

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

**School Board: Rainy River District Board of Education**

**Grade(s): 4**

**Subject(s):Health/Coding**

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| **BIG IDEAS:****Basic coding involves all the skills of problem solving: reasoning, communicating, reflecting and metacognition****Healthy eating habits: Health is very important to students’ present and future lives.****Curriculum Expectations:****OVERALL:** C1. demonstrate an understanding of factors that contribute to healthy development; C2. demonstrate the ability to apply health knowledge and living skills to make reasoned decisions and take appropriate actions relating to their personal health and well-being; C3. demonstrate the ability to make connections that relate to health and well-being – how their choices and behaviours affect both themselves and others, and how factors in the world around them affect their own and others’ health and well-being.**SPECIFIC:** C1.1 identify the key nutrients (e.g., fat, carbohydrates, protein, vitamins, minerals) provided by foods and beverages, and describe their importance for growth, health, learning, and physical performanceC2.1 analyse personal food selections through self-monitoring over time, using the criteria in Canada’s Food Guide (e.g., food groups, portion size, serving size), and develop a simple healthy eating goal appropriate to their age and activity levelC3.1 identify ways of promoting healthier food choices in a variety of settings and situations (e.g., school, arena, recreation centre, stores, food courts, special events |
| **Learning Goals:**“We are learning to…”**Identify ways of promoting healthier food choices in a variety of settings and situations (e.g., school, arena, or anywhere with vending machines).****Identify the key nutrients provided by foods and****beverages, and describe their importance for growth and good health.**  | **Success Criteria:** “We will be successful when…”**We design and create a healthy vending machine using the Scratch program.** |
| **Lesson Overview:****Design a vending machine with healthy food choices using Scratch.** |
| **Materials and Technology:** Canada’s Food GuideScratch program on Chromebooks or computers |
| **Student Accommodations/Modifications:** Speech to text capability for devices | **Lesson will be differentiated by:*** **Content, specifically:**
* **Process, specifically:**

**X Product, specifically: fewer choices required on the vending machine*** **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.** **Have students make a list/collage of sometimes or everyday snacks using magazines or the internet****What key questions will you ask?** **What makes a healthy snack?****What things should we consider when we are determining if a snack is healthy or not?****How will you gather diagnostic or formative data about the students’ current levels of understanding?****Look at students’ list or collage.** **Anecdotal notes or conversations.****How will students be grouped? How will materials be distributed?** **Students will be grouped in 3’s so they will all have to participate in the group’s effort.** |
| **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 must design a vending machine in Scratch that will display healthy food choices.**What misconceptions or difficulties do you think they might experience?** What does healthy food mean?Deciding on a design--will there be sections for hot and cold food?Consider how the machine would actually work in the real world (e.g. Finding out how long will food last in a vending machine).Getting the vending machine to look like food is coming out of it.**How will they demonstrate their understanding of the concept?**Design the vending machine with healthy food choices.**How will you gather your assessment data (e.g., checklist, anecdotal records)?**Checklist**What extension activities will you provide?** Students could include sounds (e.g. of the machine working or a recording of their voice saying, “Great choice, this food is high in calcium and will help you build strong bones,” a person approaching the machine and making a selection (student will need to know how to animate a sprite and use different costumes).Students could also code their vending machine to include a list of nutrients and benefits to the body to pop on the screen when a selection is chosen. |
| **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 will share their coded project on the Smartboard via a document camera.****What key questions will you ask during the debriefing?** **What was the most difficult part of this assignment? Do you have any advice for the rest of the class on how to tackle this assignment?****If you were going to do this assignment again what modifications would you make?** |