



THE BUREAU OF STANDARDS AND INSTRUCTIONAL SUPPORT

MISSION

Our **MISSION** is to provide quality services, resources, guidance and professional development to our educational partners.

BUREAU OF STANDARDS &
INSTRUCTIONAL SUPPORT

VISION

Our **VISION** is that all stakeholders are equipped and empowered to guide students to reach their full potential.

CPALMS

CPALMS Perspectives Videos

The [CPALMS Perspectives initiative](#) provides standards-aligned, five-minute video resources highlighting experiences and thoughts regarding mathematics and science from experts, teachers, professionals and skilled enthusiasts. These brief videos may be useful for understanding technical content, learning new approaches to teaching, and highlighting the appearance of science and mathematics concepts in practical, real-world situations. This initiative is focused on K-12 instruction from the mathematics and science standards.

There are three types of videos:

Content Expert

Expert videos primarily feature deep knowledge gained through years of academic study. The primary goal of these videos is to provide quick and in-depth knowledge related to the math or science standard.

Teacher

Teacher videos feature lesson plans or ideas that can be implemented in a K-12 classroom. The primary goal of these videos is to provide effective and creative teaching ideas related to the math or science standard.

Professional/Enthusiast

Professional and enthusiast videos feature practical applications of mathematics and science outside of academia. The primary goal of these videos is to demonstrate application examples of the knowledge gained in these standards.

If you have questions about CPALMS or www.floridastudents.org, or you have comments or suggestions, please contact Ashley Palelis at Ashley.Palelis@fldoe.org.

April/May 2017

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FLORIDA DEPARTMENT OF
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Fine Arts

2017 All-National Honor Ensembles

The All-National Honor Ensembles (ANE) Program within the National Association for Music Education (NAfME) represents the top-performing high school musicians in the United States. The ensembles will meet, November 26-29, 2017, at the Walt Disney World Resort in Orlando, Florida, under the baton of leaders in the field of music education. The NAfME All-National Honor Ensembles are represented in the following components: concert band, mixed choir, symphony orchestra and jazz ensemble. More information about the program and application requirements can be found at <http://www.nafme.org/programs/all-national-honor-ensembles/>.

Art in the Capitol Competition

The 2016-17 school year was the first year of the Florida Art in the Capitol Competition as a result of [s. 1003.49965,F.S.](#) This annual competition is open for all students in grades 6 through 8 to compete at the district level. Each district-level winner's work will be on display at the Capitol building during Florida's regular legislative session. Currently, the student work from this year's competition is on display on the lower level of the Capitol. The work will be on display through the end of session, May 5, 2017. Congratulations to all the students whose work was selected to represent their district in this year's exhibit! For more information regarding the Art in the Capitol Competition, please contact Jennifer.Infinger@fldoe.org.

Healthy Schools

Comprehensive Health Education

Health education addresses 12 required component areas for instruction under [s. 1003.42\(2\)\(n\),F.S.](#) Numerous health observances occur during April and May. Please see the spotlighted health education component, observances and resources below.

The family life component focuses on family structures, roles and responsibilities; gender roles; sexual stereotypes; marriage; divorce; human sexuality education; abstinence; parenting; physical and sexual abuse; building family relationships; child abuse and neglect; the family life cycle; family planning; heredity; and communication skills.

Health Observances:

- April is Sexual Assault Awareness and Prevention month. Please visit <http://www.nsvrc.org/saam> for information and resources.
- April is also Child Abuse Prevention Month. Strong, nurturing communities that are supportive of families can get involved and play a role in preventing child abuse and neglect and promoting child and family well-being. Please visit <https://www.childwelfare.gov/topics/preventing/preventionmonth/> for information and resources.
- May is Skin Cancer Prevention month. Please review the Melanoma/Skin Cancer Detection and Prevention [toolkit](#) for detailed information and resources.

For more information, please visit the [Florida Department of Education \(FDOE\) Comprehensive Health Education webpage](#).

The Youth Mental Health First Aid Course

The 2017 Healthy Schools Summer Academy is June 14-15, 2017, at the [Safe Schools Institute](#) in Boca Raton, Florida. The Youth Mental Health First Aid course will be offered concurrently with a certificate awarded upon completion. To learn more about the course, please visit <http://www.mentalhealthfirstaid.org/>.

Online registration for the course is \$30 per person and can be accessed via the Healthy Schools Summer Academy website, (<http://www.healthyschoolsummeracademy.org/>). The registration cost will include the Academy keynote address, general sessions, the resource carousel and lunch.

For more information, please contact the FDOE health education coordinator, Michelle L. Gaines, by email at Michelle.Gaines@fldoe.org or by phone at 850-245-0978.

2017 Healthy Schools Summer Academy

The FDOE Healthy Schools Summer Academy is June 14-15, 2017, at the [Safe Schools Institute](#) in Boca Raton, Florida. This eighth annual professional development event will provide information and resources focusing on Florida Standards, educational technology, mental health, nutrition, physical activity, safe and supportive environments, sexual health education, school connectedness and subject-area integration of health education. District administrators, school counselors, school nurses and all subject-area teachers are also encouraged to attend this informative and interactive two-day event.

Online registration for the academy is \$60 per person and can be accessed via the Healthy Schools Summer Academy website (<http://www.healthyschoolsummeracademy.org/>). For more information, please contact the FDOE health education coordinator Michelle L. Gaines by email at Michelle.Gaines@fldoe.org or by phone at 850-245-0978.

Opportunity for Florida Asthma-Friendly Schools Recognition

To support the academic performance and improve the health status of students with asthma in Florida, the Florida Asthma Coalition established the Asthma-Friendly Schools Recognition with the support of local, state and academic partners.

With the goal of improving student health, attendance and academic achievement, the Florida Asthma Coalition established a voluntary recognition opportunity to acknowledge schools with exceptional asthma management programs. The Florida Asthma Coalition recognizes the long-term impact of academic success and the link between health and academics. Academic success is a key indicator for the overall well-being of students and a primary predictor and determinant of adult health outcomes.

The [2016-17 Asthma-Friendly School Award Application](#) is due May 19, 2017. For assistance during the application process, please refer to the [Asthma-Friendly School Mentor Map](#). To start the process for your school, please complete an [Interest Form](#) and submit it to the mentor assigned to your area. A mentor will contact you to walk you through the process of applying and receiving recognition. If you have any additional questions, contact Karen Farrington, Asthma Program Manager, Division of Community Health Promotion, Bureau of Chronic Disease Prevention, Florida Department of Health at 850-245-4444 ext. 2976 or Karen.Farrington@flhealth.gov.

Instructional Materials

2017-18 Adoption

The Florida Department of Education (FDOE) has announced plans for the 2017-18 instructional materials adoption and is calling for bids from publishers in K-12 Science. The specifications for Science for the 2017-18 Instructional Materials state adoption are posted. The announcement and specifications are posted on the FDOE website at <http://www.fldoe.org/academics/standards/instructional-materials>, and includes course call information for materials to be utilized in the classroom in the 2018-19 academic year. Course descriptions may be found online at www.cpalms.org. The state adoption process includes publishers submitting bids according to the adoption cycle and final sample materials submitted to FDOE by July 14, 2017. Reviews by state expert science reviewers will begin in August 2017.

Library Media

April is School Library Month

Each year, school districts and Florida citizens take time to recognize the programs, services and resources provided by school libraries. This celebratory month provides opportunities across the state to highlight school library contributions to Florida public education. School library programs make a measurable difference in student academic achievement, prepare students for lifelong learning and enhance their reading enjoyment. Additionally, School Library Month coincides with National Library Week, sponsored by the American Library Association, which highlights the resources and contributions of all types of libraries across the country.

Mathematics and Science

Computer Science Courses for 2017-18

With the adoption of computer science standards in 2016, there will be new courses available for the 2017-2018 school year that contain these new standards. Additional courses are awaiting State Board approval. The following courses have already been approved and the courses descriptions are available on CPALMS:

- STEM Lab Kindergarten
- STEM Lab Grade 1
- STEM Lab Grade 2
- STEM Lab Grade 3
- STEM Lab Grade 4
- STEM Lab Grade 5
- Meteorology Honors for grades 9-12

The STEM Lab courses offer elementary students an opportunity to deepen science, technology, engineering and mathematics skills. These courses contain many of the computer science standards including the areas of communication and collaboration; computer practices and programming; communication systems and computing; and personal, community, global and ethical impact. Coding is one component within these courses as students learn about creating algorithms, arranging and sorting information, and detecting and correcting program errors.

The Meteorology Honors course for students in grades 9-12 contains computer science standards related to data analysis, specifically how to use data to formulate strategies or algorithms to solve advanced problems.

In addition, two courses are currently awaiting State Board approval: Introduction to Computer Science 1 for students in Kindergarten through Grade 2 and Introduction to Computer Science 2 for students in Grades 3 through 5. These courses include all of the computer science standards for each grade band. Coding concepts appear throughout these courses especially in the standards of problem solving and algorithms, data analysis, computer programming basics and programming applications.

For more information about the computer science standards and courses, visit www.cpalms.org.

If you have questions about Computer Science, CPALMS or if you have comments or suggestions, please contact Ashley Palelis at Ashley.Palelis@fldoe.org.

Elementary Grades Science

Teaching Science in Grades 3 and 4 is critical to a student's success on the Grade 5 Statewide Science Assessment (SSA). To give more exposure to the important content covered in Grades 3 and 4, we will share a resource each month. This month we highlight **Sound Energy (SC.4.P.10.3)**. To show mastery of this standard, students will investigate and explain that sound is produced by vibrating objects and that pitch depends on how fast or slow the object vibrates. This is Grade 4 content that falls under Big Idea 10/Forms of Energy.

From PBS Learning Media, you can access [Pitch: Water Trombone](#). This video resource is available in both English and Spanish. It also includes a background essay and thought-provoking questions.

Give students a chance to solve a real-world problem using these concepts by implementing this hands-on STEM activity: [Sound Vibrations Using the Engineering Design Process](#).

Secondary Science

Teaching science in Grades 6 and 7 is crucial for a student's success on the Grade 8 Statewide Science Assessment (SSA). In addition, many middle grades standards support the high school science student. This month we highlight light, sound and other waves. Many quality resources are available to support secondary science instruction at www.cpalms.org. Selected resources are highlighted below.

Middle Grades Science

[SC.7.P.10.3](#)

Recognize that light waves, sound waves and other waves move at different speeds in different materials.

Student resources that support [SC.7.P.10.3](#) are linked below.

[Wave Movement, Is it more than just Medium?](#)

Students will discover that light waves and sound waves move at different speeds through different mediums through inquiry, observation and collaboration with peers.

[Modeling Sound Waves Traveling through Different Mediums](#)

In this Perspectives STEM video, the teacher will transfer ideas to you about teaching wave and material properties.

[Light Wave Interaction with Matter](#)

Light travels at an incredibly fast speed and it allows us to see everything around us. It travels as a wave which interacts with different types of matter in a different way. This lesson is designed for Grade 7 students to investigate the different ways in which light waves interact with matter. The type of matter depends on which state the object is in: solid, liquid or gas.

High School Science

[SC.912.P.10.20](#)

Describe the measurable properties of waves and explain the relationships among them and how these properties change when the wave moves from one medium to another.

Student resources that support [SC.912.P.10.20](#) are linked below.

[Refraction of Light](#)

Direct Link: <http://micro.magnet.fsu.edu/primer/java/refraction/refractionangles/index.html>

This resource explores the electromagnetic spectrum and waves by allowing the learner to observe the refraction of light as it passes from one medium to another, study the relation between refraction of light and the refractive index of the medium, select from a list of materials with different refractive indices, and change the light beam from white to monochromatic and observe the difference.

[Fighter Jets and the Doppler Effect Perspectives Video: Professional/Enthusiast](#)

Major Tucker Hamilton, a test pilot for the United States Air Force, explains various aspects of the Doppler Effect as it applies to moving objects such as fighter jets.

[Wave Machine](#)

Direct Link: <https://www.stem.org.uk/elibrary/resource/27031/wave-machine>

This lesson is on the difference between types of waves. This lesson is linked to [SC.912.P.10.20](#). The lesson will focus on recognizing that the source of all waves is a vibration, that waves carry energy from one place to another; and the distinction between transverse and longitudinal waves in mechanical media, such as springs and ropes.

Please register for the Secondary Science Webinar on April 25, 2017, 4:00 PM EDT at:

<https://attendee.gotowebinar.com/register/9155865702602987011>.

Elementary Mathematics

This month's focus is on procedural fluency. What is procedural fluency and how do we help students develop it? Below is the National Council of Teachers of Mathematics position on procedural fluency.

“Procedural fluency is a critical component of mathematical proficiency. Procedural fluency is the ability to apply procedures accurately, efficiently, and flexibly; to transfer procedures to different problems and contexts; to build or modify procedures from other procedures; and to recognize when one strategy or procedure is more appropriate to apply than another. To develop procedural fluency, students need experience in integrating concepts and procedures and building on familiar procedures as they create their own informal strategies and procedures. Students need opportunities to justify both informal strategies and commonly used procedures mathematically, to support and justify their choices of appropriate procedures, and to strengthen their understanding and skill through distributed practice. 2017”

Below are links to the standards for Kindergarten through Grade 6 and resources to support students with procedural fluency. Teachers can administer a formative assessment to gain a better understanding of student thinking and address misconceptions they may have. Links to additional resources are provided.

[MAFS.K.OA.1.5](#) Fluently add and subtract within 5. [Fluency Within Five – Plus Ones and Minus Ones](#)

[MAFS.1.OA.3.6](#) Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. [More Than One Way to Solve a Problem](#)

[MAFS.2.NBT.2.5](#) Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. [Adding Within 100 Using Place Value](#) [Using Properties and Place Value to Add and Subtract](#)

[MAFS.2.OA.2.2](#) Fluently add and subtract within 20 using mental strategies. By the end of Grade 2, know from memory all sums of two one-digit numbers. [Fluency for Addition Within 20](#) [Fluency for Subtraction Within 20](#)

[MAFS.3.NBT.1.2](#) Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. [Wanda's Method Adding and Subtracting Using Properties](#)

[MAFS.3.OA.3.7](#) Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and divisions or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers. [Using Flexible Strategies Fluency with Division](#)

[MAFS.4.NBT.2.4](#) Fluently add and subtract multi-digit whole numbers using the standard algorithm. [Fill In The Missing Number Find the Error](#)

[MAFS.5.NBT.2.5](#) Fluently multiply multi-digit whole numbers using the standard algorithm. [Find the Multiplication Error Complete The Multiplication Problem](#)

[MAFS.6.NS.2.2](#) Fluently divide multi-digit numbers using the standard algorithm. [Long Division - 2](#)

[MAFS.6.NS.2.3](#) Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation. [Dividing Multidigit Decimals](#) [Multiplying Multidigit Decimals](#)

Secondary Mathematics

This month's focus is on proficiency and helping students with those standards he or she still needs support with before the end of the school year. Students can use the below resources at home as well as in school.

[Khan Academy](#) has developed classes, practice and missions for Algebra I and Geometry. Students create an account and the program provides practice for skills students are still working on as well as circling back to help students remember previously learned skills. Students can access the Algebra and Geometry missions by using the subject drop down menu.

[Math Nation](#) is another free resource aligned to the Florida Standards customized to help students become proficient in Algebra I, Geometry and Algebra II.

Social Studies

Visible Learning Books

Many of you may be familiar with the research presented in John Hattie's Visible Learning books. These books present research-based practices for increasing student achievement. In November 2016, a webinar titled "Visible Learning for Literacy" was hosted by Dr. Nancy Frey, which included information on the surface, deep and transfer phases of learning, activities and routines that are most effective at different phases of learning, and key mind frames for teachers and how they apply to curriculum planning. Access the webinar recording at <http://home.edweb.net/webinar/visible-learning-literacy/>.

The Council of State Social Studies Supervisors compiled a list of professional development opportunities to consider. The list can be found at <https://docs.google.com/spreadsheets/d/1OQ28L6qYSXGnF2yjBfwXhU-uclH7QEjTr-AuUaCwFJ4/edit?usp=sharing>.

Bill of Rights and You Pop Up Exhibit

Recently, select Leon County Public Schools hosted The Bill of Rights and You Pop Up Exhibit. The exhibit was created by the National Archives Traveling Exhibits Service and commemorates the 225th anniversary of the ratification of the Bill of Rights. The exhibit provides information in relation to the following headings: Our Bill of Rights, Creating the Bill of Rights, Know Your Rights and Make a Change. The exhibit includes a resource guide with lesson plans, a glossary and suggestions for using the exhibit, and can be used to support the teaching and learning of related social studies standards in the American History, Civics and Government strands. Furthermore, the Bill of Rights is included in Florida's required instruction statute ([s.1003.42, F. S.](#)). Use the following link to view the information contained in the exhibit: <https://www.archives.gov/amending-america/visit/bill-of-rights-pop-up>. Visit <https://www.archives.gov/exhibits/nates> for more information on the National Archives Traveling Exhibits Service.

For more information or to share your ideas, contact Michael DiPierro, Social Studies Education Specialist, at Michael.DiPierro@fldoe.org or 850-245-9773.

Technology

Free Geographic Information Systems (GIS) Tools

Esri, an organization that brings meaning to maps, offers free online mapping tools as part of the ConnectED initiative. Through ArcGIS Online, students and teachers can explore and analyze data using maps. The site offers free instructional materials for a variety of subjects and grade levels including advanced environmental science, history, earth science and human geography. The lessons include a website link to access accompanying maps, and the science lessons use the 5E Model (Engage, Explore, Explain, Elaborate and Evaluate).

Teachers can visit <http://www.esri.com/connected> to access the instructional resources without a login and request a free school account for additional resources.

For more information on GIS, including locations with GIS from Esri, regional online GIS education opportunities and geomentors willing to help educators, visit <http://esriurl.com/usk12gis>.

Data Walls

What do you think of when you hear the word “data?” If you are like many, your mind jumps to thoughts of fancy, high-tech charts with lots of complicated numbers. The concept of data walls may alter your perception. A data wall is quite simply a visual means of tracking and displaying data. They can be “high tech” or use traditional “low tech” tools such as chart paper and pocket charts. Although data walls can be used for different content areas in a variety of ways, the focus of this article is using them in a classroom setting.

You may be wondering why data should be displayed in the classroom instead of organized in a notebook or on the computer. There are a few reasons why showcasing data is a good idea. When the data is up on the wall, it becomes a part of the classroom culture. The students benefit as well because they are able to visually see their progress. Data walls can be interactive, giving students a clear understanding of what the data means and why measuring progress is important for meeting their goals both in and out of the classroom.

For more information about data walls and how they can be used to increase student achievement, check out this video from the Teaching Channel: <https://www.teachingchannel.org/videos/differentiated-instruction-with-data-walls>.



Using data effectively

Tech Chat!

Each month, the Bureau of Standards and Instructional Support conducts an online webinar known as “Tech Chat”. The broadcast is one hour and features guest speakers who are experts on the chosen topic for the month. In addition, district leaders in technology, curriculum and professional development are invited to showcase what is happening in their districts and share their challenges and successes with others. The intended audience for these webinars is district instructional technology staff, curriculum specialists and professional development leaders from Florida districts; however, everyone is invited to take part.

In order to participate you must register for each webinar via a link sent out from the instructional technology staff. If you would like to receive these invitations, contact April Drennan at April.Drennan@fldoe.org and she will add you to the contact list. If you are unable to attend during the scheduled time, webinars are recorded and posted on the instructional technology webpage at <http://www.fldoe.org/academics/standards/subject-areas/instructional-technology>.

Upcoming Tech Chats

May 25, 2017– 3:00-4:00 p.m. EDT: Minecraft

If you have questions about using technology in the classroom, or you have comments or suggestions, please contact April Drennan at April.Drennan@fldoe.org or 850-245-5153.

Transition to our 21st Century Certification System

The Florida Department of Education is launching a new Educator Certification Technology Infrastructure in November 2017. The new system will streamline the application process, and although there will be changes, the improvements will be invaluable to educators and school districts.

- Educators will benefit from:
 - Fast search and retrieval of applications and status;
 - Easy attachment and viewing of required documents;
 - Online processing with a secure and user-friendly interface; and
 - Common applications for all state certification actions;
- School districts will benefit from:
 - Fast search and retrieval of applicants and their information for easy employment screening;
 - Common applications for all state certification actions;
 - Reduced manual processing; and
 - Improved record keeping and reduced need for paper documents.
- Opportunities for school district collaboration:
 - August-October 2017 – System Training for school district certification partners and broad communication with stakeholders;
 - November 2017 – Educator Certification System release.