

# Capture the Core

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System of Support  
Content Specialists

Sixth through  
Eighth Grade

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## Check Out the New ISBE Website

In December, the Illinois State Board of Education (ISBE), launched a newly redesigned website which is also mobile-friendly. Content is organized and prioritized by audience.

Along the top bar you can select if you wish to search by Administrator, Teacher, Families and Students or Community and Partners.

Also at the top are System Quick Links to ELIS ( Educator License Information System), Illinois Report Cards and “How To” Videos on topics such as

Navigating ELIS and applying for a Professional Educator License.

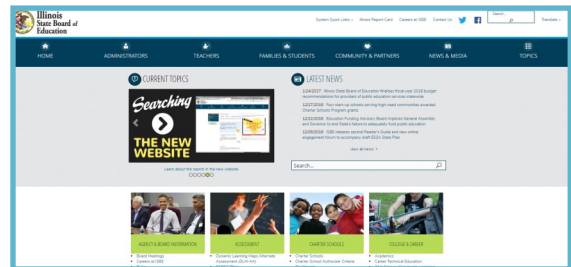
The cover page includes Current Topics and Latest News.

Scrolling down the home page you will find the latest Superintendent's Weekly Message, a calendar and Frequently Asked Questions.

translations to many other languages to support non-English speakers. This might be especially useful for parents.

The new ISBE website offers more up-to-date information to support you in your classroom. To investigate further go to: [www.ISBE.net](http://www.ISBE.net) or click [here](#):

The site offers



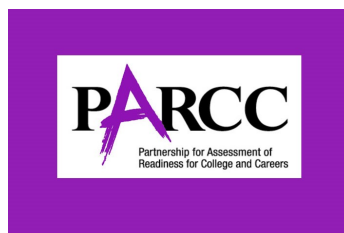
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## PARCC Practice Tests are Now Available

Want to see PARCC items in action?

Want to know how PARCC is different from previous tests?



On the home page of PARRC (Partnership for Assessment of Readiness for College and Careers) website, a link entitled *Test Preparation* provided. Here you can find sample items, tutorials and practice tests for English/Language Arts and Mathematics.

Practice tests for ELA are available for grades 3 - 11. Mathematics practice tests are available for grades 3-8,

Algebra I, II, Geometry, and Integrated Pathways.

Educators find that taking one of these practice tests better prepares them in presenting material to students.

To investigate further, visit: <https://parcc.pearson.com/practice-tests/>

Or click [here](#)



## Language Standard 5a: Figures of Speech



Language Standard #5 states that students should, **“Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.”** There are 3 subskills that are a part of standard #5.

L.6-8.5a states, **“Interpret figures of speech in context.”** By developing a clear understanding of figurative language, students

can further comprehend texts that contain language beyond the basic word level. Direct, or explicit, instruction is often needed to provide the knowledge necessary to understand not only the figurative language expressions but the context surrounding them as well.

There are many types of figurative language. Some include and are listed as examples in the standards are

- Personification
- Mythological allusions
- Literary allusions
- Biblical Allusions
- Verbal Irony
- Puns

Similes, metaphors, idioms and adages have been taught in 4th and 5th grades and can and should still be revisited with grade appropriate text.

## Language Standard 5b: “Kick Me”

L.6-8.5b states, **“Use the relationship between particular words to better understand each of the words.”**

In order to meet this part of the standard, students should have opportunities to see how words can be related in text in examples such as:

- Synonyms
- Antonyms
- Analogies
- Cause/effect
- Part/whole
- Item/category

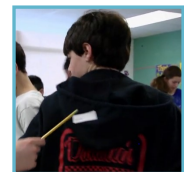
One idea for practicing word relationships is a game called “Kick Me.”

The Kick Me method is based on the prank of putting a note on someone’s back that says kick me. In order to prepare for Kick Me, the teacher should collect analogies and take out one word of the analogies and put it on the students’ backs.

Give students a minute to analyze the relationship, and then find the missing word on their classmates’ backs.

Because there’s a limited amount of answers, they had to find the right answer or the best answer similar which is similar to standardized assessments.

Click [here](#) to watch this strategy in action.



## Language Standard 5c: “What’s In a Name?”

L.6-8.5c states, **“Distinguish among the connotations (associations) of words with similar denotations (definitions).”**

In order to teach students about connotations and denotations, play “What’s In a Name?” In this activity, students will gain an understanding of the

difference between the connotation and denotation/ definition of words, and the importance of effective word choice. Before beginning the activity, make sure students have a clear understanding of connotation and denotation.

Make a list of sports teams for students to see. As you go through the list, ask for

volunteers to give a definition (denotation) of each word, as well as their reaction (connotation) to the word. Ask the class to consider reasons why these names were chosen. Discuss reasons why it is important for a team to have a name that evokes those emotions or reactions. Brainstorm a list of purposes, and record.



## A Closer Look at Mathematical Practice Standard #3

The third Practice Standard, **Construct viable arguments and critique the reasoning of others**, requires students to make conjectures, build a logical progression of statements and analyze situations by breaking them into cases. Students need to use counterexamples, justify conclusions, communicate them to others, and respond to the arguments of others. Students compare the effectiveness of two plausible

arguments, distinguish correct logic or reasoning from that which is flawed, and explain any flaws. Students can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

### How do I encourage MP3?

Provide problems that require students to do the following:

- Engage in reasoning and critical thinking.
- Develop mathematical

arguments that include diagrams, words and/or equations.

- Share mathematical thinking with another student.
- Reflect on a variety of solutions to one problem and to defend a solution.
- Think about explanations and discuss misconceptions.
- Discuss logical steps using precise language.



## Engaging Students in MP3 in the 6-8 Classroom

This task, from Mathematics Assessment Project, effectively engages students in MP3 and addresses the content standard 6.RP Understand ratio concepts and use ratio reasoning to solve problems.

Students must determine a “fair” way for Lara, Chan, Jason, and Maria to share the cost of the gasoline they consume as they carpool to school. There are definitely different ways that students can interpret what would be a “fair” solution. The key element that engages students in MP3 is how they are required to articulate why their answer is the “fairest” and how they arrived at that solution. As students share out their ideas, they will need to analyze and compare to

### Sharing Gasoline Costs

Each day Lara's mom drives her to school. On the way, she picks up three of Lara's friends, Chan, Jason and Maria.

Each afternoon, she returns by the same route and drops them off at their homes.

This map is drawn to scale.

It shows where each person lives and the route taken by Lara's mom.

At the end of a term, the four students agree to pay \$300 in total towards the cost of the gasoline.

I think Lara should pay the most as she has had further to travel.

Yes, I think we should share the cost according to how far we travel in the car.

The people who are in the car for part of the journey should share the cost equally for that part.

How much should each person pay?  
Try to find the fairest possible method. Show all your work.

come to a consensus on which solution is the “fairest.”

Find the entire lesson here:

<http://map.mathshell.org/download.php?fileid=1598>

**Good mathematics is not about how many answers you know...It's about how you behave when you don't know.**

~Author Unknown





***“Some important themes pervade science, mathematics, and technology and appear over and over again, whether we are looking at an ancient civilization, the human body, or a comet. They are ideas that transcend disciplinary boundaries and prove fruitful in explanation, in theory, in observation, and in design.”***  
(Committee on Conceptual Framework for the New K-12 Science Education Standards. et al.)

#### Resources:

- [A Framework for K-12 Science Education](#) (Chapter 4)
- [Teaching Channel Videos for the CCC](#)
- [Bozeman Science](#) has a comprehensive video for each of the CCC.

## Dimension #2: Crosscutting Concepts

This dimension of science education consists of the underlying themes that permeate the topics students will engage in. While these concepts have always existed, historically very little, if any, attention was devoted to them. Intentionally focusing

on the crosscutting concepts (CCC) will “help students develop a cumulative, coherent, and usable understanding of science and engineering.” (Committee on Conceptual Framework for the New K-12 Science Education Standards. et al.)

The seven crosscutting concepts are listed in the table below along with a description of how that CCC looks in this specific grade band along with an example of a Performance Expectation that engages students in that CCC.

Crosscutting Concept:	Description of how the CCC looks in a 6th-8th grade classroom:	Example Performance Expectation that engages students in this CCC:
Patterns	Students recognize that macroscopic patterns are related to the nature of microscopic and atomic-level structure. They identify patterns in rates of change and other numerical relationships that provide information about natural and human designed systems. They use patterns to identify cause and effect relationships, and use graphs and charts to identify patterns in data.	MS-LS4-1. Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that
Cause and Effect	Students classify relationships as causal or correlational, and recognize that correlation does not necessarily imply causation. They use cause and effect relationships to predict phenomena in natural or designed systems. They also understand that phenomena may have more than one cause, and some cause and effect relationships in systems can only be described using probability.	MS-PS1-4. Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed
Scale, Proportion, and Quantity	Students observe time, space, and energy phenomena at various scales using models to study systems that are too large or too small. They understand phenomena observed at one scale may not be observable at another scale, and the function of natural and designed systems may change with scale. They use proportional relationships (e.g., speed as the ratio of distance traveled to time taken) to gather information about the magnitude of properties and processes. They represent scientific relationships through the use of algebraic expressions and equations.	MS-LS1-1. Conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells.
Systems and System Models	Students can understand that systems may interact with other systems; they may have sub-systems and be a part of larger complex systems. They can use models to represent systems and their interactions—such as inputs, processes and outputs—and energy, matter, and information flows within systems. They can also learn that models are limited in that they only represent certain aspects of the system under study.	MS-PS2-4. Construct and present an argument using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects.
Energy and Matter	Students learn matter is conserved because atoms are conserved in physical and chemical processes. They also learn within a natural or designed system, the transfer of energy drives the motion and/or cycling of matter. Energy may take different forms (e.g. energy in fields, thermal energy, energy of motion). The transfer of energy can be tracked as energy flows through a designed or natural system.	MS-ESS2-4. Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.
Structure and Function	Students model complex and microscopic structures and systems and visualize how their function depends on the shapes, composition, and relationships among its parts. They analyze many complex natural and designed structures and systems to determine how they function. They design structures to serve particular functions by taking into account properties of different materials, and how materials can be shaped and used.	MS-PS4-2. Develop and use a model to describe that waves are reflected, absorbed or transmitted through various materials.
Stability and Change	Students explain stability and change in natural or designed systems by examining changes over time, and considering forces at different scales, including the atomic scale. Students learn changes in one part of a system might cause large changes in another part, systems in dynamic equilibrium are stable due to a balance of feedback mechanisms, and stability might be disturbed by either sudden events or gradual changes that accumulate over time	MS-LS2-4. Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.

Adapted from A Framework for K-12 Science Education.

Access printable pdf files of the tables [here](https://www.illustrativemathematics.org/) on [ilclassroomsinaction.org](https://www.illustrativemathematics.org/).

## Upcoming Professional Learning Opportunity

An Illinois Science Teacher Leader Institute is coming this summer. This two-day professional learning opportunity will take a close look at the shifts of the

science standards and how they affect classroom instruction. Educators will experience inquiry and work on creating engaging three-dimensional learning

experiences for their students. Keep an eye on [ilclassroomsinaction.org](https://www.illustrativemathematics.org/) for the details regarding dates, locations, and registration.

## New Illinois-Created Resources Available!

The social science page on the IL Classrooms in Action website has had many new additions recently! The Social Science Standards Implementation Starter Kit has been posted on the social science resource page. The resources in this kit provide various types of support to educators working to understand and incorporate the new Illinois Social Science Learning Standards into curriculum. The [Starter Kit User Guide with Visual Resource Guide](#) will assist in identifying a potential process to use to support educators in the implementation process while also providing links to all kit resources. Two kit components are highlighted below.

### Inquiry-Based Learning Webinar

In addition to two webinars that provide an overview of the social science standards, a newly available webinar discusses Inquiry-Based Learning in the Social Sciences. This webinar discusses what inquiry is, how it can be structured in the classroom, and ways to use the Standards to incorporate inquiry in the classroom. The webinar is available through the Implementation Kit User Guide or a [direct link](#) on the social science resources page.

### Keep It, Tweak It, Delete It: Analysis of Current Social Science Curriculum

Each grade level handout allows teachers to reflect upon the true alignment of currently utilized social science curriculum. Educators can take a look at current lessons or units and evaluate which standards are fully met through current activities. These documents also highlight opportunities for growth that exist in current lessons in order to guide future implementation and alignment discussions.

The [Analysis of Current Social Science Curriculum](#) can be especially helpful as educators begin the implementation process since in order to understand any potential adjustments that may be needed, a baseline needs to be established. To use this analysis document, educators will need to have access to a copy of the relevant grade standards as well as the current curriculum in place. This document is most useful when honesty is emphasized! There is no need to be embarrassed of gaps, the purpose is to discover areas where growth is possible.

Many more resources exist as part of the Standards Implementation Starter Kit, check out all the new resources on the [Classrooms in Action social science page!](#)



## ISBE Mandate Guidance Documents

The adoption of the new Illinois Social Science Learning Standards caused many educators to question what mandated units of study are required for students in sixth through twelfth grade. Two newly created documents have been published on the IL Classrooms in Action social science page to provide guidance on current legislation and mandates.

The [Illinois Civics Mandate Guidance Document](#) is to serve as a guide for districts, schools, and teachers in interpreting the amendments to the School Code that effect civics instruction (P.A. 99-434 and P.A. 99-485). Included are the Illinois State Board of Education's interpretation of the law and common misconceptions.

The [Illinois Mandated Units of Study Guidance Document](#) assists in interpreting the current mandated units of study in Illinois. Though a focus is on social science relevant mandates, information about mandates in all areas is included as well. Common misconceptions are addressed as are the Illinois State Board of Education's interpretation of the law.

Access to the full School Code for further information can be found on the Illinois General Assembly website.  
<http://bit.ly/2iy4yfr>



# Comprehensive System of Learning Supports



"If you want a child to be attentive and stay on task, and also if you want them to encode the information you're giving them in their memory, you've got to give them regular breaks."

-Dr. Bob Murry  
Ohio State University  
pediatrician

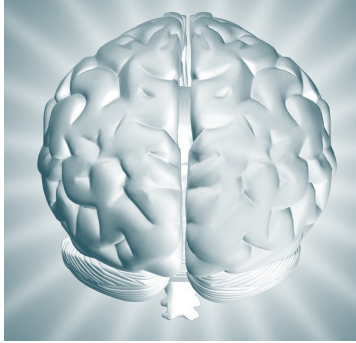
Check us out on the web:  
[Illinois Classrooms in Action](#)



## Physical Activity: What Research Says...

Students need physical activity for a healthy mind as well as a healthy body. Students' cognitive, emotional and behavioral development is linked to physical activity. Studies looking at the effects of aerobic activity on several parts of the brain indicate different developmental indicators.

The hippocampus area in aerobically fit children and adults was found to be larger in volume and better in memory performance than peers who were less fit. (Erickson, et.al., 2011) The top portion of the Basal Ganglia (Dorsal Striatum) in fit children were shown to have larger volumes. This is the area associated with superior executive functioning skills, specifically on a



task that involved paying attention and ignoring distractions.

Researchers have begun using MRI technology to view the frontal cortex of the brain when children are engaged in thinking, playing and paying attention. Following a semester that included 60+ minutes of physical activity daily and a control group of students that had no interaction with the researchers, studies found a marked difference in the MRI scans of the two groups. The fit group show more activity in all areas of the brain and faster responses.

Chaddock-Heyman, L., Erickson, K. I., Voss, M. W., Knecht, A. M., Pontifex, M. B., Castelli, D. M., Hillman, C. H., & Kramer, A. F. (2013). The effects of physical activity on functional MRI activation associated with cognitive control in children: A randomized controlled intervention. *Frontiers in Human Neuroscience*, 7, 2-13.

## Classroom Brain Breaks and Activities



GoNoodle.com has activities to get kids moving and thinking! The online platform has music videos with which students can interact. A free account is a fully functional resource that allows educators to set up individual class accounts. A few activities to use in middle or high school are below.

**Snowball:** Have the students take out a sheet of paper, write their name on the front of the paper, and write out a problem that they have been working on. On the back of the paper solve the problem. Crumple the paper up like a snowball. Everyone should stand up and have a good old fashion snowball fight with the papers. All throws must be aimed at shoulders or below. After they have thrown at least 3 times, they should pick up a snowball and start doing the problem on the paper. Check the answer.

**Say 21 and WIN:** The object is to say 21 and win. You have the option when it is your turn to say the next consecutive number or two. For example... I go first I say 1, You can say 2 or 2...3. You say 2. Then I can say 3 or 3...4. I say 3 ... 4 and so on until someone says 21 and wins.

### Rocks, Paper, Scissors, Math:

- You can only use the numbers 1,2,3 or 4
- You can't use your thumb as a number
- You must hold your hand flat
- The first person to add the numbers together wins that round.
- Have students play the best of 5 rounds.
- Variations are that one person is negative, both are negative, or multiply the numbers.

**Paper Twirling:** This will help you focus and concentrate. Take the paper with your palm up in one hand. Twirl it around your back and catch (don't grab) it with the other. Twirl (go around and around) as fast as you can. Switch directions.