

**FAST FACTS**

**Name:** Sarah Jessie

**Role:** Instructional Specialist for Hands-On Science

**Institution:** Rutherford County Schools, Murfreesboro, TN

**Challenge:** Providing science activities that engage young students and build a solid foundation for future studies and lifelong learning.

**Solution:** Carolina living materials and STEM programs, including the Smithsonian STC® program and the Building Blocks of Science® curriculum.

**Results:** Students can't wait to get to their science activities, and they share that excitement with each other and their families. Students embrace other subjects—such as reading and math—when integrated with science, and the resulting student grades demonstrate the positive impact of learning with science.

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## *Carolina Living Materials: Inspiring Young Learners, Their Families, and Educators*



**Supporting lifelong learning.** *Fostering an early interest in science can have positive effects that last a lifetime.*

Sarah Jessie is always on the lookout for great inquiry-based, hands-on STEM resources for the elementary students of Rutherford County Schools. Jessie has been developing the K–5 science activities for Rutherford for more than 24 years, and she has partnered with Carolina for 23 of those years. She credits Carolina with helping her keep her programs up to date, interesting for students, and fresh for teachers.

The results are amazing student engagement, consistently high student assessment levels, and a recognized science program that has become a model for schools throughout the state.

### **Building a Stellar STEM Program**

Jessie uses many Carolina living materials and STEM resources, such as the Smithsonian STC® program and the Building Blocks of Science® curriculum. Both of these programs provide the three-dimensional learning approach of the Next Generation Science Standards\* (NGSS). Carolina's living materials are an important component of the programs.

Jessie also incorporates Carolina living materials for other attention-getting, longer-term science activities, such as butterfly metamorphosis. "Hands-on activities are so important for student engagement," says Jessie, "and the wide variety of living materials available from Carolina makes it easy to develop stand-alone activities students can follow for several months."

### **Awakening Young Minds**

Year after year, Jessie sees the impact living materials have on young students. "The hands-on activities definitely capture their attention," she reports. "They become so fascinated with science that they can hardly wait to get to that part of their day."

In addition to getting students interested in science, Jessie's teachers find their students are more open to other subjects, such as reading and math, when

“The Carolina living materials and other STEM resources are a great source of ideas and inspiration for me and our teachers.”

—Sarah Jessie, Instructional Specialist for Hands-On Science,  
Rutherford County Schools, Murfreesboro, TN

incorporated into their science lessons. “The students also score better in those subjects when they are integrated with science lessons,” explains Jessie, who has witnessed firsthand the power of three-dimensional learning.

### Changing Lives

Jessie has seen how hands-on science can have impacts beyond subject mastery and good grades—it literally changes the lives of many students. She shares the story of a young Rutherford student who was very shy and didn’t interact with her classmates. Then came the snails. In a science activity involving aquatic snails, the little girl’s snail was unusually active for a snail. “She became so excited that she forgot her shyness and began talking more, and her classmates began interacting with her more too,” says Jessie. “She came out of her shell thanks to that snail, and she became a more dynamic part of her class.”

Jessie relates another examples of life-changing impact from hands-on science. One of the Rutherford teachers received a letter from a former 2nd-grade student who was then in her final year of medical school. The student thanked her teacher for the science activities they did all those years ago, especially the butterfly metamorphosis, which began a process of change in her own life. She relates how that experience sparked her love of science and learning, which led her to be the first person in her family to graduate high school, the first to attend college, and now the first to earn her medical degree.

### STUDENTS ARE SAYING . . .

I began a journey in the 2nd grade when I fell in love with science thanks to the fun hands-on activities we did. Now I am graduating from medical school. What a difference those science activities made in my life!

### Inspiring Educators and Parents

Jessie regularly finds inspiration for new activities from Carolina resources and staff. For example, Jessie gets ideas from Carolina for her Family Science Nights when parents get to see what their children are doing in science and actually conduct hands-on activities with them. “The parents have fun and often get as excited as their children,” Jessie relates. She also sees the Rutherford teachers enjoying similar excitement and inspiration with Carolina resources.

### Being a Regional Resource

The elementary students of Rutherford County Schools consistently achieve above-average scores on the TNReady science assessments. This has made the school system a go-to resource for other schools that want to know Rutherford’s secret so they can help their own students in their STEM studies. “Other educators call us to talk about what we do and how we do it,” says Jessie, “and many visit us to talk more, observe, and learn.”

These are just a few of the positive impacts that interactive learning with living materials has on young learners. Over the past 24 years, Sarah Jessie has built an outstanding, dynamic program of hands-on science experiences that young learners embrace, enjoy, and share. Carolina is proud to be a partner in that success by providing high-quality living materials and STEM resources to Jessie, the Rutherford teachers, and their students.

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