



STEM-FOCUSED CLASSROOMS

Hoover High School

WHAT DOES THE ROOM LOOK LIKE?

The goal is to provide students and teachers unique environments to learn and teach. By providing an alternative space for teachers to bring their students to learn, we put forward the idea that teaching and learning is not business as usual. Stand and deliver is not comfortable in these spaces. We ask teachers to consider planning instruction with space in mind causing them to consider how the physical layout and lesson design process are inter-related.

Features of the room include a welcoming atmosphere, comfortable seating, collaborative environments that allow student choice, and low technology features so that all teachers feel comfortable using.

Partners to the STEM classroom include DMPS Superintendent Tom Ahart, DMPS Chief Operations Officer, Harold "Bill" Good, Storey-Kenworthy our furniture and design partner, DuPont-Pioneer, and Iowa State University.

WHO USES THE ROOM?

Hoover High School has three different spaces that have been re-designed, two classroom spaces that are specific to a teacher and a third that is available to all teachers in the building.

Space #1 is a math classroom that serves students learning geometry, AP statistics, and algebra. The cost of outfitting this classroom is the same cost as buying 30 student desks and a teacher desk, but there is no doubt it evokes a different feel for both students and teachers. It consists of high and low tables, chairs that roll on a finished cement floor, and soft seating around whiteboard-top tables that students use to show work and share ideas. There is an area of the room with soft, stair-step seating that students love to relax and work on. Several desks have electrical charging stations in the middle of the table, allowing students to charge their electronics as they work.

Space #2 is an Engineering classroom which serves students who take our PLTW courses, graphic design courses, and architectural and engineering courses. The room is three times longer than it is wide, allowing the space to be divided into three distinct work areas. One has tables that allow for maker-space and collaborative group work. The second is where you will find the desktop computers where students can work separately or together, depending on the task. The third space contains all of the printers and equipment necessary for graphic work.

Space #3 is referred to as the STEM space and it is available to any teacher in the building who has a lesson that would benefit from defined, collaborative work space and may need students to project from a computer to a screen for their group to see. It also has an interactive white board available for teachers and students.

HOW DO YOU USE THE ROOM?

One common theme of the learning in these spaces is that it is student-centered. Students are working harder than the teacher in these rooms – that is, when it comes time for the lesson to be delivered. There is no question the teacher has stepped outside their normal planning routine to consider the space and technology available and how it is actively incorporated into the lesson.

WHAT ARE SOME TIPS FOR OTHERS INTERESTED IN DEVELOPING A STEM CLASSROOM?

1. Hire a team that designs spaces for a living. They will come to the table with a mindset that will cause teachers and administrators to think outside of their wheel house.
2. Consider color, durability of the finish of the material.
3. If there are electronics in this space, how will you manage?

CONTACT INFORMATION

Maureen Griffin,
STEM Administrator, School Improvement Leader
maureen.griffin@dmschools.org
515-242-7300
4800 Aurora Avenue
Des Moines, IA 50310

For more information, visit www.IowaSTEM.gov/STEMClassrooms