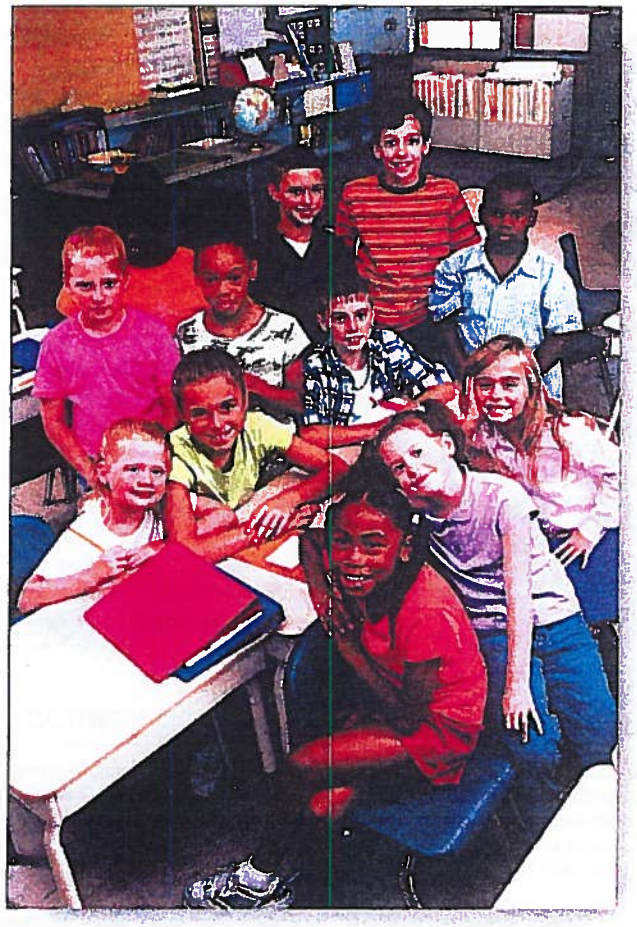
# 2012-13 School Year

# COMMON CORE AWARENESS

# HOW TO BEGIN



## COMMON CORE STATE STANDARDS MISSION

The mission of the Common Core State Standards is to provide a consistent, clear understanding of what students are expected to learn, so teachers and parents know what they need to do to help them. The standards are designed to be robust and relevant to the real world, reflecting the knowledge and skills that our young people need for success in college and careers. With American students fully prepared for the future, our communities will be best positioned to compete successfully in the global economy.

## TRANSITIONING TO THE COMMON CORE STATE STANDARDS

The Common Core State Standards encourage the highest achievement of every student by defining the knowledge, concepts, and skills that students should acquire at each grade level through an integrated standards-based system of education in which both academic content standards and "Habits of Mind" standards are an essential part of the whole. No single element ensures student achievement as each element supports the other.

The introductions to both the English language arts and mathematics Common Core State Standards include descriptions of knowledge, skills, and dispositions, referred to as "Habits of Mind" which operate in tandem with the academic content in the standards. These "Habits of Mind" offer a portrait of students who, upon graduation, are prepared for college, career, and a global economy. These cognitive and psychological aptitudes are described in the English language arts standards as "Capacities" and in the mathematics standards as "Practices."

## 21ST CENTURY SKILLS ARE EMBEDDED WITHIN THE COMMON CORE "HABITS OF MIND"

The 21st Century Skills embedded in the "Habits of Mind" are extremely important to the development of the assets students need to be successful in a rapidly-changing global economy. A focus on the 4C's of Creativity, Critical thinking, Communication and Collaboration are essential to prepare students for their future.

### COMMUNICATION & COLLABORATION:

Students know how to articulate thoughts and ideas effectively using oral, written and nonverbal communication. They listen effectively to decipher meaning, such as knowledge, values, attitudes and intentions, and use communication in diverse teams and environments for a wide range of purposes.

### CREATIVITY & INNOVATION:

Students use a wide range of techniques to create new and worthwhile ideas, elaborate, refine, analyze, and evaluate their own ideas. In order to improve and maximize creative efforts, students need to demonstrate originality and inventiveness both individually, and in group settings.

### CRITICAL THINKING & PROBLEM SOLVING:

Students reason effectively, use systems thinking and understand how parts of a whole interact with each other. They make judgments, decisions, and solve problems in both conventional and innovative ways based upon logical reasoning and evidence.

GRADES K - 12

# TEACHER INSTRUCTIONAL STRATEGIES TO ENGAGE STUDENTS IN THE COMMON CORE "HABITS OF MIND"

**21st century thinkers that are prepared for college and career have identifiable characteristics, "Habits of Mind", which attribute to their success. These patterns of intellectual behavior can be taught by intentionally designing environments in which learning, teaching, and assessment all focus on developing students' "Habits of Mind" capabilities, practices, and metacognition.**
*This suggested sequence provides teachers a progressive developmental approach toward incorporating new instructional strategies to empower students in the "Habits of Mind". As strategies are incorporated and mastered, the "Habits of Mind" are attained, student achievement increases, and student learning in greatly enhanced.*
***Please Note**: In working with the sequence remember that the strategies are cumulative; each prior strategy supports the next one. This then creates a shift from engagement to empowerment.*

## COMMON CORE STATE STANDARDS "HABITS OF MIND"

**English Language Arts Capacities**
*As students advance through the grades and master the standards in reading, writing, listening, and language, they should be able to exhibit with increasing fullness and regularity the capacities of a literate individual.*

1. They demonstrate independence.
2. They build strong content knowledge.
3. They respond to the varying demands of audience, task, purpose, and discipline.
4. They comprehend as well as critique.
5. They value evidence.
6. They use technology and digital media strategically and capably.
7. They come to understand other perspectives and cultures.

**Mathematical Practices**
*For students to succeed, they must increasingly develop varieties of expertise at all levels in the following ways:*

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasonings.

## INTENTIONALLY SEQUENCE INSTRUCTIONAL STRATEGIES TO PROGRESSIVELY ENGAGE AND EMPOWER STUDENTS IN THE "HABITS OF MIND"

**Initiating Think, Pair-Share (or, Think, Write-Pair-Share)**
The teacher asks a question or assigns a problem and allows students to think and work with a partner for one to three minutes before requesting an answer to the question or problem. In think, pair-share students are given a brief period of time to think independently before working with a partner. While effective in results, this strategy is a significant first step in engaging all students in classroom instructional activities.

**Showing Thinking In Classrooms**
The teacher works toward higher degrees of student involvement in classroom activities. Once pair-share is incorporated into classroom routines, the teacher incorporates additional strategies that promote "every pupil response". Collaboration is used to help as students clarify their own thinking as part of the "every pupil response" strategy prior to individual share-out. "Every pupil response" strategies include such responses as "thumbs up/thumbs down," or use of individual white boards for noting answers. Students are also pressed to be more aware of their description. Students merely provide the steps they used to solve the problem, not their reasoning and thinking about how they knew which processes to use. In order to reveal student thinking, more challenging, open-ended problems are needed.

**Questioning and Wait Time**
As thinking is increased in the classroom, better questioning and wait time are required. Teacher provides thought provoking questions to students, and then allows the students time to think and work toward an answer.

**Grouping and Engaging Problems**
The strategy of "grouping and engaging problems" is a significant shift in pedagogy and materials. Students are given challenging problems/tasks/scenarios to work, and allowed to work on the problem in a group of two, three, or four. Challenging problems/tasks/scenarios take time, effort, reasoning, and thinking to solve.

**----------EMPOWERMENT STRATEGIES----------**

**Using Questions and Prompts with Groups**
Once students are provided with opportunities to solve challenging problems/tasks/scenarios in groups, the teacher increases the level of the guiding to encourage students to continue persevering to solve the problems/tasks/scenarios. Teacher evokes student curiosity and enthusiasm to continue by providing hints or cues without giving students the answers, and asks probing questions to better assess student thinking and current understanding.

**Allowing Struggle Time**
Students learn to persevere in solving challenging tasks/scenarios/problems by being allowed to have time to struggle with the challenging task/scenario/problem. Students need to understand that real-word, thus authentic school tasks/scenarios/problems do not usually have a quick, easy solution. Effective effort is a life-skill and should be learned interdependently and independently. Appropriate degree of difficulty is foremost on teachers' minds. If the problem is too easy, students do not need to struggle if the problem is far too difficult; students are not capable of solving the problem. Teachers need to balance working in groups and working independently, and be able to quickly adjust grouping strategies as the need arises.

**Encouraging Reasoning**
Students need to be encouraged to carefully think about the content area, and to be aware of their own level of knowledge and understanding. They also need to be able to accurately communicate their thinking to others. Reasoning requires students to pull together patterns, connections, and understanding about the content, and then apply and adapt their understanding to new learning within and across content areas and real-life situations.

GRADES K - 12

# TEACHER INSTRUCTIONAL STRATEGIES TO ENGAGE STUDENTS IN THE COMMON CORE "HABITS OF MIND"

**Please Note:** ***As you begin to design learning environments that provide students opportunities to develop the Common Core ELA Capacities, "Habits of Mind", consider this chart as a quick reference to what the "Habits of Mind" might look like in proficient students. Remember, literate students can read, write, speak, and listen as a scientist, historian, engineer, artist...in other words, from the perspective of all content areas.***

| ENGLISH LANGUAGE ARTS "HABITS OF MIND" | STUDENTS WHO ARE PROFICIENT IN LITERACY, CAN... |
|---|---|
| **I Respond to the Varying Demands of Audience, Task, Purpose, and Discipline** | • I adapt my communication in relation to audience, task, purpose, and discipline<br>• I set and adjust my purpose for reading, writing, speaking, listening, and language use as warranted by the task<br>• I adapt my tone, nuances, and connotations of my words to affect meaning<br>• I know that different disciplines call for different types of evidence |
| **I Comprehend As Well As Critique** | • I am an engaged, discerning, and open-minded reader and listener<br>• I work diligently to understand precisely what an author or speaker is saying<br>• I question and assess the veracity of claims and the soundness of reasoning of an author's or speaker's assumptions and premises |
| **I Build Strong Content Knowledge** | • I engage with a wide range of works of quality and substance<br>• I am proficient in new areas through research and study<br>• I read purposefully and listen attentively to gain both general knowledge and discipline-specific expertise<br>• I refine and share my knowledge through writing and speaking |
| **I Use Technology and Digital Media Strategically and Capably** | • I employ technology thoughtfully<br>• I acquire useful information efficiently, and I integrate what I learn online with what I learn offline<br>• I am familiar with the strengths and limitations of various technological tools and mediums<br>• I select and use tools best suited to my communication goals |
| **EMPOWERMENT**<br>***Empowerment is the process of increasing the capacity of individuals or groups to make choices and to transform those choices into desired actions and outcomes. Central to this process are actions which both build individual and collective assets, "Habits of Mind".*** | |
| **I Value Evidence** | • I cite specific evidence<br>• I use relevant evidence when supporting my own points in writing and speaking, making my reasoning clear to the reader or listener<br>• I constructively evaluate others' use of evidence |
| **I Come to Understand Other Perspectives and Cultures** | • I appreciate learning and working with people from widely divergent cultures who represent diverse experiences and perspectives<br>• I actively seek to understand and communicate clearly with people of varied backgrounds<br>• Through reading world, classic, and contemporary literature, I can vicariously inhabit worlds and have experiences<br>• much different than my own |
| **I Demonstrate Independence** | • I am a self-directed learner, I evaluate and comprehend complex text<br>• I construct effective arguments and convey multifaceted information<br>• I independently discern a speaker's key points, request clarification, and ask relevant questions<br>• I build on others' ideas, articulate my own ideas, and confirm I have been understood<br>• I demonstrate command of standard English and acquire and use a wide-ranging vocabulary |

GRADES K - 12

# TEACHER INSTRUCTIONAL STRATEGIES TO ENGAGE STUDENTS IN THE COMMON CORE "HABITS OF MIND"

**Please Note:** *As you begin to design learning environments that provide students opportunities to develop the Common Core Mathematical Practice Standards, "Habits of Mind", consider this chart as a quick reference to what the "Habits of Mind" might look like in proficient students. Remember, mathematically literate students can read, write, speak, and listen as a mathematician across all academic content areas.*

| MATHEMATICS "HABITS OF MIND" | MATHEMATICALLY PROFICIENT STUDENTS, CAN... |
|---|---|
| **I Make Sense of Problems** | • I explain the problem to myself and restate it in my own words<br>• I think about past problems to help determine how to solve a problem in different ways<br>• I use concrete objects or pictures to help conceptualize and solve the problem |
| **I Critique the Reasoning Of Others**<br><br>**I Construct Viable Arguments** | • I understand and use stated assumptions, definitions, and previously established results in constructing my arguments<br>• I make conjectures and build a logical progression of statements to explore the truth of my conjectures<br>• I analyze situations by breaking them into cases, and can recognize and use counter examples<br>• I justify my conclusions, communicate clearly to others, and respond to the arguments of others |
| **I Attend to Precision** | • I communicate precisely to others, using clear definitions in discussion with others<br>• I state the meaning of the symbols I choose, and carefully specify and label units of measure<br>• I calculate accurately and efficiently |
| **I Persevere in Solving Problems** | • I analyze, make conjectures, and consider analogous problems to gain insight into a variety of possible solution strategies<br>• I monitor and evaluate my own progress and change course if necessary<br>• I check my answers, explain correspondences between my mathematical representations, and ask myself; "Does this make sense?" |
| **EMPOWERMENT**<br>***Empowerment is the process of increasing the capacity of individuals or groups to make choices and to transform those choices into desired actions and outcomes. Central to this process are actions which both build individual and collective assets, "Habits of Mind".*** | |
| **I Use Appropriate Tools Strategically** | • I consider the available tools when solving a mathematical problem<br>• I make sound decisions about when each tool might be helpful, recognizing both the insight to be gained and their limitations<br>• I use technological tools to explore and deepen my understanding, and enable me to visualize and compare<br>• I can identify relevant online mathematical resources, and use to pose or solve problems |
| **I Model with Mathematics** | • I apply the math I know to solve problems arising in everyday life<br>• I am comfortable making assumptions and approximations to simplify a complicated situation<br>• I identify important quantities in a practical situation and use tools to map their relationships<br>• I analyze mathematical relationships to draw conclusions<br>• I interpret my results in the context of the situation and reflect on whether the results make sense, and improve the model if it has not<br>• served its purpose |
| **I Reason Abstractly and Quantitatively** | • I make sense of quantities and their relationships in problem situations<br>• I translate given information to create a mathematical representation for a concept, bring two complementary abilities to bear on problems<br>• involving quantitative relationships<br>o I represent my mathematically thinking symbolically<br>o I demonstrate understanding of the meaning of the symbols involved<br>• I create a coherent representation of the problem at hand |
| **I Look For and Express Regularity in Repeated Reasoning** | • *I notice if calculations are repeated, and look for both general methods and shortcuts*<br>• *I maintain oversight of my solution process, while attending to the details*<br>• *I continually evaluate the reasonableness of my results* |
| **I Look For and Make Use Of Structure** | • *I look closely to discern a pattern or structure*<br>• *I can step back for an overview of a mathematical equation or expression, and shift my perspective*<br>• *I can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects* |