

**CODE/MOE/UOIT Makerspaces Project--Lesson Planning Template**

**School Board: Rainy River District School Board**

**Grade(s): 4**

**Subject(s): Music & Visual Arts**

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| **BIG IDEAS:****Basic coding involves all the skills of problem solving: reasoning, communicating, reflecting and metacognition**• developing aesthetic awareness • using the creative process • taking an innovative approach to a challenge • manipulating elements and forms to convey or express thoughts, feelings, messages, or ideas through the arts • using the critical analysis process • constructing and analysing art works, with a focus on analysing and communicating the meaning of the work • using new media and technology**Curriculum Expectations:****OVERALL:** C1. Creating and Performing: apply the creative process to create and perform music for a variety of purposes, using the elements and techniques of music;D1. Creating and Presenting: apply the creative process to produce a variety of two- and three-dimensional art works, using elements, principles, and techniques of visual arts to communicate feelings, ideas, and understandings;**SPECIFIC:** D1.1 create two- and three-dimensional works of art that express feelings and ideas inspired by their interests and experiences;C1.3 create musical compositions for specific purposes and audiences (e.g., write a composition for recorder using musical notation on the five-line staff; compose a piece using non-traditional notation, such as a melody map or icons; compose a soundscape to represent the physical landscape of Canada; create a composition to accompany a dance piece) Teacher prompt: “Using your voice or an instrument, create a melodic contour that represents the contour of the boundary between Canada and the United States. How could you use your voice or an instrument to re-create this contour line?” |
| **Learning Goals:**“We are learning to…”-create circuits with the Makey Makey and various fruits, vegetables and other conductive materials.-Perform musical compositions using the Makey Makey piano. | **Success Criteria:** “We will be successful when…”-We can play musical notes using the Makey Makey. |
| **Lesson Overview:**-Students worked in small groups to setup the Makey Makey to various conductors. Using their Chromebooks and the Makey Makey piano students performed music creations. |
| **Materials and Technology:** -Makey Makey kits-Chromebooks-Various materials for students to test conductivity |
| **Student Accommodations/Modifications:** -Students were strategically placed into groups where they could be successful. | **Lesson will be differentiated by:*** **Content, specifically:**
* **Process, specifically:**
* **Product, specifically:**
* **Environment, specifically:**
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| **MINDS ON: Getting Started** |
| During this phase, the teacher may: • activate students’ prior knowledge; • engage students by posing thought-provoking questions; • gather diagnostic and/or formative assessment data through observation and questioning; • discuss and clarify the task(s).  | During this phase, students may: • participate in discussions; • propose strategies; • question the teacher and their classmates; • make connections to and reflect on prior learning.  |
| **Describe how you will introduce the learning activity to your students.** -Prior to using the Makey Makey we did a lesson on open and closed circuits which involved YouTube videos and demonstration.**What key questions will you ask?** -Why is your Makey Makey not working?-What makes your circuit complete?-How can you fix your Makey Makey to make it work?-How can this technology be used in other ways?**How will you gather diagnostic or formative data about the students’ current levels of understanding?**-Observations, discussions, checklists. **How will students be grouped? How will materials be distributed?** **-**Students will be grouped in pairs or groups of 3. Each group will have a Makey Makey and Chromebook and various conductive and non-conductive materials.  |
| **ACTION: Working on it** |
| During this phase, the teacher may: • ask probing questions; • clarify misconceptions, as needed, by redirecting students through questioning; • answer students’ questions (but avoid providing a solution to the problem); • observe and assess; • encourage students to represent their thinking concretely and/or pictorially; • encourage students to clarify ideas and to pose questions to other students. | During this phase, students may: • represent their thinking (using numbers, pictures, words, manipulatives, actions, etc.); • participate actively in whole group, small group, or independent settings; • explain their thinking to the teacher and their classmates; • explore and develop strategies and concepts.  |
| **Describe the task(s) in which your students will be engaged.** Students will be engaged through the hands-on use of the Makey Makey and materials.**What misconceptions or difficulties do you think they might experience?** -Some circuits may not work because the material is not conductive, missing the ground wire, not holding the ground wire, or the circuit may not be complete.**How will they demonstrate their understanding of the concept?**-Students will be able to play music on the Chromebook via the Makey Makey.**How will you gather your assessment data (e.g., checklist, anecdotal records)?**Observations, discussions, checklists.**What extension activities will you provide?** -Students can explore other activities on the Makey Makey website, YouTube and using Scratch. |
| **CONSOLIDATION: Reflecting and Connecting** |
| During this phase, the teacher may: • bring students back together to share and analyse strategies; • encourage students to explain a variety of learning strategies; • ask students to defend their procedures and justify their answers; • clarify misunderstandings; • relate strategies and solutions to similar types of problems in order to help students generalize concepts; • summarize the discussion and emphasize key points or concepts.  | During this phase, students may: • share their findings; • use a variety of concrete, pictorial, and numerical representations to demonstrate their understandings; • justify and explain their thinking; • reflect on their learning. |
| **How will you select the individual students or groups of students who are to share their work with the class (i.e., to demonstrate a variety of strategies, to show different types of representations, to illustrate a key concept)?** -Students that volunteer to share their work will have the opportunity.**What key questions will you ask during the debriefing?** -What difficulties did you have?-What did you learn?-What other ways can you use circuits? |