Abstract

The goal of the 4-H program is to help youth grow and develop in all areas, but they are lacking slightly in the STEM activities they offer. This project seeks to fill that gap by creating a series of chemistry activity books which can be implemented as a new 4-H project. With the adoption of these books, the 4-H program will have its first purely scientific project to offer its members. The activity books cover grades 3 through 11, the typical age range of most 4-H projects and provide participants the opportunity to learn more about science. The books also encourage 4-H members to explore chemistry in the world that surrounds them, inspiring curiosity.

The books provide a structure for learning complex chemistry topics, but leave enough freedom that participants may explore the topics with curiosity and interest. The books are structured in a similar manner to current 4-H books for ease of adoption and incorporation into the 4-H program. The activities are organized by topic which are repeated in subsequent levels in greater detail and complexity. By revisiting the topics with different activities and experiments, students are provided with the opportunity to learn the same concept in a variety of ways. This iterative process reinforces the concept knowledge so that it is better understood.

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