

Sample Lesson: Antioxidant Power of Food

Grades 7–12

Lesson Resources

1. Student Inquiry Graphic Story — *Antioxidant Fare at the Science Fair*.
2. Student Inquiry Graphic Story Q&A
3. Student Investigation — *The Antioxidant Power of Colorful Fruits and Vegetables*
4. Teacher Guide: — *The Antioxidant Power of Colorful Fruits and Vegetables*
5. Student Background Reading — *Purple (and Red, Orange, Yellow) Power*
6. *Purple (and Red, Orange, Yellow) Power* Close Reading Comprehension Questions
7. Food Experience — Preference test with colorful fruits such as blueberries, strawberries, blackberries, and raspberries

Lesson Plan

Have students read the Student Inquiry Graphic Story *Antioxidant Fare at the Science Fair*. For middle school grades, you may need to work as a class to read and discuss the story in sections. As an option, you could demonstrate the experiments for Jan’s testable questions or have materials for students to try in groups as they read the story. However, doing the actual experiment for Jan’s science fair project is not needed since students will be doing their own experiments in the next part of the lesson.

Have students work individually or in small groups to write answers to the questions in *Antioxidant Fare at the Science Fair* in their science journals.

Explain to students that they will be using an activity guide called *The Antioxidant Power of Colorful Fruits and Vegetables* to investigate their own testable questions similar to Jan’s. You may want to demonstrate with juice and water the party clean up scenario described at the beginning of the activity as shown below. The teacher guide to *The Antioxidant Power of Colorful Fruits and Vegetables* provides more information about doing the activity with your students.

A friend who was getting paid to clean up after a big party, just texted you to say that pouring some left over purple grape juice into a glass of water turned the water into a blue green color! The blue green color of the water faded to an army green but the purple color of the leftover grape juice did not fade. What are your beginning ideas about what could cause this?

Show students the variety of colorful fruits, vegetables, or juices you have available for them to test, and ask them to plan their tests as indicated on the student activity sheet. Give students time to conduct their experiments and record their data. Make sure students write their claims and evidence statements and discuss results with each other. If time requires the claim and evidence writing and discussion to be done on another day, this actually allows for deeper student learning as they revisit their records of tests and results.

To follow up the hands-on investigations, have students read *Purple (and Red, Orange, Yellow) Power*. For middle school grades, you may need to work as a class to read and discuss in sections. Follow with the close reading comprehension questions to support language arts common core skills for content area reading.

Finish the lesson with a fun food tasting experience conducting a class preference test with brightly colored fruits such as blueberries, strawberries, blackberries, and raspberries.