



THE UNIVERSITY OF BRITISH COLUMBIA

Faculty of Education

Master of
Educational
Technology
Program



Multi-Sensory Trail

Inclusive Makerspace Challenge

Overview of the challenge

Create a multi-sensory trail experience for those with mobility limitations, and hearing and visual impairments. This trail experience can be a hiking trail or discovery trail anywhere in the world.

Materials and Resources Required



No Tech Tools can include (but are not limited to)

- cardboard
- glue
- scissors
- string/yarn/twine
- construction paper
- popsicles
- pompoms
- pipe cleaners
- tape
- recyclable items
- bbq skewers
- tooth pics
- straws
- playdough
- clothes pins



Low Tech Tools can include (but are not limited to)

- Ozobots
- Cublets
- Beebot
- Code-a-pillar
- Sphero
- Tinkercad
- DoInk
- Animation Creator
- Flip-a-Clip
- StopMotion Recording
- Garageband
- iMovie



High-Tech Tools can include (but are not limited to)

- 3-D printer
- Sphero
- Makey Makey
- Dash and Dot
- Ollie



Note: many of the low-tech tools can also be combined with other educational technology tools to redefine the inclusive makerspace challenge using technology in innovative and critical ways.

It is also recommended to explore and discover digital tools and robots to be used in critical and creative ways.

Inclusive Maker Challenge Instructions

1. Your task is to make more inclusive multi-sensory trail experiences for its users using equity, diversity, inclusion, decolonization, and anti-racism (EDIDA) frameworks. You may redesign or reinvent an existing creation, tool, product, or a good or innovative and new idea for the purposes of making the experience inclusive and accessible to all. You will utilize the available makerspace materials to design your inclusive space and experience.
2. Create a multi-sensory trail experience for those with mobility limitations, different ages and abilities, individuals with cognitive challenges, hearing and visual challenges, physical challenges, and/or mental challenges. Use the maker materials available or discovered to design a prototype and test each prototype of this multi-sensory trail experience. This trail could be a hiking or discovery trail anywhere in the world. As you design these multi-sensory aids, consider the environment, location, Indigenous resources, etc. and identify how you might ensure the sustainability of both the multi-sensory experiences and the environment.
3. Use the lesson plan templates (printable [design planning sheet](#) and [Tinkercad Design Thinking Process](#)- Digital Process) to design your multi-sensory trail experience.

Critical Questions for Consideration

- a) How will you ensure that the multi-sensory experience is inclusive of all peoples of all abilities?
- b) How will you ensure that you are not disrupting the environment and resources within the environment?
- c) What do you need to consider to ensure the sustainability of the multi-sensory trail experience?
- d) What UN Sustainability goals align with your design?
- e) What are you planning on making and why?
- f) What problem(s) are you solving?
- g) Why is this a problem?
- h) What audience are you making this for?
- i) How might this item benefit this audience?
- j) What barriers do you foresee having?
- k) What is your plan of execution?
- l) How might you transition your prototype to an actual multi-sensory trail experience?
- m) How might you showcase these experiences to a global audience?
- n) What are your next steps?

Background/ Additional Information

Evergreen is helping make cities flourish. Cities that are low carbon, inclusive to all and sustainable at their core. Cities to live, move, work, play, learn and thrive in. Since 1991, Evergreen has been facilitating change. Working with other city builders to convene, collaborate and catalyze ideas into action. Their teams connect with many stakeholders to lead with a mindset focused on solutions. They collaborate to develop innovative ideas and catalyze change by testing solutions, developing prototypes and



scaling projects. Find out more [here](#).

Smart Cane: <http://mysmartcane.ca/>



Blindsquare: <http://www.blindsquare.com/about/>



Inclusivity Focus

For this multi-sensory trail experience inclusive making challenge, it is imperative that you consider all ages, abilities, races, cultures, religions, and genders to ensure you are creating experiences that are accessible and engaging to all individuals.

No Tech, Low-Tech, High-Tech Options

See the materials list for options of no-tech, low-tech, and high-tech options for this challenge.

Extensions

There are endless opportunities for ways to extend the design of multi-sensory trail experiences for all peoples. To share your own ideas and examples, tweet #UBCMETmakerchallenge.