Media literacy, technology engaging for elementary students



School libraries across the state increasingly are becoming home to makerspaces and 3D printing opportunities as elementary school teachers use innovative learning experiences to equip students with the skills they need to succeed in college, career and life.

Editor's Note: This guest piece is by Karen Ammann, digital learning instructor for ***Red Clay Consolidated School District***

STEM (science, technology, engineering and mathematics) programming emphasizes applying knowledge to solve problems, and educators are finding new ways to provide engaging learning that requires critical thinking and is problem-based.

Stella Evans, librarian and technology teacher at **Mote Elementary School** in the **Red Clay Consolidated School District**, organizes a variety of opportunities for her students to build, create, and solve problems in the library's makerspace centers. There, children can be found using Lego blocks to build roadways and infrastructure to connect two buildings strategically placed on a wall. Students may need to consider scale, distance, landforms, and other variables that may impact their building choices and decisions.

Others may be seen using the open-source electronics platform Arduino to program a computer to perform tasks such as turning on a fan and creating patterns on a light board. Others may be diagnosing an electrical problem in a circuit that is preventing a light bulb from lighting. Regardless of the modality, Evans' students apply their knowledge in all content areas to solve authentic, engaging real-world problems.

At Mote Elementary, fourth- and fifth-grade students choose their favorite Unified Arts class in which to spend an extra day each week for the marking period. Evans hosts the Technology Elective class, which focuses on 3Dmodeling. Students work in Tinkercad, an online 3D design and 3D printing application, to build their designs.

In Tinkercad, students complete a five-lesson pack learning how to maneuver the Tinkercad tools. Once the lesson pack is complete, students then select a project to build and print. Some students

choose a pre-designed project while others opt to build their project from scratch. The goal of the class is to create a Recipe for Creation, one in which students work with scale, layering, cause-and-effect relationships, and measurement. Recipes are then shared with classmates so students can collaborate and learn from each other’s successes and failures.