

VILLA PROJECT—Curriculum and Instruction—October 16, 2017

MATHEMATICS BREAKOUT SESSION



Cherokee County School District

Cherokee County School District is committed to providing balanced mathematics program for all students from kindergarten through graduation. Through a blended learning model, students receive instruction via technology and in print. Our focus begins with the acquisition of math skills through the conceptual instructional strategies. This results in a comprehensive understanding of the math principals to apply towards critical thinking, problem solving and application of skills into real life situations.

Why has math instruction changed? Simple, the world is changing and we must prepare our students to solve problems to better help them prepare for opportunities that do not even exist yet.

Standards of Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Justify and explain their reasoning and critique the reasoning of others.
4. Model with mathematics, i.e. graphs, drawings, tables, symbols, etc.
5. Use appropriate math tools strategically, i.e. manipulatives, calculators, rulers, etc.
6. Attend to precision, i.e. clear communication, accuracy, measurement, calculations.
7. Look for and make use of patterns and structure.
8. Look for and express regularity in repeated reasoning through rules properties and shortcuts.

Mathematical Foundational Skills

Students use manipulatives, software, and technology to investigate and discover math concepts.

Students understand concepts through models, simulations and relevant real world examples.

Students represent the mathematics through drawing pictures, graphics, tables, numbers, and symbols.

Students are given purposeful skills and practice to strengthen computation.

Students engage in explanatory writing to justify their thinking.

Students become fluent by applying strategies and procedures efficiently and accurately.

Application & Problem Solving

Students use Concepts and skills that they acquire to:

Solve problems with the use of models and explanations.

Solve and analyze performance tasks for deep/rich contextualized problem solving and application of the concepts to new or unique situations.

Apply towards Problem Based Learning where students explore real-world problems and challenges for possible solutions.

Work individually and collaboratively to explain and justify their thinking.

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SCIENCE BREAKOUT SESSION



Cherokee County
School District

Cherokee County School District provides a hands-on, experienced based curriculum where K-12 students explore characteristics and phenomena of our natural and man-made world. Through engaging and rigorous instruction students investigate problems, develop evidence-based explanations, and learn how to communicate their findings in a precise and effective manner. Through questions, observations, experiments, dialogue and research, students build their understanding as they evaluate and design solutions to problems. In doing so, our students gain the process skills and content understanding necessary to develop into creative thinkers and efficient problem solvers who can engineer solutions to the natural and man-made problems that await our attention.

SCIENTIFIC FOUNDATIONAL SKILLS

Science centers on the investigation of our natural and engineered world through careful observation, data collection, and controlled experimentation. Students acquire knowledge of key scientific principles while building systematic inquiry skills such as creating, collecting, and analyzing data. Finally, students demonstrate their understanding by constructing explanations, engaging in argument, and engineering solutions to practical problems.

Students must be engaged in the performances of science. Its about getting students to do science; not just memorize facts.

SCIENCE & ENGINEERING PARCTICES

GATHER: Obtain information, Ask Questions, Plan and Carry out Investigations, Use Models to Gather Data and information, Use Mathematics/Computational Thinking

REASON: Evaluate information, analyze data, Use Mathematics/Computational Thinking, Construct Explanations/Solve Problems, Develop Arguments from Evidence, Use Models to Predict & Develop Evidence

COMMUNICATE: Use Models to communicate, Create a dialogue with others on their Findings, Argue from Evidence; Verbal and written forms

CROSSCUTTING CONCEPTS

Patterns: Students observe patterns in nature that guide organization and prompt questions.

Cause and Effect: Students investigate how causal relationships are central to science.

Scale and Proportion: Students analyze the importance of scale, proportion, and quantity.

Systems: Students define the system(s) under study as a tool for understanding and testing ideas.

Energy and Matter: Students track the transfers of matter and energy within systems under study.

Structure and Function: Students interpret how the structure of an object or organism relates to its function.

Stability and Change: Students evaluate the importance of stability and rates of change in a system.

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CTAE BREAKOUT SESSION



Cherokee
County
School
District

Career Pathway Options 2017-18



Cherokee High School

Pathways:

- Air Force JROTC
- Audio/Video Technology & Film
- Automobile Maintenance & Light Repair
- Business & Technology
- Carpentry
- Early Childhood Care & Education
- Electrical
- Engineering & Technology
- Information Support Services
- Nutrition & Food Science
- Plant & Floral Design Systems
- Programming
- Therapeutic Services/Patient Care
- Welding



Creekview High School

Pathways:

- Army JROTC
- Audio/Video Technology & Film
- Engineering & Technology
- Entrepreneurship
- Equine Science
- Graphic Communications
- Graphic Design
- Law Enforcement Services/Forensic Science
- Marketing Communications & Promotions
- Nutrition & Food Science
- Teaching as a Profession
- Therapeutic Services/Allied Health & Medicine - Sports Medicine



Etowah High School

Pathways:

- Air Force JROTC
- Architectural Drafting
- Audio/Video Technology & Film
- Automobile Maintenance & Light Repair
- Companion Animal Systems
- Computer Science
- Engineering Drafting & Design
- Entrepreneurship
- Therapeutic Services/Patient Care
- Law Enforcement/Criminal Investigations
- Nutrition & Food Science
- Plant & Floriculture Systems
- Programming



River Ridge High School

Pathways:

- Air Force JROTC
- Architectural Drafting
- Audio/Video Technology & Film
- Business & Technology
- Computer Science
- Engineering & Technology
- Law Enforcement Services/Forensic Science
- Marketing Communications & Promotions
- Nutrition & Food Science
- Teaching as a Profession
- Therapeutic Services/Patient Care



Sequoyah High School

Pathways:

- Air Force JROTC
- Architectural Drafting
- Audio/Video Technology & Film
- Automobile Maintenance & Light Repair
- Business & Technology
- Computer Science
- Engineering Drafting & Design
- Marketing & Management
- Nutrition & Food Science
- Sports & Entertainment Marketing
- Teaching as a Profession



Woodstock High School

Pathways:

- Audio/Video Technology & Film
- Business & Technology
- Computer Science
- Early Childhood Care & Education
- Engineering & Technology
- Graphic Design
- Law Enforcement Services/Criminal Investigations
- Marketing & Management
- Navy JROTC
- Nutrition & Food Science

For more information, contact the counselor's office at the respective high school www.cherokeek12.net

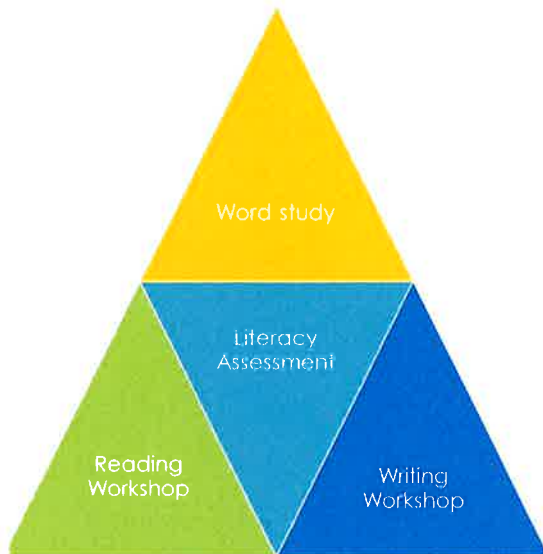
TCSG/CCSD High-Demand Careers

Agricultural Mechanics
Aircraft Maintenance
BioTech/BioMedical Technician
Certified Engineer Assistant
Commercial Truck Driving
Computer Programmer
Computer Technology
Cybersecurity

Diesel Equipment Technology
Early Childhood Care & Education
Health Science
Industrial Maintenance
Movie Production Set Design
Practical Nursing
Precision Manufacturing
Welding & Joining Technology

ELA/READING BREAKOUT SESSION

What is Balanced Literacy?



Components of Literacy Framework

- Word Study
- Read Aloud
- Reading Workshop
 - Mini Lesson
 - Shared Reading
 - Guided Reaading
 - Work Stations
- Writer's Workshop
 - Mini Lesson
 - Shared Writing
 - Interactive Writing
 - Independent Writing

Rigorous Curriculum Design Units for every grade K-5

- Priority and Supporting Standards
- Pacing Guides
- 6 units for every grade
- Pre-Assessments
- Post-Assessments
- Weekly planner
- Performance tasks for each unit

<https://www.georgiastandards.org/Georgia-Standards/Documents/ELA-Standards-Grades-K-5.pdf>

<https://www.georgiastandards.org/Georgia-Standards/Documents/ELA-Standards-Grades-6-8.pdf>

<https://www.georgiastandards.org/Georgia-Standards/Documents/ELA-Standards-Grades-9-12.pdf>

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Social Studies BREAKOUT SESSION

GSE Crosswalk Example

SS6G11 The Student will describe the cultural characteristics of Europe.

- A. Explain the diversity of European languages as seen in a comparison of German, English, Russian, French and Italian.
- B. Describe the major religions in Europe; include Judaism, Christianity and Islam.
- C. Explain how the literacy rate affects the standard of living in Europe.

SS6G10 Describe selected cultural characteristics of Europe.

- A. Describe the diversity of languages spoken in Europe.
- B. Identify the major religions in Europe: Judaism, Christianity and Islam.

It's Not the "What;,"

It's the "HOW"

Content and Instructional Resources:

- Curriculum Map
- Sample Units
- Teacher Notes
- Content Tutorial
- Instructional Activity Tutorial Videos'
- Social Studies Labs
- Virtual Specialists Professional Learning Communities

What is
IN?QUIRY
-based learning?

Instructional Activities S W I R L



Cherokee County Schools Instructional Framework DESIGN

Concept	What does it look like in practice?		
1) Utilize Georgia Standards as the foundation of the curriculum and create a shared understanding of student learning goals.	<ul style="list-style-type: none"> Teachers unpack the standards to understand the depth and rigor of learning expectations. Teachers utilize the standards to collaboratively plan curriculum, instruction and assessment. Teachers and students articulate learning targets based on the standards and set goals to gauge progress based on data. 		
2) Analyze multiple measures to prioritize and address the individual needs of all students.	<ul style="list-style-type: none"> Teachers and students utilize multiple measures to develop learning goals and design instruction. Teachers analyze and use student learning data, demographic data, and prior learning experiences to inform planning. 		
3) Develop goal-driven, rigorous, personalized and engaging lessons appropriately paced to meet students' needs.	<ul style="list-style-type: none"> Lessons are developmentally appropriate and designed to optimize student interest, ability, creativity, innovation and engagement. Formative and summative assessments are based on the standards and designed to help students master content. Technology is utilized as a learning tool to enhance the learning experience, create equitable access, and increase student engagement. 		
Instructional Resources		Instructional Support	
Georgia Standards	Instructional and Assistive Technology	Universal Design for Learning	Teacher Keys Evaluation System (TKES)
• Georgia Standards of Excellence	Learning Management System	Tiered Interventions (RTI)	Data Team for Learning Process (DT4L) within PLC
• Georgia Performance Standards	Summative and Formative Data	Professional Learning Communities (PLC)	CCSD Walkthroughs
• WIDA Standards	Universal Screening and Progress Monitoring Data (easyCBM, iReady)		
• ISTE Standards	Lexile Frameworks		
CCSD Prioritized Standards	Statewide Longitudinal Data Systems (SLDS)		
Curriculum Maps			
Pacing Guides			
School Improvement Plan			
Strategic Plan			

Updated as of 11.14.16

Cherokee County Schools Instructional Framework

ASSESS

Concept	What does it look like in practice?	
7) Utilize a variety of diagnostic, formative and summative assessments aligned to the standards to inform instruction and provide feedback to students.	<ul style="list-style-type: none"> • Teachers design formative, summative, and performance assessments aligned to the level of cognitive demand and performance expectation of the standard(s). • Teachers utilize common pre-, mid-, and post-assessments to plan instruction tailored to individual student needs and assess progress toward learning goals. • Teachers use a collaborative, strategic, data-based process to strengthen teaching and learning and provide timely, meaningful feedback to students on their progress toward mastery. • Teachers observations, verbal, written, and nonverbal measures (e.g. ticket out the door, thumbs up, elbow partners) are utilized to monitor learning and adjust instruction. • Teachers collect, analyze and maintain data from multiple measures to monitor student achievement of learning goals 	
8) Provide timely, collaborative, and relevant feedback which encourages students to engage in self-assessment and goal setting.	<ul style="list-style-type: none"> • Teachers use success criteria and examples (written/verbal) to clearly define and communicate performance expectations in order to assist students as they assess their own progress and set goals for improvement. • Teachers provide opportunities for students to collaborate, providing explanations/examples to determine their individual level of understanding or performance. • Students create learning goals based on standards and performance data (e.g. pre-assessment or self-assessment) and a work plan based on success criteria that defines expectations and a learning path. 	
Instructional Resources		Instructional Support
Depth of Knowledge (DOK)	Universal Screener and Progress Monitoring <ul style="list-style-type: none"> • easyCBM • iReady • Lexile Framework 	Professional Learning Communities (PLC) School-based Data Management / Instructional Leadership Teams
Student Self-Assessment and Goal Setting		Data Team for Learning Process (DT4L) within PLC
Portfolios	Digital Formative Assessments	Teacher Observations
Exemplars		Tiered Intervention Process (RTI)
Rubrics and Scoring Guides	Summative Assessments	