



Board Workshop Date: 9.11.23

Title: Overview of Partnership with Edina Fire Department to Enhance Middle School Science Curriculum

Type: Information

Presenter(s): Jody De St. Hubert, Director of Teaching and Learning; Mark Carlson, Curriculum Coordinator; Tricia Pettis, Principal South View Middle School; and Patrick Bass, Principal Valley View Middle School

Description: In collaboration with Edina Fire Department, South View Middle School and Valley View Middle School are in the exploration phase of enriching their 8th grade science curriculum. In alignment with the Edina Public Schools vision and mission, the enrichment provides an authentic hands-on experience for Edina Middle School Scientists to foster curiosity and develop critical thinking skills. The unit of enrichment is called [The Science of Fire Forensics](#) designed by XplorLabs. This unit will bring together ideas from the year including energy, thermal transfer, and chemistry culminating in a controlled experiment. In the controlled experiment, facilitated with the Edina Fire Department, students are asked to determine where a fire started and how. They learn that fire investigation is a complex job that involves science, technology, engineering, and math in an environment that is safe and supports an exposure to potential career pathways. While this science curriculum enrichment is in the exploration phase South View and Valley View will find opportunities for alignment in the future, with South View engaging in the full pilot for the 2023-24 school year. The commitment is that when the pilot year is complete and reviewed that both middle schools will move forward in full alignment.

Additional Details of Planning for MS Science and Edina Fire Department Curriculum Partnership

Currently South View Middle School science teachers are working with the Edina Fire Department and consultants from [XplorLabs](#), Megan O'Keefe and Becki White, on a real world project called Fire Forensics designed by XplorLabs. An initial meeting occurred on August 9th with 8th grade science teachers Alex Sackett and Kate Kobany, South View Principal Tricia Pettis, consultants from Xplore and representatives from the Edina Fire Department (EFD). The purpose of the meeting was to plan a collaboration between our Edina Middle Schools Science Departments and EFD which will culminate with a spring unit on Fire Forensics and a controlled real world experiment. At this time Valley View has been included in information sharing and due to several transitions at Valley View, is in full support of the South View team participating as a pilot this year.

As part of the collaboration, EFD will meet with science teachers and consultants to begin testing experiments to be conducted during the spring unit. Tentatively the unit will take approximately 5 days to complete and will address multiple state standards. This unit will pull together ideas from the year including energy, thermal transfer, and chemistry in a real world hands-on approach. XplorLabs will supply kits for the team to practice the experiments prior to the unit. This meeting is scheduled to occur on September 25th with the consultants logging in virtually. There will be a financial need related to materials for the spring unit.

In addition to the Fire Forensics unit, EFD will have members at South View this fall during school-wide C-Day to talk about careers and the relationship between science and the fire department. This unit will provide

students with a connection with the local fire department and also allow them to have hands-on experience with standards directly related to what is being taught in middle school courses. The plan for the future will be for consistency with South View and Valley View either both participating or both not participating. This decision will be made in collaboration with both Middle Schools and Teaching and Learning.

Specific NGSS Standards Enhancements

Middle School-PS1: Matter and its Interactions

[PS1.A Structures and properties of matter](#)

[PS1.B Chemical reactions](#)

In The Science of Fire Forensics students engage with interactive simulations to analyze and interpret data to support understanding about whether chemical or physical changes have occurred.

Middle School-PS3: Energy

[S3.A: Definitions of Energy](#)

[PS3.B: Conservation of Energy and Energy Transfer](#)

[PS3.C: Relationship Between Energy and Forces](#)

In The Science of Fire Forensics, students explore interactive simulations to observe how energy and matter flow within a system. Classroom Investigations are also provided where students have the opportunity to plan and carry out investigations to explore the interactions between energy and matter.

Recommendation: This report is provided for information for the School Board and our Edina stakeholders.