



Maker Lesson Summary

Lesson Title	Making Mindfulness
Name of creator	Susan McLain
Name of collaborator/s	Patience Blythe and Kristina Read
Subject and grade level	6th, 7th, and 8th grade STEM
Time required	4 weeks (variable)
Link to lesson plan and materials	https://smclain.my-free.website/maker-lesson

Lesson Description:

Over the course of a month in the spring of 2018, one class period each of 6th, 7th, and 8th grade STEM students at the Ann Richards School for Young Women Leaders joined together to design and build a mindfulness/relaxation space on campus. Students generated ideas to encourage relaxation, chose concepts, gathered materials, constructed their elements, and presented their work to their peers.

Lesson Development:

The Ann Richards School prioritizes the development of the whole child and emphasizes a "healthy and well-balanced lifestyle." Part of this Social and Emotional Learning initiative includes weekly yoga and mindfulness activities. Some students have expressed a lack of understanding about what mindfulness means other than a quiet time to breathe. The eighth- and seventh-grade STEM teachers and I developed this maker lesson as a tool to get our students to think more critically about what mindfulness means. Over the course of this project, the students will design and create a space on campus to evoke relaxation and mindfulness for their fellow students during the stressful testing time during the spring semester.

Lesson Implementation:

Through an experience watching an emotional movie clip, the students in my sixth-grade STEM class developed an understanding of how different feelings and emotions can be evoked in others. Students watched the scene in *Up* that shows Carl and Ellie's relationship through the years. The clip tends to evoke strong feelings in viewers through intentional use of colors, sounds, and other stimuli. Students took notes about how they felt and tried to identify what in the clip made them feel that way. Finally, students chose an emotion they wanted to make someone feel and came up with how they could evoke the feeling using sight, touch, sound, taste, and smell.

My 6th grade students self-grouped and brainstormed ways they could encourage relaxation and mindfulness in their space. They created miniature models of the A-frame the 8th graders had constructed and made scale models of different elements they might like to build for the space. After joining with the 7th and 8th grade students and splitting up into sense groups, students generated many ideas for how to encourage calm using their sense.

Students had a significant amount of freedom to make whatever elements of the relaxation space that interested them. Each sense group was given a budget of up to \$10 to make their elements. Some students gravitated toward new tools that interested them. For instance, a pair of students in the Sight group wanted to learn how to use the laser cutter, so they decided to create a lamp with a cut-out shade made of scrap plywood from the school's makerspace. They learned how to use Adobe Illustrator to create a pattern, send that pattern to the laser cutter, and cut out the sides of the shade. Then they used more familiar tools, like square clamping jigs and wood glue to assemble the lamp. A pair of students in the Sound group decided to make a wind chime using silverware that one of their families was going to get rid of. They used a scrap piece of plywood with an interesting lasercut hole in it as the base of their wind chime. They spray painted each piece of silverware gold and drilled a hole in it. They strung the silverware up using fishing wire.

Due to testing schedules, the students were unable to complete the project. Each group created at least one element to encourage mindfulness, but the final structure and staging was not completed. However, the students conducted an interactive gallery walk to present their creations to the other members of the construction team. Some of the elements were installed individually around the school. For example, the tire swing was hung from one of the trees in the courtyard, and I observed many students sitting on it over the course of the rest of the school year.

Connection to important concepts and skills within the discipline and/or across subject areas:

Due to the very open-ended nature of this project and the STEM curriculum at Ann Richards School, concepts and skills varied significantly depending on the group:

- Tool and equipment proficiencies
- Measurement and units
- Geometric concepts, including angles and shapes
- Chemical changes
- Electric circuits

Reflection:

What Went Well:

This project included major student voice and choice. The students were able to choose which sense appealed to them, they chose what kind of experience they wanted to create, and they were able to construct their own designs. Also, the students learned how to use a variety of new tools and equipment and became more comfortable in the makerspace. They had to overcome challenges like a limited budget, not having unlimited time on a

shared tool, and creating around materials that weren't pristine. The students owned their projects and were excited and proud to show them off. The younger students, especially, gained confidence in their making abilities and in their interactions with older students.

Thoughts for the Next Iteration:

Structuring the project a little more would help the project go more smoothly. We teachers didn't set intermediate deadline expectations very well, and the students were unable to finish. Also, I think the project would have been substantially the same but more likely to be completed if the students installed their projects in an existing space rather than trying to construct a separate space. Doing this project again, I would have the students use a journal to reflect on their process and progress each day and keep track of the math and science that they used.