



DISCOVERING the SCIENCE of **ALCOHOL**

About the Explorations

Explorations with Real World Relevance

Discovering the Science of Alcohol (DSA) fosters the development of 21st century skills by engaging students in activities involving inquiry, hands-on investigation, research, collaboration, technology, and civic engagement.

DSA's Inquiry-based Explorations:

1. **ABCs – Alcohol Basics and Conceptions:** Students test their knowledge of alcohol and set learning goals, then examine the structure of an alcohol molecule.
2. **It's in the Blood:** Students simulate the movement of alcohol into the bloodstream with such variables as quantity and rate, and explore the science of blood alcohol concentration (BAC).
3. **Detox Central:** Students examine real micrographs of hepatocytes (liver cells), compare those of a healthy person with those of a person with steatosis, then model a medical consultation for a young chronic drinker.
4. **Wired!:** Students investigate the effects of alcohol on simple reflexes and memory.
5. **A Game of Numbers:** Students examine current research on the genetics of dependence.
6. **Walking the Metabolic Tightrope:** Students simulate feedback control and examine current research on the effects of alcohol on neurotransmitters.
7. **Remembering and Reacting:** Through an online driving simulation, students explore alcohol's effects on reaction time. They also extend their understanding of the effects of alcohol on the nervous system, coordination, and learning.
8. **Spread the Word!:** Students are challenged to integrate their understandings of the science of alcohol into the development of an ad campaign aimed at reducing alcohol abuse and dependence.

"With DSA, teachers have everything at their fingertips to make the lesson units successful not only for the students, but for both new and seasoned busy teachers."

Lynn J. Young;

Science Consultant, Retired Science Supervisor/Teacher/ Biologist

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