

# NATIONAL SCIENCE EDUCATION STANDARDS

## The Chemistry of Food Dyes

GRADE	CATEGORY	SUB-CATEGORY	STANDARD
9-12	Physical Science	Chemical Reactions	A large number of important reactions involve the transfer of either electrons (oxidation/reduction reactions) or hydrogen ions (acid/base reactions) between reacting ions, molecules, or atoms.
9-12	Physical Science	Chemical Reactions	Chemical reactions occur all around us, for example in health care, cooking, cosmetics, and automobiles.
9-12	Physical Science	Motions and Forces	The electric force is a universal force that exists between any two charged objects.
9-12	Physical Science	Structure and Properties of Matter	The physical properties of compounds reflect the nature of the interactions among its molecules.
9-12	Science and Technology	Understandings About Science and Technology	Creativity, imagination, and a good knowledge base are all required in the work of science and engineering.
9-12	Science as Inquiry	Abilities Necessary To Do Scientific Inquiry	Communicate and defend a scientific argument.
9-12	Science as Inquiry	Abilities Necessary To Do Scientific Inquiry	Design and conduct scientific investigations.
9-12	Science as Inquiry	Abilities Necessary To Do Scientific Inquiry	Formulate and revise scientific explanations and models using logic and evidence.
9-12	Science as Inquiry	Abilities Necessary To Do Scientific Inquiry	Use technology and mathematics to improve investigations and communications.
9-12	Science as Inquiry	Understandings about scientific inquiry	Scientists usually inquire about how physical, living, or designed systems function.
9-12	Science in Personal and Social Perspectives	Natural and Human Induced Hazards	Natural and human-induced hazards present the need for humans to assess potential danger and risk.