

Livonia Public Schools

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Academic Services Department

Math/ Science Curriculum Coordinator
Elementary Curriculum Coordinator

DATE: May 8, 2020

TO: Shalonda Owens, Principal, Cooper
Lawrence DeLuca, Principal, Niji-Iro
Shanan Wheeler, Principal, Johnson
Kristyn Cousino, Principal, Riley
Lora Boka, Principal, Webster

FROM: Rebecca Caldwell, 7-12 Math and Science Curriculum Coordinator
Jennifer Cory, Elementary Curriculum Coordinator

SUBJECT: **5th Grade Science Curriculum Recommendation**

Committee Members

Cooper Upper Elementary: Michelle Stackpoole and Ronald Mark
Johnson Upper Elementary: Anne Sherwood and Tammy Cross
Riley Upper Elementary: Deborah Elliston and Robert Sharp

Recommended Curricular Materials:

Amplify Science, 2019, Amplify.

Matthew Paupore, Account Executive

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Included Materials

- Digital Courseware 6-year license.
- Materials Kits
- Teacher Resource Package

Cost proposal is attached.

Overview

During the 2015-16 school year, the state of Michigan adopted the Michigan Science Standards. This made it necessary to review our curricular materials for science in all grades. This process began with aligning our curriculum to the new science standards for grades 6-8. After two years, a committee of 6-8th grade teachers came to the decision to adopt Amplify Science. This program best met the evaluation criteria and coherently developed the science concepts and practices we deemed as priorities during our analysis. Amplify Science is NGSS aligned and provides opportunities for students to learn concepts centered around anchoring phenomena throughout each unit. Amplify also includes units that address the engineering standards included in NGSS.

Following the adoption of Amplify for grades 6-8, in an attempt to have a cohesive program at our Upper Elementary schools, a committee of teachers was brought together to evaluate the possibility of extending the use of Amplify materials for adoption in fifth grade. We are currently using the Battle Creek curriculum in our fifth grade classrooms and it is not aligned with the current Next Generation Science Standards (NGSS). The committee consisted of two fifth grade teachers from Cooper, Johnson, and Riley. Teachers at Niji-Iro and Webster were familiar with the Amplify curriculum due to the multi-age classrooms at each school. The committee would like to recommend adopting the Amplify Science curriculum for fifth grade, creating consistency in grades fifth through eighth.

Evaluation Process

A common curriculum among our upper elementary and middle school science program supports the shared vision for middle level science at LPS. With this approach to middle level science, fifth grade teachers on this committee were to evaluate a pilot unit in Amplify, *Geology on Mars*. Prior to the pilot unit, the committee members had a day of training with an Amplify representative on the overall curriculum and a day of training/collaboration on the pilot unit, *Geology on Mars*.

Shared Vision for Middle Level Science, Grades 5-8

1. Hands-on, age-appropriate activities that support inquiry that has materials and funding to be sustainable.
2. Age-appropriate reading materials.
3. Technology infused in learning.
4. Meaningful, engaging, authentic activities that develop critical thinking and questioning skills.
5. Realistic timeline that provides opportunities to meet with students, discuss topics, argue about ideas, etc.
6. A coherent structure to the development of concepts, so students can make connections (building on, not repeating).
7. Aligned to standards.
8. Student-centered.
9. Opportunities for differentiation.
10. Formative, summative, and self-assessment provided in the materials

Topics Evaluated/ Pilot

The committee of six teachers began the in-class pilot unit, *Geology on Mars*, prior to the school closure on March 13, 2020 with positive results on the completed sections. With the closure of schools, we worked with Amplify to offer Amplify materials for the *Ecosystem Restoration* unit to all fifth grade teachers. This included a video series, the reading materials and online simulations. While we were not able to complete the original pilot to its fullest, the school closure allowed the opportunity for all teachers and students to interact with Amplify science

digital platform. Google Meet sessions were held with all fifth grade teachers prior to instruction to support their use of the Amplify product during this period of online learning. Students were able to read the online books and engage with the simulations during online learning.

After the in-class pilot unit, *Geology on Mars* and the implementation of the *Ecosystem Restoration* online pilot unit, the committee met again to evaluate the Amplify curriculum and unanimously supported the adoption of the Amplify Science Curriculum for fifth grade. The integrated curriculum will consist of one unit of life science, physical science and Earth Science.

Student Rating

At the conclusion of the middle school pilot Amplify was overwhelmingly the strongest program in the student survey results. For our fifth grader pilot, we were concerned with surveying students at this time because there are many variables to their new learning circumstances and it may not reflect the Amplify curriculum.

Independent Evaluation

EdReports released their first evaluations of science programs. Of the six programs listed, Amplify Science was the only program to receive a green (passing) rating in all areas.

<https://www.edreports.org/reports/overview/amplify-science>

Future Considerations

- Training of all program components, including online functionality (professional development days are included in quote).
- Time for collaboration and planning for each grade level and entire middle level team.
- Follow-up training/coaching throughout at least the first year of implementation.
- Continued middle level approach in both science and math.

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