



Curriculum Units by Fellows of the National Initiative
2026 Volume V: Chemistry of Cooking

Kid Cuisine: Cooking Begins at the Molecular Level

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Teaching all subjects at the 5th grade level welcomes opportunities for cross-curricular exchange and planning where students organically observe connections and are more intentional about how they leverage their academic skills to construct knowledge. Throughout this curriculum unit, students will conduct meaningful, culturally relevant research, conduct experiments, and apply writing skills to design a cookbook of recipes including kid-friendly creations explained in scientific language. The lessons in this unit will provide all students regardless of performance level or learning abilities with comprehensive project-based learning experiences where they will be required to complete standards-based tasks incorporating skills from all subjects taught in our classroom. Students will explore and explain physical and chemical changes, chemical formulas/reactions, and apply mathematical reasoning to cooking. By the end of the unit, scholars will have 3 major artifacts as evidence of their content mastery: an original cookbook with recipes explained through mixtures, chemical formulas, and reactions, expository writing samples that explain as well as compare/contrast food choice aligned to different cultures/communities, and, lastly, edible samples demonstrating their strategic use of ingredients and application of food science.

(Developed for Math, Science, and ELA, grade 5; recommended for ELA and Science, grades 4-5)

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