



Parent
LAKE ORION COMMUNITY SCHOOLS
TEACHING AND LEARNING NEWSLETTER
2018/2019 ~ November

Dear Parents/Guardians, Partners in Education,



We have had a fast but great start to the 2018–2019 school year. The first term at each of the levels has included new initiatives and programs. The highlight thus far has been the implementation of the Phenomenal Science and our STEM Coaches at the elementary level along with science alignment and revision of science courses at the middle and high school level. I am very pleased and proud of how our science programming is progressing.



Thank you to those that supported the school bond on November 6. This was a critical decision that has great impact on all of the wonderful opportunities we offer our students. The approval of this bond allows us to ensure that the focus of our general fund dollars is used for students in the classroom.

Please take a few minutes to read this quarter's newsletter and learn about the things that are happening in the district along with a few tips and strategies to support your learners at home.

Heidi Mercer

Heidi Mercer
Assistant Superintendent of Teaching and Learning



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**DRAGON
COUNTRY**

Science Department

You may notice a few new faces in your child's elementary school building and classroom this year. STEM (Science, Technology, Engineering and Mathematics) Coaches are a new addition to Lake Orion's six elementary buildings. They are supporting teachers and students in grades three through five to implement Michigan's new science standards along with the newly adopted Phenomenal Science program. These dynamic new standards engage students in learning science through investigating and explaining the world around them.

All third through fifth grade students have interacted with coaches, as science has gotten under way. Coaches have been in classrooms alongside students during science lessons to help guide and support their learning.

Our new STEM coaches are Pam Moremen, Amy Bohm and Andrea Brook.



Level Updates:

At the elementary level, science kits have arrived in buildings. Kindergarten through third grade students are diving into their first science units. Fourth and fifth grades are working towards their second units of the school year. Our Lake Orion STEM coaches are co-teaching with third, fourth and fifth grade teachers to help implement Phenomenal Science, our new science resource.

At the middle level, teachers are taking a look at resources to adopt. Eleven teachers are on the pilot team. Currently, teachers are working through a second resource and will start a third resource after the first of the year. We are looking forward to adopting a science resource in the Fall of 2019!

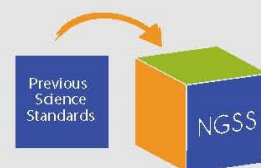
This school year, Lake Orion High School rolled out two new courses that were built around the new Michigan Science Standards. In addition to Physical Science (9th), Biology (10th) and Earth Science (11th) now complete the required course sequence for our high school students. Teachers worked over the summer to create and adapt curriculum to meet the new Performance Expectations of the Michigan Science Standards, which are based off of the Next Generation Science Standards (NGSS).

See the next 2 pages for more information on NGSS.

Next Generation Science Standards (NGSS)

WHAT ARE THE NEW SCIENCE STANDARDS?

The Next Generation Science Standards (NGSS) are a new set of K–12 science standards that were developed by states, for states. The NGSS identify scientific and engineering practices, crosscutting concepts, and core ideas in science that all K–12 students should master in order to prepare for success in college and 21st-century careers.



WHY ARE THEY IMPORTANT?

It has been more than 17 years since the National Research Council and the American Association for the Advancement of Science produced their reports from which most state science standards are based. Since then, there have been major advances in science and our understanding of how students learn science. Students need the kind of preparation that gives them the tools and skills necessary to succeed in a rapidly and continuously changing world.

When current students graduate from high school, more jobs will require skills in science, technology, engineering, and mathematics (STEM) than in the past. The NGSS provide a strong science education that equips students with the ability to think critically, analyze information, and solve complex problems — the skills needed to pursue opportunities within and beyond STEM fields.

HOW WERE THEY DEVELOPED?

The NGSS were developed through a collaborative state-led process. Science supervisors from 26 states worked with a 40-member writing team—which included teachers, working scientists, and education researchers—to develop the draft standards, based on the National Research Council's document *A Framework for K–12 Science Education*. Each of the 26 states established a broad-based committee to review draft standards and provide feedback. In addition to those reviews, a larger stakeholder team composed of hundreds of members representing K–12 educators, administrators, higher-education faculty, scientists, engineers, business leaders, policymakers, and key organizations provided feedback during five review periods. The draft standards went through two public review periods and received comments from more than 10,000 individuals.



HOW WILL THE NGSS SUPPORT COLLEGE AND CAREER READINESS FOR ALL STUDENTS AND PREPARE THEM TO SUCCEED IN THE GLOBAL ECONOMY?



A high-quality, robust science education means students will develop an in-depth understanding of content and will gain knowledge and develop skills—communication, collaboration, inquiry, problem solving, and flexibility—that will serve them throughout their educational and professional lives.

The NGSS were benchmarked against countries whose students perform well in science and engineering fields, including Finland, South Korea, China, Canada, England, Hungary, Ireland, Japan, and Singapore.

WHAT WILL THE NGSS LOOK LIKE IN THE CLASSROOM?

High-quality education standards allow educators to teach effectively, moving their practice toward how students learn best—in a hands-on, collaborative, and integrated environment rooted in inquiry and discovery. Teaching based on the NGSS calls for more student-centered learning that enables students to think on their own, problem solve, communicate, and collaborate—in addition to learning important scientific concepts.

THE NGSS OFFER FIVE INNOVATIONS FOR TEACHING

- 1 **Three Dimensional Learning:** There are three equally important, distinct dimensions to learning science included in the NGSS: Scientific and Engineering Practices, Crosscutting Concepts, and Disciplinary Core Ideas. The NGSS connect all three dimensions. To prepare students for success in college and 21st century careers, the NGSS also connect scientific principles to real-world situations, allowing for more engaging and relevant instruction to explore complicated topics.
- 2 **All three dimensions build coherent learning progressions:** The NGSS provide students with continued opportunities to engage in and develop a deeper understanding of each of the three dimensions of science. Building on the knowledge and skills gained from each grade—from elementary through high school—students have multiple opportunities to revisit and expand their understanding of all three dimensions by the end of high school.
- 3 **Students engage with phenomena and design solutions:** In instructional systems aligned to the NGSS, the goal of instruction is for students to be able to explain real-world phenomena and to design solutions using their understanding of the Disciplinary Core Ideas. Students can achieve this goal by engaging in the Science and Engineering Practices and applying the Crosscutting Concepts.
- 4 **Engineering and the Nature of Science is integrated into science:** Some unique aspects of engineering (e.g., identifying problems) are incorporated throughout the NGSS. In addition, unique aspects of the nature of science (e.g., how theories are developed) are also included throughout the NGSS as practices and crosscutting concepts.
- 5 **Science is connected to math and literacy:** The NGSS not only provide for coherence in science instruction and learning but the standards also connect science with mathematics and English Language Arts. This meaningful and substantive overlapping of skills and knowledge affords all students equitable access to the learning standards.

COMMON MISCONCEPTIONS ABOUT THE NGSS

Myth: The NGSS were developed by the United States Department of Education.

FACT: The Next Generation Science Standards (NGSS) were developed through a collaborative state-led process. Twenty-six states volunteered to work with the 40 members of the writing team to lead the development of the standards, and each state formed broad-based committees to work on the standards.

Myth: The NGSS were developed without public input.

FACT: The draft standards received comments from more than 10,000 individuals during each of two public review periods. These comments came from teachers, school and school district discussion groups, scientific societies, parents, and students. In addition, an expert team composed of hundreds of members representing K–12 educators, administrators, higher education faculty, scientists, engineers, business leaders, policymakers, and key organizations provided confidential feedback during critical points of the development process.

Myth: The NGSS were developed without teacher input.

FACT: To develop the standards, the science supervisors in the 26 lead states worked with a 40-member writer team, all of whom were education experts and more than half of whom were practicing K–12 teachers. Thousands of teachers also provided comments to the draft standards during the two public review periods and as part of expert review panels.

Myth: The NGSS will force states and districts to adopt a uniform curriculum.

FACT: The NGSS are standards, not curricula. Local districts, schools, and classroom teachers will continue to determine their own curriculum, including what is taught throughout the year and how it is taught.

Myth: The NGSS are part of the Common Core.

FACT: The NGSS are not part of the Common Core State Standards (CCSS). The CCSS only cover mathematics and English Language Arts (ELA)/literacy whereas the NGSS are a separate set of K–12 science standards that were drafted through a distinctly different process.

Myth: The NGSS are funded with federal dollars.

FACT: No federal funding, grants, or formula funding is tied to the adoption of the NGSS nor was used to develop them. The Carnegie Corporation of New York, a foundation dedicated to improving science education in the U.S., provided funding support for the development of the NGSS.

Myth: The NGSS are too rigorous for students who have no intention of pursuing science after high school.

FACT: Science is a key factor in students' ability to think critically and innovate. All students need strong foundational knowledge in science to tackle long-term and difficult issues that face our generation and future generations. A strong science education equips students with skills that are necessary for lasting success in their postsecondary lives and careers.

Myth: The NGSS are not rigorous enough for students interested in advanced classes in high school and beyond.

FACT: The NGSS does not set a ceiling for student achievement. Students who wish to take advanced coursework will still have the opportunity to do so, and the NGSS will provide them with a solid academic foundation for college-level science courses.

ELA Department News

Beth Bruce, Kelly Day, and Kate DiMeo

Let's Talk... Penmanship



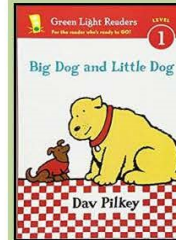
Lake Orion K-1 students learn traditional ball and stick penmanship using the verbal pathways and handwriting sequence defined by the Teachers College Reading and Writing Project Phonics series. Students have direct penmanship instruction for no more than ten minutes. Most handwriting practice comes daily in writing workshop.

During the first half of second-grade, our students are taught cursive letter formation. Again, limited to only ten minutes a day, this instruction is brief but provides exposure. Our cursive handwriting goal is for students to be able to sign their name. In the second semester, handwriting is no longer instructed and keyboarding skills are developed.

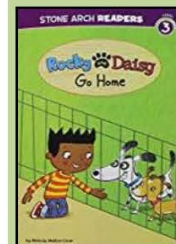
During the 18-19 school year, third-graders will be taught cursive letter formation. However, beginning in 19-20, third-grade students will not be explicitly taught cursive but instead given opportunities to practice what they have learned in second-grade. This is limited to no more than ten minutes a day. In conjunction with keyboarding, students are given opportunities to practice the skills needed to successfully communicate their messages.

In grades 4 and beyond, handwriting is no longer explicitly taught. Students are given authentic reading and writing experiences in which they may choose to write in cursive, print, or type. Most of these experiences happen with real context, especially in reading and writing workshop. Occasionally, students are guided as they attempt to read minimal cursive. The goal is that they will be able to read notes, lists, and small amounts of text in cursive, but it should be done in a non-graded, low stakes manner.

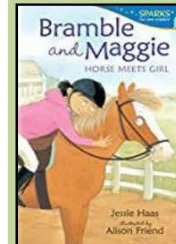
From our bookshelf to yours...



Big Dog and Little Dog
By Dav Pilkey
Level D
Dav Pilkey captures the humor of everyday dog life in this hilarious series.



Rocky and Daisy
By Melinda Melton Crow
Level I
Rocky and Daisy are two dogs with nothing in common except the love of their owner, Owen. A great adventure series for dog lovers!



Bramble and Maggie
By Jessie Haas
Level K
Maggie and her mischievous horse, Bramble, teach readers about the ups and downs of true friendship.



Tales of Sasha
By Alexa Pearl
Level M
Visit Verdant Valley and Crystal Cove. Travel to a land of kings and queens. This is the perfect series for lovers of magical ponies.



Endling
By Katherine Applegate
(She has lots of titles)
Level RST
Enthralling characters, unique setting and gripping adventure make this an epic fantasy your readers won't put down.

More ELA Department News



Andrea Moede and Norman Wright use student work and *Patterns of Power* to plan for small group grammar instruction

Planning Small Group Grammar Instruction in Grades K-5

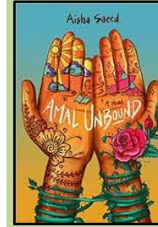
On Tuesday, November 6, elementary teachers participated in district-wide professional development for grammar instruction. The Lake Orion Grammar Team has spent several years researching best practices for teaching grammar.

Kate DiMeo, K-12 Literacy Specialist, presented meaningful methods for implementing grammar instruction during both reading and writing workshop. Then, teachers had the opportunity to participate in two break-out sessions, in which they used student work to plan for small group instruction.



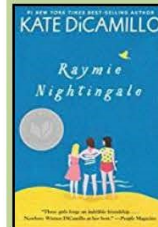
Kate DiMeo worked with a group of teachers to identify an appropriate grammar skill to teach during small group instruction.

From our bookshelf to yours...



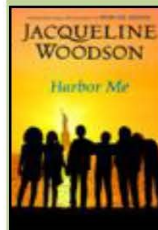
Amal Unbound
By Aisha Saeed
Level UVW

In this story of resistance and justice, one girl fights to regain her life after being forced into indentured servitude to pay off her family's debt.



Raymie Nightingale and *Louisiana's Way Home* By Kate DiCamillo
Level UVW

You first meet Louisiana Elefante in *Raymie Nightingale* and her adventures continue in *Louisiana's Way Home*. A delightful friendship series for tween readers.



Harbor Me
By Jacqueline Woodson
Level UVW

This book has EVERYTHING – love, family, discrimination, middle school transitions, and devastating realities faced by many children in this country. A short but powerful read!



A Long Way Down
By Jason Reynolds
Mature Content
Level Z+

This stunning novel, told in verse, is a fast and furious social commentary on teen gun violence.



Birthmarked (a trilogy)
By Caragh M. O'Brien

This trilogy takes place in a dystopian society 300 years in the future. As babies are born, a very select few are "advanced" to a more elite life inside the city. Gaia, the protagonist, does not question this process until her parents are arrested.

Math Department

What is the Deal with the Michigan Standards?

Why do we have to teach our kids multiple ways?

Why does my child need to be able to “explain” how they got it?

An important requirement in the *Michigan State Standards* is the need for students to discuss ideas and justify their thinking. There is a good reason for this: Justification and reasoning are two of the acts that lie at the heart of mathematics. They are, in many ways, the essence of what mathematics is. Scientists work to prove or disprove new theories by finding many cases that work or counter-examples that do not. Mathematicians, by contrast prove the validity of their propositions through justification and reasoning.

Mathematicians are not the only people who need to engage in justification and reasoning. The young people who are successful in today’s workforce are those who can discuss and reason about productive mathematical pathways, and who can be wrong, but can trace back to errors and work to correct them.

In our new technological world, employers do not need people who can calculate correctly or fast, they need people who can reason about approaches, estimate and verify results, produce and interpret different powerful representations, and connect with other people’s mathematical ideas.

Another problem addressed here is the North American idea that those who are good at math are those who are fast. **Speed is revered** in math classes across the country and students as young as five years old are given timed tests—even though these have been shown to create math anxiety in young children. Parents use flash cards and other devices to promote speed, not knowing that they are probably damaging their children’s mathematical development. At the same time, mathematicians point out that speed in math is irrelevant. One of the world’s top mathematicians, Laurent Schwartz, reflected in his memoir that he was made to feel unintelligent in school because he was the *slowest* math thinker in his class. But, he points out that what is important in mathematics “is to deeply understand things and their relations to each other. This is where intelligence lies. The fact of being quick or slow isn’t really relevant.” It is fortunate for Schwartz, and all of us, that he did not grow up in the speed- and test-driven classrooms of the last decade that have successfully dissuaded any child that thinks deeply or slowly from pursuing mathematics or even thinking of themselves as capable.

This country does not need fast procedure executors anymore. We need people who are confident with mathematics, who can develop mathematical models and predictions, and who can justify, reason, communicate, and problem solve. We need a broad and diverse range of people who are powerful mathematical thinkers and who have not been held back by stereotypical thinking and teaching. Common Core mathematics, imperfect though it may be, can help us reach those goals.

JO BOALER is a professor at Stanford University’s Graduate School of Education and the CEO and cofounder of YouCubed, which provides math-education resources for students, parents, and teachers.





PARENT UNIVERSITY

Lake Orion Community Schools Parent University has offered several events this fall on a variety of topics. Events that have been held were Literacy Make and Take, Fact Fluency, Experience the New Science Standards, Vaping 101 and Technology and Your Child. Events have been well attended by parents.

The following are the remainder Parent University dates for the 2018–19 school year. Look for flyers with more details and how to sign up to attend as the dates get closer.

| Topic | Grade Levels | Date | Location |
|---|--------------|-------------|------------------------|
| What science courses should my high school student take? 6:30–7:30 p.m. | 8–12 | January 15 | LOHS KIVA |
| Is my child on the right math track? 7:35–8:35 p.m. | 8–12 | | |
| Angst Movie (movie is about student stress and anxiety) 6:30–8:00 p.m. | 4–12 | January 22 | LOHS Auditorium |
| College prep (include SAT, anxiety associated with college prep, leaving home for college and career selection) 6:30–7:30 p.m. | 9–12 | February 5 | LOHS KIVA |
| PSAT for middle school students—6:30—7:30 p.m. | 6–8 | February 27 | Scripps Middle School |
| Coping Skills and Conflict Management for elementary students—6:30 –7:30 p.m. | K–5 | March | Orion Township Library |
| Kindergarten Readiness (importance of fine motor skills/ gross motor skills and prepping for kindergarten)* 6:30–7:30 p.m. | DK–1 | June 4 | Webber |

* Events with a * will have childcare provided



English Learner Department

This year, Lake Orion Community Schools is servicing 278 English Learners. Lake Orion High School and Learning Options High School have 60 English Learners, the middle schools have 32, and the elementary schools have 186. Our English Learners speak 36 languages other than English. 44% of our English Learners speak Spanish, 6% speak Portuguese, 5% speak German, 5% speak Vietnamese, and 5% speak Hmong.

Lake Orion Community Schools offers a variety of assistance to provide ELs with the support necessary to improve their English proficiency. Some options include programs listed below:

- Individual and small group instruction that aims at developing fluency and literacy in English.
- A structured research based program of teaching the English language through science, math, social studies and language arts.
- Use of students' home language (through bilingual dictionaries or online translators) as needed to assist students in understanding and acquiring new concepts in subject areas like math, science and social studies.
- Opportunities to be included in all district interventions, enrichment and accelerated programs.
- A summer school program.

Lake Orion Community Schools is committed to collaborating with the families of all learners. There are many ways parents and families of ELLs (English Language Learners) can support their children at home, even though they may have limited English themselves. Visit the article, "Empowering ELL Parents & Families at Home" found on the link below. It gives parents valuable tips about homework help or ways to support ELLs with reading and vocabulary expansion. The article is available in both English and Spanish. Click below:

<http://www.colorincolorado.org/article/empowering-ell-parents-families-home>

Another suggestion from the article is that families take a "field trip" to their public library. Lake Orion's own public library is a great resource for ELLs to visit with a great selection for children through adults. The selection of bilingual books can bring enjoyment to the whole family! Parents may even want to stop in themselves for the ELL Conversation Group that meets each Wednesday from 10:30—11:30 a.m. It is an informal group for adults to practice their English language skills and meet other ELLs.

More information about this or other ELL programs at the Orion Township Public Library can be found by calling 248-693-3001 or visiting the library website here:

<https://orionlibrary.org/>.

Special Education Department

Tips and Tools for all Learners...

To succeed, it often takes hard work and practice. Although this is a universal concept, it is particularly relevant to the development of fine motor skills in children with special needs. While Occupational Therapists have training and expertise in the development of fine motor skills and Special Education teachers often **incorporate fine motor activities** into their student's school day, extra attention and support from parents in the home environment is key for consistent improvement in their child's hand strength and coordination. Here is an activity you can do this holiday season to encourage your child's fine motor development while having lots of family fun!



Make holiday cut-out cookies:

Let your child scoop, pour and measure dry ingredients. As you add in wet ingredients, allow them to mix it up. If mixing is difficult, have them wear small kitchen gloves to mix with their hands. Give them their own ball of dough and encourage them to roll it out using a rolling pin. Use various holiday cut-outs to create an assortment of cookies. Finally, let them frost and decorate their own cookies using their fingers to pinch and sprinkle colored sugar or other toppings.

Make holiday play-dough:

If you are not a baker, make home-made holiday play-dough instead! Find a recipe online, add peppermint extract for a wonderful peppermint scent, use your holiday cut-outs, rolling pin and other play-dough tools to have months of fun while developing those fine motor skills!

10 Keys to Success for a Child with ADHD:

<https://www.metroparent.com/daily/parenting/special-needs-resources/10-keys-to-success-for-children-with-adhd/>

From Michelle Cureton, LOCS Diversity and Equity Coordinator...

On January 21, 2019, Lake Orion High School will host a Martin Luther King Community Celebration in the auditorium at 6:30 p.m.

See the LOCS website for updates and more information on this event.

