

# THE POSSIBILITIES ARE ENDLESS MAKERSPACE

**INNOVATION. CRITICAL THINKING. CREATIVITY. CHALLENGING. PROBLEM-SOLVING.**

---

These are just a few words to describe what is going on at West Valley Christian School in their makerspace area. With academic rigor at the core, West Valley Christian excels at preparing students for high school and beyond.

The students, with the supervision from their teachers, get a hands-on approach as they build their own projects. This can be an E. V. Racer, Kelvin kit for building an airplane, levitation racers, robotic arm, jumbo foam cutter, building an airplane, and even work with a bandsaw.

As the students were building their E. V. Racer, they had to use critical thinking to make their car work best. The project combined a motor, wheels, and a rubber band to connect them, to make the cars drive, but also drive up an incline.

"It's really cool to think about what an engineer does," said Emma, a seventh grader. "If I do one thing, how does it affect the next part? I have to think about the final product altogether. I need to try different solutions, to see what can make my car move the best.

The students continued to make modifications, as they tried their car on the track and incline, using critical thinking to make their car faster. They stretched out the rubber band to make it bigger or they rearranged their equipment to see if the weight being at the front or the back would make a difference. Then, the students put their cars to the test. A hill climb track was used to see at what degree angle the cars could drive up. Depending on the speed of each car, the angles used were 8 degrees to 25. Students continued to tweak their car to make it drive better. The students also used a second, long track. With cars driving from the starting line to the finish line, 30 feet in total.

The project also made the students think about how engineers work. "How do people make bigger versions," said Micah, a seventh grader. "How can I make my small car better? Do I re-adjust the location of the parts to make the rubber and work better with the wheel?"

---

# THE POSSIBILITIES ARE ENDLESS MAKERSPACE

**INNOVATION. CRITICAL THINKING. CREATIVITY. CHALLENGING. PROBLEM-SOLVING.**

---

The school is always bringing in new projects and ideas to get the students thinking about how things work, why things work, and then bringing it all back to a biblical mindset.

This is just one of many fun projects that school has for kids in their STEM classes. They also learned about flight. Using a Kelvin kit to form their parts on an airplane, the students started by sanding down the edges. Starting with the fuselage and then moving to the wing. Forming their plane to the best of their ability. It allows students to be creative as no plane looks the same.

“It was hard work,” said Justin, a sixth grader. “We got dirty. It was fun. It took time to shape and depending on how hard I pushed with the sander, my wings would be formed a certain way. It’s a good opportunity because the designing piece helps someone have a better understanding of making something.”

The students had more to say and finished with talking about how the school truly cares for them. “They want us to learn more,” said Emma. “Not just focus on English or math, but experience more opportunities.”

