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Technology in the Classroom

BENEFITS OF TECHNOLOGY IN THE CLASSROOM

"We need technology in every classroom and in every student and teacher's hand, because it is the pen and paper of our time, and it is the lens through which we (students) experience much of our world."
-David Warlick, educator and public speaker

The world is nearly unrecognizable today than from 100 years ago. Every industry of the world has changed with the growth of new technology. Today, 97% of classrooms have a computer. But, having one computer in the classroom isn't all the technology a school needs nor all the technology the world has to offer. Students can learn and benefit from access to a variety of technologies.

Makes Learning Fun

One of the most obvious reasons for using technology in the classroom is that it makes learning more fun. Modern students are more likely to be attentive to a series of slides on a tablet than the same info on pieces of paper.

▶ Hands-on education is an effective learning style. Using technology, students can complete a task and learn simultaneously. The Silhouette software and machines can be great assets to hands-on students.

▶ Technology can help keep students focused for longer periods of time. Rather than staring at a textbook, engaged learning can help distracted students stay on-task.

Prepares Students for the Future

Using technology at school will teach students skills they will use in their future careers. Rather than strict memorization, students will learn team work, communication, and problem solving skills. Plus, technical skills are essential in today's workplaces and learning how to interact with technology can help students with any technologies they will encounter in the future.

Students Learn at Their Own Pace

Technology allows students to get individualized time to learn at their own pace. The Silhouette machine is easy to use and students can use it without help from the teacher. Technologies can offer a confidence boost to students who can operate the machine alone and help develop trouble-shooting skills.

SILHOUETTE MODELMAKER™

Silhouette ModelMaker™ is and educational 3D modeling software geared toward supporting STEM (Science, Technology, Engineering, and Mathematics) subjects. The software is easy-to-use yet powerful, making it useful in elementary through high schools.

Using ModelMaker can help students develop skills such as:

- ▶ Cognitive and practical skills
- ▶ Reasoning
- ▶ Understanding and interpreting concepts
- ▶ Manual dexterity
- ▶ Spatial awareness
- ▶ NETS modeling
- ▶ Design skills
- ▶ Math skills

Users can design in this interactive software and create 3D models using the Silhouette machines.

Using Silhouette in the Classroom

Kris Schwengel teaches at Punahou School in Hawaii. A seasoned teacher of 23 years, Mr. Schwengel has been using Silhouette and ModelMaker for 10 years to teach 4th graders (watch video). He says, "the Silhouette cutting machine is perfect for introducing elementary and junior high school students to engineering."

Mr. Schwengel and his students create projects using the Silhouette ModelMaker™ software to "take math off the page". These type of projects target the often-neglected engineering part of STEM classes. One project he teaches is creating a mini pizza box to scale. The student designs and creates the 3D model by measuring an actual pizza box and using geometry to size it proportionately. The student then uploads a pizza image onto the box and figures out how to position the image correctly on the various sides.

After that, it is as easy as sending the design to print from a printer and then loading it into the Silhouette to cut the edges and perforate the folds. "It doesn't feel like a math lesson or math project to them," says Mr. Schwengel. A technology that helps kids learn math that doesn't even feel like doing math would be an asset to any classroom.
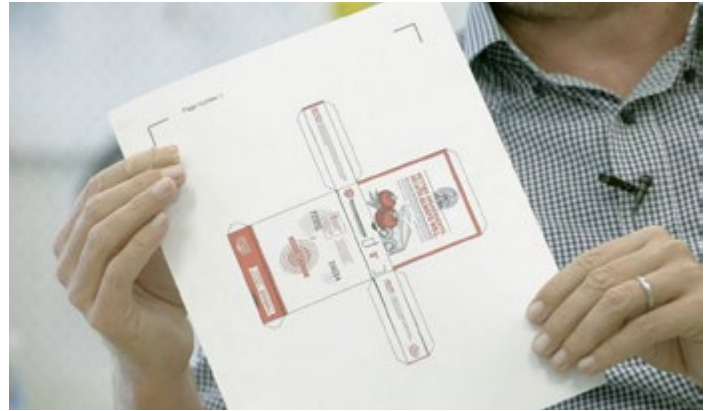
Pizza box

Student using Silhouette

Silhouette machines are already being utilized in classrooms. Suzanne Yamanaka, a teacher Kapolei Middle School in Hawaii teaches math in a way she calls "hands-on geometry". Using the Silhouette machines and ModelMaker, Ms. Yamanaka had her students design and build a 3D model city. She uses this approach to "introduce geometry without the textbook". Students get a hands-on learning experience rather than math problems out of a book.

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TURNING CLASSROOMS INTO MAKERSPACES

Using the model of an active learning environment, classrooms can be Makerspaces. A Makerspace is a place where people can meet to build, tinker, create, invent, and explore with tools and with other people. Having a Makerspace in the classroom is a way students and teachers can use technology together.

In schools, sometimes creativity gets pushed to the back and greater emphasis is placed on other areas of learning, such as preparing for standardized tests. Bringing technology and Makerspaces into class is a way to restore creativity and critical thinking. Makerspaces promote curiosity, inventiveness, and problem solving. These are skills that students can use in any future profession they choose. Knowing technical skills is becoming a requirement for jobs in all fields. According to one study, 78% of teachers, kindergarten through middle school, affirm that technology has had a positive impact on their students.

WHY SILHOUETTE?

Silhouette machines are just one of many technologies that could be used in the classroom. But why is Silhouette such a great choice?

▶ Silhouette machines and software are learning technologies. With the Silhouette, students are using technology to make something physical. Seeing a design move from lines on a screen to a physical project is rewarding and educational.

▶ Silhouette machines are safe. The blade is protected so students can't cut themselves, even if they need to manually adjust the blade.

▶ Silhouette machines are durable, and there are not many ways a student could easily break one.

▶ Silhouette machines are cost-friendly. The main material you will use in the classroom is paper, which is not expensive compared to other products.

Cutting with a Silhouette machine is the perfect lead-in to 3D printing. A student can learn the basic skills, like designing, and then quickly cut out their design with paper and a Silhouette. This option is much cheaper and faster than 3D printing.

EDUCATOR DISCOUNT PROGRAM

Many teachers use Silhouette electronic cutting machines extensively for classroom décor and organization. This can be a cost effective way to personalize a classroom. But Silhouette machine usefulness doesn't end there. They are great to use in the teaching of curriculum at all grade levels. Whether it's preschoolers learning simple shapes or university students practicing package design, the Silhouette can be a great teaching tool.

Educators at any level and licensed non-profits qualify to purchase Silhouette products at an educator discount for classroom or curriculum use. Simply submit the form at www.silhouetteamerica.com/education.

References

Benefits of technology in the classroom

Why the maker movement is popular in schools

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