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Recombinant DNA Technology and Global Health

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The unit, Recombinant DNA Technology and Global Health, is designed to teach students the benefits of genetically modified organisms. It focuses on the basic needs of living organisms, and how environment plays an integral role in acquiring them. Students will learn how DNA functions as a blueprint for living organisms. Students will explore how scientists use DNA to understand the traits and characteristics of plants and animals. They will also use computer applications to determine how characteristics are passed from parent to offspring. The unit provides several experiments to demonstrate the extraction of DNA from human and plant tissue. There is also content information available to provide instructors with background knowledge about biofortified crops, and why they are needed in different regions. Literary resources are included to give students relevant information about genetically modified organisms. The listed activities can be used in a primary classroom, but simple modifications are listed for use in upper grades. A research component is included to provide students with independent research on the effect of biofortified crops. This unit can be used to highlight regional disparities of nutritional intake, and how students can use problem-solving skills to address them.

(Developed for Science and Social Studies, grade 3; recommended for Science and Social Studies, grades 4-6)