) whip around and share (10seconds) everyone's idea <p>D) Maker Challenge</p> <ul style="list-style-type: none"> a) Using either Tinkercad (low tech) or crafting materials generate a concept prototype of your idea 	<p>Explain in your own words what these two stories described about everyday objects.</p>
<p>CONSOLIDATION/CONCLUSION: Group share - every team will have 1-2 minutes to show their idea, describe their process and goals and answer questions and get feedback from their peers.</p> <p>Generate and consolidate ideas for Culminating Activity (next lesson)- What can we MAKE to improve our community. This is a step further to lesson 5. Students will be asked to go through a similar process as lesson 5 but will attempt to create a fully functioning tangible item or project (ex buddy bench, wellness program)</p>	<p>CRITICAL GUIDING QUESTIONS:</p> <p>Can this be taken further? What more did we learn about ourselves, each other, community? Does your design create any new issues?</p>

ASSESSMENT (STRATEGIES, TOOLS) - DIAGNOSTIC, FORMATIVE, SUMMATIVE

Diagnostic

For

Ongoing from previous lessons. Were students able to generate ideas and expand their thinking about self and community?

Introductory activity - Are students able to expand their thinking surrounding objects and locations?

Whiteboard brainstorming and designs

As

Pair sharings

Conferences and strategic questioning

Filling out Self Reflection Table/Padlet

Summative

One Column Rubric with expectations.

EVALUATION OF THE LESSON

How would you do this?

Were students able to come up with a realistic concept to help their community?

Did we have the resources to help students realize their designs?

Did students have enough experience with the creation tools before this project?

REFLECTION:

1. Were my students successful in meeting the learning goals? How do I know?

Students were able to generate a concept and design a digital wireframe/concept of their idea.

2. Did my instructional decisions meet the needs of all students? If not, what are my next steps?

I will determine this through observation during the lesson and make accommodations and modifications to the lesson as it progresses.

What worked well? Why?

Were the students proud of their work? Were the projects meaningful/impactful for the students learning as well as their community? Did intrinsic motivation happen naturally? I will determine this through observation during the lesson, student self assessment, and completion of the rubric.

3. What will I do differently

- a. When teaching this lesson again?
 - i. Would I take parts away/add?

- b. For the subsequent lesson?
 - i. What else do they need before revisiting some of the skills learned so far?

4. What are the next steps for my professional learning?

How can I share this with others? School district newsletter, website, professional development, colleagues, invite other classes. repeat with another class.

References

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