Maker Skill Sprint Cycle: Design Your Own

Use this tool to plan a skill sprint cycle. Determine up front what the focus will be for the cycle and then plan a series of skill sprints to support students' development of affective, skill-based and cognitive objectives. At the end of the cycle, plan a culminating activity in which students to apply their new knowledge and skills to solve an open-ended challenge.
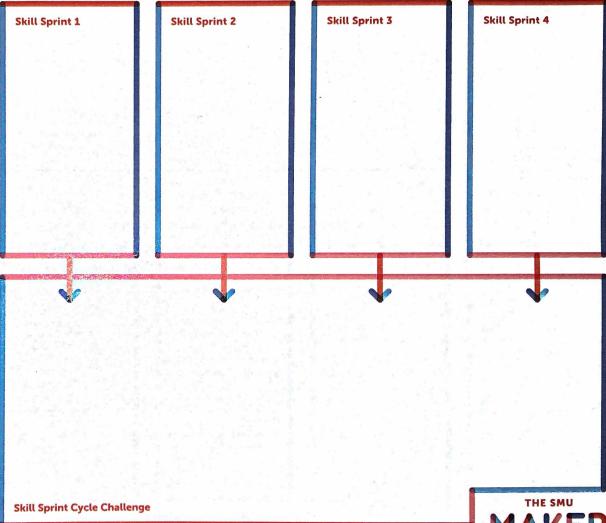
What is the overarching theme for this skill sprint cycle? Take a look at the Organizing Themes section of the Maker-Based Instruction Resource Guide.

How does this skill sprint cycle align with learning objectives for your students?

Affective Learning Objectives:

Skill Learning Objectives:

Cognitive Learning Objectives:

Skill Sprint 1

Skill Sprint 2

Skill Sprint 3

Skill Sprint 4

Skill Sprint Cycle Challenge

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Maker Skill Sprint Cycle: Modeling the Seasons

What is the overarching theme for this skill sprint cycle? Take a look at the Organizing Themes section of the Maker-Based Instruction Resource Guide.

Understanding the seasons through 3D Printing

How does this skill sprint cycle align with learning objectives for your students?

Affective Learning Objectives:

Skill Learning Objectives:

Cognitive Learning Objectives:

Skill Sprint 1

Sketching

Explore: Video

Skill Building: Discussion

Challenge: Sketching what causes the seasons

Skill Sprint 2

Building Physical Models

Explore: Creating a previously used model

Skill Building: What needs to be included in a model

Challenge: Building a physical model that best represents a scientific concept

Skill Sprint 3

Building Digital Models

Explore: Exploring Thingiverse

Skill Building: Using Tinkercad

Challenge: Building a digital model of previous day's physical model

Skill Sprint 4

3D Printing Models

Explore: 3D printing videos & 3D printed objects

Skill Building: Understanding the design to print process & how 3D printing works

Challenge: 3D printing the digital model from the previous day

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Extending to other scientific concepts

Explore: Identifying other common scientific misconceptions

Skill Building: Developing a plan to address that misconception through 3D modeling

Challenge: Create a 3D printed model that addresses the selected scientific misconception

Skill Sprint Cycle Challenge

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