

**FAST FACTS**

**Name:** Jessica Brown

**Role:** Biology Instructor

**Institution:** Central Carolina Community College

**Challenge:** Providing students with distance learning labs that are rigorous, relevant, and engaging, and that can easily be modified to meet the changing needs of students and the college

**Solution:** Customizable distance learning lab kits from Carolina Distance Learning®

**Results:** Labs and lab kits that are readily customizable to respond to state-of-the-science curriculum changes as well as the changing needs of distance learning students

**CONTACT:**

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## Carolina Distance Learning® Lab Kits: Cutting Edge and Student Focused



*Continuous improvement must be a priority to ensure students receive state-of-the-science instruction that builds their science literacy.*

their distance learning course offerings. Today they offer distance learning courses in biology, anatomy and physiology, chemistry, physics, geology, and environmental science. CCCC students are indeed fortunate to have faculty who are so dedicated to providing versatile, thorough distance learning courses.

Biology instructor Jessica Brown joined CCCC in 2001 and soon became involved in the distance learning team. She teaches the nonmajors biology course every semester and also develops and manages the other distance learning courses for her department. She is a strong believer in the value of hands-on science education, so she is diligent about continuously improving the lab component of CCCC's distance learning courses.

### Finding the Lab Kit with the Best Fit

Brown and her colleagues initially designed, built, and shipped the lab kits. It quickly became obvious, however, that a more efficient means was needed to provide students with appropriate lab kits. Brown began contacting lab kit suppliers to investigate their products and services. As she evaluated the available products,

Central Carolina Community College (CCCC) had been a leader in distance learning innovation for more than two decades. It began offering distance education science courses in the 1990s with cassette tape-based curricula, which sounds primitive now but in hindsight was a big step toward the robust arena of distance learning we enjoy today. Since then, CCCC science educators have continued to improve and expand

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she looked for labs and kits that

- Engage students' imagination and encourage their desire to learn
- Include real-world topics that resonate with students
- Provide a level of scientific rigor that is commensurate with course objectives
- Teach the scientific method in every lab
- Improve students' science literacy, especially for nonmajors courses
- Were customizable to meet specific course criteria



*The Carolina Distance Learning® team hosts think tanks where it collaborates with faculty in continuous improvement efforts.*

Brown found that the Carolina Distance Learning® labs stood head and shoulders above the other providers by meeting these criteria, and so many more! From her first course using the Carolina kits to the numerous courses that use them today, Brown finds Carolina to be a real partner in advancing CCCC's distance learning science education.

## **Continuous Improvement Ensures Rigor, Relevance, and Engagement**

As CCCC's distance learning lineup expanded over the years, so have the opportunities and challenges to improve the lab experience for students. Brown works closely with the Carolina Distance Learning® team to continuously improve the lab kits and individual labs to meet her specific course needs.

One of Brown's goals for her nonmajors biology class is to build students' science literacy so they are better able to navigate the abundance of scientific information available in society today. She knows that the Carolina team is always on the lookout for ways to adjust their labs to include new, relevant experiments or topics that will spark student interest.

One way Carolina demonstrates its commitment to continuous improvement is by hosting think tanks that gather distance learning instructors for collaboration and brainstorming. Reflecting on the most recent Carolina think tank, Brown describes it as "a chance to meet with other like-minded distance instructors and share our experiences and ideas. It is both helpful and encouraging."

Brown also finds that the Carolina team is ready to embrace her ideas and work

with her to modify labs when requested. "The Carolina team is always ready to help me adjust the labs in our kits," she says, "even every semester when necessary." Brown demonstrates her student-focused approach to lab development by using a course blog each semester to solicit feedback from her students throughout the course. "This helps me know which labs students are appreciating the most and where modifications might be helpful to further engage them," she explains. Brown considers the Carolina team to be a valuable partner in implementing changes she sees her students needing.

Sometimes Brown finds that department-wide curriculum changes necessitate modifications to the distance learning lab kits. This recently happened when the curricula for all biology courses were changed to require dissection labs. She reached out to the Carolina team to begin designing the lab kit modifications needed to meet the new requirements. "Carolina worked with me to recommend and then implement the perfect dissection labs for each specific course," explains Brown.

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## STUDENTS ARE SAYING . . .

“I really enjoyed the cheek cell experiment and found the extracted DNA kind of mesmerizing. It is not very often you get to personally visualize something microscopic, so that was really great!”

### Students and Faculty Reap the Benefits of Continuous Improvement Efforts

The commitment of Brown and Carolina to continuously improving their distance learning labs and kits has led to great success for CCCC students and faculty. She finds that students really enjoy the labs that relate directly to their own bodies and make microscopic substances more tangible, such as the cheek cell DNA extraction lab. As one student told her, “I really enjoyed the cheek cell experiment and found the extracted DNA kind of mesmerizing. It is not very often you get to personally visualize something microscopic, so that was really great!”

Feedback also confirms that the inclusion of environmental biology labs engages the attention of many students. “My all-time favorite was when we had to go outside and take pictures of things in our environment,” one student told

Brown, “Most of the items were literally in my backyard, I just needed biology to help me figure that out.” Now that is engagement and relevance that will stay with those students a lifetime.

Her colleagues tell Brown they appreciate being able to provide their students with high-quality labs without having to use their own limited time to design, build, and ship them. They also like the thorough instructions that come with each lab and the ability to add their own notes for students to the instructions.

Brown has abundant evidence that her efforts and those of Carolina to continuously improve the distance learning labs are positively impacting students and CCCC every semester. Carolina Distance Learning®—it partners with faculty to provide rigorous, relevant labs that engage students for life.

“The Carolina distance learning team is always looking for ways to improve their labs, as well as helping me modify my lab kits in response to feedback I receive from students.”

—Jessica Brown, Biology Instructor, Central Carolina Community College