



Pre-Visit/Post-Visit Guide

Lesson Name: Case of the Missing Chef!

Summary of Lesson:

Students are introduced to a case involving a missing chef. In three separate labs, students will act as forensic specialists, analyzing materials found at the crime scene. They will perform strawberry DNA extraction, evaluate DNA samples, determine blood type, and, in the chemistry component, analyze known and unknown materials found at the scene. At the end of the day, students will have enough information to argue a claim as to what happened to our missing chef!

South Carolina Science Standards: 7.P.2B.3; 7.P.2B.4; 7.L.3B.1.

Pre-Visit Resources

- **Teacher/Chaperone Expectations:** Please help us by letting us know of any special accommodations for your children prior to the lesson. Please divide your students into groups of no more than 25 students in each group. Your assistance with classroom management and distribution of supplies will also be greatly appreciated.
- **Instructions for Teachers:** Students will work in groups of three. If you could have the students split into groups of three, it would help students get into the lesson quicker upon arrival to the lab. If your class size is not a multiple of three, one or two groups of two will work. Lunches will be placed in carts upon arrival and taken to picnic areas.
- **Key Vocabulary:** physical change, chemical change, blood type, antigen, DNA, buffer solution, pH scale
- **Key Questions Addressed in Lesson:** How is science used to establish identity? How do physical changes compare to chemical changes? What are white blood cells and red blood cells used for in the body? What is DNA? How can we use DNA and blood type to solve a crime?
- **Content Preview Video:** This is a video explaining how digital animations can help us better understand DNA and cells. <https://embed.ted.com/eb59ab65-a143-4fba-b512-4e131a7500c4>

Post-Visit Resources

- **Writing Prompt:** In the three labs today, you were able to gather data about The Case of the Missing Chef. In real life cases, investigators use forensics to gather data that can be used to infer what actually occurred in order to find suspects and ultimately use the evidence to prove their case in court. You have collected data about what happened to Chef Mandek. Using that evidence, write your theory about what you think transpired. Remember, all of your conclusions must be supported by the evidence.
- **Possible Lesson Link:** This lesson unit offers a variety of forensics lessons that can be done in the classroom. <http://sciencespot.net/Pages/classforsci.html>
- **Video Link:** Great short video explaining how to become a forensics scientist for a career connection. <https://www.youtube.com/watch?v=uOV0spSo0BI>

