



THE UNIVERSITY OF BRITISH COLUMBIA
Faculty of Education

Master of
Educational
Technology
Program



Supports Within Your Community

Lesson Plan- Grade 6

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THE UNIVERSITY OF BRITISH COLUMBIA

Vancouver Campus

Master of Educational Technology

Intermediate Lesson Plan

Grade(s): Middle Years	Date(s): N/A	Duration: ~3.5hr	Lesson Topic/Title: Lesson 4: What supports are available in my community?
Subjects: ADST and PHE (B.C. Curriculum)		Number of Students: 24	
Big Ideas: <ul style="list-style-type: none">- To develop an awareness of the support available within the community.- To make healthy choices that positively influence physical, emotional, and mental well-being.- To be aware of contributing factors for the inequities of support.			
Curricular Competencies: PHE: Social and community Health: <ul style="list-style-type: none">- Explore strategies for promoting the health and well-being of the school and community.- Identify and describe strategies for avoiding and/or responding to potentially unsafe, abusive, or exploitative situations.			

- Describe and apply strategies for developing and maintaining healthy relationships

Understand context:

- Empathize with potential users to find issues and uncover needs and potential design opportunities.

ADST:

Defining:

- Identify key features or potential users and their requirements

Ideating:

- Generate potential ideas and add to others' ideas
- Evaluate personal, social, and environmental impacts and ethical considerations

Sharing:

- Identify new design issues

Applied Skills:

- Identify and evaluate the skills and skill levels needed, individually or as a group, in relation to a specific task, and develop them as needed

Applied Technologies:

- Identify how the land, natural resources, and culture influence the development and use of tools and technologies

Social Justice inclusions:

- Develop an understanding of personal perspective on community issues (Knowledge)
- Reflect on opinions and perspectives of the community composition (Attitude)
- Identify equitable solutions to improve access to supports (Skill)

Content Objectives

- Student will identify the supports available in their community that apply to the identified issues from lesson 3
- Students will understand some of the barriers that exist for access to support
- Students will understand how their position within the community contributes to observed disparities and needs
- Students will reflect on their own actions and attitudes and how they impact inclusivity in the community

General Objectives:

- Students will identify community and personal support for the identified community issues.
- Students will use Micro Bits to create a support tracker.
- Students will abstract practical uses for the support tracker.
 - What are real world examples of the application of this technology?
 - How would this technology help those in need of support?

Specific Objectives:

- Students will collaboratively create lists of supports available within their community
- Students will discuss the availability and accessibility of those supports (think, pair, share).
- Students will use block coding to create a support tracker to participate in support scavenger hunt.
 - Set radio frequency dynamically.

<ul style="list-style-type: none"> - Are real world examples of this technology accessible (what are the barriers to use and who do they exclude). - How can real world examples of this technology be improved? - Students will understand potential barriers to access helping to avoid dangerous or exploitative situations. 	<ul style="list-style-type: none"> - receive radio frequency. - Use conditionals statements. - Set variables. - Students will identify barriers created by technology to access support. - Students will identify their own perspectives and prejudices. - Students will ideate solutions to overcome barriers such as inequity and prejudice.
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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 and Problem Solving	Collaboration	Global Citizenship
Students will consider the identified issues and consider what supports might be: <ul style="list-style-type: none"> - Ask questions 	Students will work together within multiple areas of the assignment to enhance perspective and understanding. <ul style="list-style-type: none"> - Ask 	Students will develop an awareness of the implications of their social and economic environments. <ul style="list-style-type: none"> - Support

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<p>- . M a k e c h o i c e s b a s e d o n i n f o r m a t i o n a n d t a s k t o</p>	<p>e l c o m i n g a n d s a f e p l a c e f o r e x p r e s s i o n o f t h i n</p>	<p>n t s w i l l r e c o g n i z e t h e d i v e r s i t y a n d r e a l i t i e</p>
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<p>Students will reflect on the issues identified and consider the limitations to access that may be barriers when considering real world applications of</p>	<p>identifying -</p>	<p>knowing -</p>	<p>software -</p>
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i o n s a n d v i e w s o f o t h e r s a n d a d j u s t n y t h i n k i n g	-	n d p u r p o s e . O r g a n i z e s e l f a n d t a s k s i n o r d e r t o	solving problem s. - P a r t i c i p a t e i n a c t i v i t e s t o i n p r o v e n t s o
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o t h e r s t o b r o a d e r c o n t e x t s . Students will exhibit their inner maker. - I e n o n s t r a		u a t e s t r a t e g i e s . - I d e n t i f y , w e i g h t c o n s e q u e n c
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LEARNING GOAL(S) I can... I will....

- I can empathize with problems to uncover needs and potential solutions (ADST)
- I can identify my biases and prejudices and understand their influence on the community (social justice)
- I can identify the differences between cultures and their interpretations of community and support (cultural perspective)
- I can generate ideas and contribute to the ideas of others (ADST)
- I can identify how issues and supports may be different in terms of access, inclusion, and perception (intersectionality)
- I can apply simple algorithms and use computational thinking (ADST)
- I can use block coding to create a support tracker (ADST)
- I can work collaboratively with others and contribute to group discussions. (PHE)
- I can identify solutions to community issues while considering the solutions from others. (PHE)
- I can identify and consider the barriers to access for the identified supports. (PHE)

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

- Students will already be familiar with Micro Bits.
 - Connectivity.
 - Block coding environment.
 - Specific use of individual blocks and their function.
- Students will have prior experience working in groups with assigned roles.
- Students will already be oriented to devices that facilitate access needs.
- Familiarity with Padlet.
- Familiarity with MentiMeter.
- Students will have completed the preceding 3 lessons on self, community, and issues.
- Students have been in contact with community members to gain perspectives from various community groups.
- Students will have looked at census data for their community and have an understanding of the communities composition.

- Students will have already had discussions with their family about perceived issues and available support.

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?*
- *Consider what materials you will use*
- *How will you ensure all voices are included and heard?*
- *From what lens will the content be delivered?*
- *How will you present and implement the content in a way that is culturally responsive and relevant?*

The group nature of the empathy portion of the design cycle will be completed as group contributions to posters in the classroom. The open aspects of this activity will inherently impose group dynamic roles and play into social positioning within the learning group. To counter this inherent positioning within the group dynamic the poster aspect of the lesson will be completed using an anonymous Padlet. This way we get group visibility of ideas while avoiding direct identification of contributors.

The lesson will include several layers of technology including the use of Padlet, makecode.org, MentiMeter, and the physical Micro Bit device. Each one of these technologies provides its own access issues and barriers.

- **Padlet:** class technologies include the use of iPads. All students will be encouraged to use the iPad's voice to text functionality. This method of contributing ideas will obscure issues concerning output (dysgraphia, motor deficiencies, literacy level). By encouraging the use of this function for all students it will act as a universal support for all learners in the class.
- **makecode.org:** The make code website has features such as coloured blocks to help students remember locations and functionality, drag and drop code functionality, keyed code shaped to understand code relations, and an interface built in for prototyping and testing the functionality of code. With all of these features there are still some areas needing attention relative to varying skill, literacy, potential visual exceptionality, and motor control. To counter some of these deficiencies within the makecode.org platform the students will work on their code in small groups. Though this format does impose group dynamics onto the activity it provides collaborative opportunities to allow for access and safety.
- **Micro Bit and makecode.org:** The Micro Bit is a small electronic component that has social connotation relative to internalized social roles and efficacy with technology. To help develop efficacy, the lesson structure will consist of chunks with explicit directions to complete the basic functionality of the code. To ensure that students who have confidence in this area, ideas for additional functionality will be included within the instructions to allow those who feel confident the opportunities to extend their thinking.
- **MentiMeter:** anonymous contributions allow for all voices to be heard without the influence of social pragmatics. Of course this can not be completely eliminated but intentional effort to mitigate this barrier is warranted. Students will interact with this platform using the text to speech function of the iPad.

Social Perspective:

- The anonymizing aspect of the Padlet contributions will extend beyond issues of efficacy and facilitate a means for equitable access. Contributions to this discussion could expose vulnerable learners to undo risk. Through the anonymization students will be able to choose if they want to contribute, not

contribute, or respond to contributions. This is important because of the potential for the exploitation of the trust relationship within the class and allowing students to exist within the continuum of this relationship. In this way the lessons are geared to dismantle social hierarchies and ensure that all students have a voice. This is especially important when considering issues such as racism, classism, and gender biases. By implementing anonymization for student contribution and participation the intent is to widen the trust space and allow for diverse and flexible thinking.

Student centered:

- The structure of the lesson has been left intentionally vague because the content and priorities of the students provide the lens and context of the lesson. This way the knowledge and experiences of the students drive the learning make it more meaningful, relatable, and applicable to their context.
- The lesson is based on student interests and by extension identity. This implies that issues around diversity are addressed through the honoring of student voice and the collective identity of the learning group. However, a dichotomy exists between student voice and group role associations. In the context of group contributions, microcosms of societal dynamics exist influencing contributions, safety, and voice.
- To extend the previous point, intentionality for the development of a safe environment also needs to reflect the needs of the group. This aspect of consideration needs to be made in light of student composition and needs.
- Peer leaders: assign experienced students as helpers to help others with connection issues such as Micro Bit pairing with iPads and website access.
- Constructivist pedagogies are a part of a maker pedagogy; this is why the lesson is focused on the students voice and affords them the opportunity to ideate solutions from their context and understanding. Solutions are not dictated or suggested by the teacher.

As students move through the unit they are developing the mindset which will allow them to approach the unit's culminating activity from an inquiry infused design thinking perspective. Students will use their 'wonders' to develop questions, empathize with the issue through research and depending understanding, ideate, prototype, and develop their solution to share with the community.

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

Outcome:

- The expectations of producing products are not an explicit intention of the lesson and will be considered in reference to growth and participation (it is not necessary for all students to produce the same product). The lesson provides students various opportunities for engagement, representation, and action. Outcomes are a measure of engagement in process rather than a measure of product.

Materials:

- The materials for the lesson have some differentiation limitations but universal supports such as voice to text, group participation, and inclusionary structures ensure that all students have the opportunity to fully engage while maintaining purpose and dignity.
- Group numbers for selection (8 sets of identifiers with a frequency number and symbol): allow for the random assignment of groups. This will facilitate equitable grouping of students without concern of social hierarchy.

Delivery:

- Learning activities are student centered with minimal teacher focused delivery of material.
- Direct instructions will be chunked to reduce cognitive load allowing learners to more easily engage.

- Chunked section of lessons will include learning extension considerations.
- Multiple modes of representation will be included for access such as: written instructions, code snippets and progression, video instructions.
- Group participation will be utilized to provide students with socially scaffolded opportunities for participation.

Accommodations: (PLEASE REFER TO THE INCLUSION GUIDE)

The accommodation strategies for this lesson can be found in its design. All support will be delivered universally to provide an inclusive learning environment.

- multiple means of access for learning materials.
- group participation for social supports
- voice to text technology implementation
- maintaining of an open space for learning
- Scavenger hunts will only include locations with universal access.

MATERIALS:

Networked:

- active internet connection (Padlet, Makecode.org, MentiMeter).
- Padlet page setup with contribution areas with anonymous settings engaged.
- MentiMeter word cloud

Hardware:

- iPads (class set or one per pair, depending on resources)
 - if this is not available poster paper or white boards can be used. If this is done, accommodations for access and social dynamics will need to be made.
- Micro Bits: boards, battery packs, extra batteries (28).
- Micro Bits with channels set and broadcast capabilities for scavenger hunt (5 - 10)

Classroom:

- Digital projector or white board

Organization:

- A frequency and symbol on a small card for each group with group identifier (This can be done through an LMS if available)

INTRODUCTION/MINDS-ON

- MentiMeter activity: Students will recall information from previous lessons about what issues are found in their community.
- MentiMeter is used to generate ideas while making prevalence and themes visible
- Use the results from MentiMeter to co-create the headings for brainstorming in Padlet.

CRITICAL GUIDING QUESTIONS:

In the last few classes we have explored who we are, our community composition, and what issues we see in our community. Let's go over the issues we see in our community.

	Login to mentimeter and add your thinking to the word cloud.
<p>ACTION-LEARNING EXPERIENCES:</p> <ul style="list-style-type: none"> - Students individually contribute to the padlet and add their ideas for support available within the community. - Ask students to think, pair, and contribute to the Paddlet once again to try and expand the available supports. - Divide the class into 8 groups of 3 using the pre-prepared group tickets. - Ask each group of three to choose a support they would like to hide in the hunt (if there are multiple groups who want the same choice ask them to rock paper scissors to decide). - Post the links to the video, written instructions, and for the scavenger hunt (Micro Bit coding). - Each group will create code for one device that the other groups need to find. They will additionally create code for their seeking device. - Discuss access parameters for where and how their device can be hidden. - Give each group a staggered start to go hide their Micro Bit. - Each group will then use their seeking device to try to find the other group's hidden devices. Each device will show a symbol and the 'finding' group will have to take a picture of the device location and symbol as evidence. <p>----- Give students time to find devices. -----</p>	<p>CRITICAL GUIDING QUESTIONS:</p> <p>Considering the problems we see in our community, what kinds of things do we have available to help with these issues?</p> <p>How could a Micro Bit be used to mimic technology we would use to find support when we need it?</p>
<p>CONSOLIDATION/CONCLUSION:</p> <ul style="list-style-type: none"> - Discuss technologies that we use which could be used to find support (internet, GIS...) - Identify barriers caused by technology access inequities on the availability of supports. - Ideate solutions to overcome these barriers. <ul style="list-style-type: none"> - Students will work in their groups to think of possible solutions - Students will share their ideas with the others. - Students will complete the self-reflection Padlet. - Are there limitations to these technologies? <ul style="list-style-type: none"> - Can everyone use them? - What might stop people from using them? - What would make them more accessible? 	<p>CRITICAL GUIDING QUESTIONS:</p> <p>I understand that using a Micro Bit to find support in the real world is not that practical. What technologies are available that we would use to find these supports?</p> <p>When considering these technologies do we see their access and use as being equal and equitable?</p> <p>What are the barriers that people might experience while trying to use technology to find support for an identified issue?</p>

What might a solution for this barrier look like? How can the technology be improved to be more equitable?

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

Diagnostic: review/discussion.

Is the learning situated in a place to allow for continuation or does previous learning need to be revisited.

- Examine previous lesson materials (Review exported PDF of previous class Padlet activity), is depth of response in a place that warrants continuation?
- MentiMeter activity is in place to explore students' recollection and current thinking of the concept. Is further discussion needed in order to prepare students for exploring supports?

Formative: observation/discussion

Teacher perspective - Is teaching currently effective? Do strategies need to be adjusted to facilitate student learning?

- Padlet activity provides direction of instruction. Is student participation and depth of thinking indicating engagement and sense of value in learning?.
- Students are able to engage in coding instructions and the majority of students are exploring extension activities/enhancements?
- Students are able to make links between Micro Bit location programs and real world examples of methods used to find supports?
- Can students identify barriers to technology access and the inequities this might create with access to support?
- Are the students able to ideate solutions to overcome these barriers?

These are guiding questions to ask while observing learning to ensure learning is happening and my teaching is effective.

Student perspective: Where am I with my learning and what do I need to do to improve my learning stretches?

- Have I contributed to class discussions?
Does my code work?
- Do I know how this activity is relevant to the technologies I would use to find something?
- Can I identify barriers to access for technology?
- I have ideas to improve access to technology to make it more equitable.

These are not explicit questions you would ask a student but represent the information you would try to attain through discussion and observation in order to move the student forward with learning.

- self reflection activity using Padlet. Students will use the padlet to record their learning under the following headings:

Students will be encouraged to use video, sound, photos when submitting to the self reflection Padlet to keep the learning inclusive and maintain universal support for learning.

- What tools did I use?
- Draw or upload a photo of your favorite moment.
- What did you find out?
- I wonder?

Summative:

Triangulation of evidence:

Observation:

- Summative assessment in this unit will be an ongoing use of a single column rubric with feedback provided as competencies, knowledge and applicable products are displayed.

Conversation:

- Student self-reflection padlet will provide a conversational student perspective for triangulation of learning evaluation.

Artifact:

- Photo and video evidence of student learning will be collected for each lesson as the unit progresses.

EVALUATION OF THE LESSON:

Self-reflective questions to evaluate lesson:

- Did the students stay engaged in the learning activities?
- Were the activities and expectations for the lesson appropriate for this learning group?
- Did the lesson facilitate the learning needs of the group?
- What were the 'pain points' for student access and participation?
- Did the assessment strategies provide me with an indication of growth?
- Did the lesson design promote a wider perspective of community and the needs and supports available?
- Was a better understanding of inequitable access to technologies and their impact on vulnerable people gained through the activity?

REFLECTION:

1. Were my students successful in meeting the learning goals? How do I know?
2. Did my instructional decisions meet the needs of all students? If not, what are my next steps?
3. What worked well? Why?
4. What will I do differently
 - a. When teaching this lesson again?
 - b. For the subsequent lesson?
5. What are the next steps for my professional learning?