The future of solving problems

During the sessions in Clarion, Evans talked to the students about the scientific method, design thinking and engineering cycles as different problem-solving methods. He explained making and breaking prototypes as a way to learn how something works and fails. And he referred to the importance of 21st-century skills such as creativity, collaboration, critical thinking and communication.

“Design and STEM all fit into that same space for learning and thinking,” Evans said. “Today we have many tools and ways of thinking that fit into that problem-solving idea. There are different ways to see the world around you.”

As he invited the students to experience the Oculus Rift, Evans said, “It might seem like a game now, but it will change how you’re educated in just two to five years. Use these tools, see how they work, experience them and then think about problem solving. These technologies will soon be how people solve many problems.”

STEM in Stratford

In Stratford, FLEx was part of a full day of activities celebrating the school’s new “making” initiative. The Stratford Community School District is part of the National Science Foundation’s K-12 STEM in Stratford program, which has received a $10,000 grant from America’s Farmers Grow Education to provide students with technology and materials, including a 3D printer, they can use to invent and create in their science and social studies classes.

Evans and Dan Neubauer, a graduate student in industrial design at Iowa State University’s Department of Industrial Design, worked with ISU Extension and Outreach. Evans referred to the importance of 21st-century skills such as creativity, collaboration, critical thinking and communication.

“The students had seen some technologies and heard of others. He was pleased about their ease of use with them. “They’re very hands on and really quick to get into it. They’re like fish in water. It’s been fun to see that,” he said. “As they walk away very enthused and excited. To have a student walk away excited about STEM, about design is fantastic. I’m very happy to provide that opportunity from Iowa State.”

FLEx moving forward

The FLEx team is busy this spring with workshops for elementary, high school and college students, talented and gifted classes and Area Education Agency instructional technology specialists. Based on this success, Ringholz plans to expand the pilot outreach program, which has been funded by Iowa State’s Strategic Initiative on interdisciplinary design education and research, and the industrial design department. FLEX is a collaboration between the colleges of Design and Engineering in association with ISU Extension and Outreach.

Ringholz and the team are creating curricular materials and resources for teachers to integrate these advanced technologies into the classroom. And they are applying for grant funding through the National Science Foundation’s K-12 STEM outreach program.