Mathematics and English Language Arts for Students with Significant Cognitive Disabilities:

An Overview for Teachers
Section 1

Introduction to the National Center and State Collaborative (NCSC) Instructional Framework
Participants will:

- Increase their understanding of the National Center and State Collaborative (NCSC) Core Content Connectors (CCC) and the alignment with Maryland College and Career-Ready Standards (MCCRS).

- Develop a deeper understanding of the Mathematics and English Language Arts content as it relates to the CCC.
Acronyms

**NCSC** - National Center and State Collaborative

**CCSS** - Common Core State Standards

**MCCRS** – Maryland College and Career-Ready Standards

**CCC** - Core Content Connectors

**AA-AAS** - Alternate Assessment on Alternate Academic Achievement Standards

**EC** - Element Cards

**EU** - Essential Understandings
Who are we talking about?

A student who:

- Has a disability that impacts intellectual functioning and adaptive behavior.
- Requires modifications to instruction.
- Requires extensive, repeated, individualized instruction.
- Uses substantially adapted materials.
**Incorrect Assumption:**

“These students cannot learn past the functional level at best.”

**Guaranteed Outcome:**

“If we never change our instructional approach and raise our expectations, we will continue to have students who will not reach their highest potential.”
What is wrong with that thinking?

- Limits potential
- Increases confusion and frustration
- Alters experiences and stages of development
- Creates gaps in learning
Assumptions and Outcomes

Correct Assumption: “All students can learn.”

Guaranteed Outcome: “When given every opportunity to learn, all students will reach their highest potential.”
What works in instruction?

- Scope and sequence of skills aligned to standards
- Comprehensive and systematic progression of learning
- Universal Design for Learning (UDL)
- Breaking skills down…slowing the pace
- Real-world learning applications
IEP goals ≠ curriculum

- **Goals** = what to measure

- **Curriculum** = guide for progression of learning
All individuals communicate.

All output (gestures, cries, noises) can be communicative.

Communication at some level is possible.

Improved communication leads to an enriched quality of life and independence.

Students with significant cognitive disabilities can improve their communication skills.
The NCSC project will develop an alternate assessment based on alternate achievement standards, balancing flexibility and standardization, working closely with teachers, content, and assessment design experts.
Draft NCSC Operational Test Blueprint

This document describes the current design of the NCSC test blueprint for the summative assessment in Mathematics and ELA. This is a draft document, and it will be updated pending data from pilot testing in fall 2014. The final operational blueprint will be published in early 2015, prior to operational testing. The NCSC partner states and national centers have worked closely with McGraw-Hill Education CTB to develop this draft. NCSC Operational Test Blueprint 12-19-14 (PDF)

NCSC Briefs

This series of NCSC Briefs highlights foundational policy discussions among the NCSC states. The first two Briefs focus on the current understanding of content and achievement standards on alternate assessments based on alternate achievement standards. Additional briefs on the underlying foundations of the NCSC curriculum, instruction, and assessment design choices will follow later this summer.

- NCSC Brief 1: AA-AAS: Standards That Are the "Same but Different" PDF
- NCSC Brief 2: AA-AAS: Defining High Expectations for Students with Significant Cognitive Disabilities PDF

NCSC Curriculum and Instruction Resources

We have posted our core curriculum and instruction resources on a public wiki (https://wiki.ncsccollege.org), created to host the materials that educators will need to deliver instruction aligned to College and Career Ready standards. The materials are grouped in four categories:

- Curriculum Resources - What to Teach; Curriculum Resources are reference materials created to reinforce educators’ understanding of curriculum content.
- Instructional Resources - How to Teach; Instructional Resources are reference materials created to support classroom teaching.
- Educator Professional Development and Parent Resources - Presentations and interactive modules designed to supplement written NCSC materials as well as written summaries about the NCSC project, explore teaching and learning for students with significant cognitive disabilities, and provide broad coverage of topics of interest to educators and parents alike.
- Parent Tips and Tools - These documents include a one page wiki navigation tool and a more detailed wiki navigation guide. In addition, there is a wiki tips series, made up of eight short documents, that helps parents use the resource materials.

In the near future, additional professional development modules will be posted on these pages.

NCSC Resources for Parents (and for others interested in summaries of our project)

- Introduction to the NCSC Project
  - NCSC Project Description 5-12-14 PDF: A three page description of NCSC and the work it is doing to develop common alternate assessments in English language arts and math for its 26 partner states and curriculum/instructional resources to support teaching the Common Core State Standards to students with significant cognitive disabilities that can be used in any state.
NCSC Curriculum Resources

Curriculum Resources

The NCSC GSEG intends to provide quality curriculum resources for educators to use and reference when delivering instruction that is aligned to the Common Core State Standards (CCSS) to students with significant cognitive disabilities. Using the Learning Progressions Frameworks developed by Karin Hess, NCSC curriculum developers have taken apart the Common Core State Standards to arrive at the Core Content Connectors. The Core Content Connectors (CCC's) are graphically presented in the Graduated Understandings as part of the Instructional Families. In addition, a series of Content Modules that present specific content across grade bands has also been developed.

Contents [hide]
1 Common Core State Standards
2 Learning Progressions Frameworks
3 Graduated Understandings
4 Core Content Connectors
5 Content Modules

Common Core State Standards

Learning Progressions Frameworks

The Learning Progressions Frameworks (LPF) were designed for use with the Common Core State Standards in both English Language Arts and Literacy (ELA) and Mathematics (M). The LPF's are based on research that describes how understanding of core concepts in English Language Arts and Mathematics typically develop over time when students have the benefit of high quality instruction. These frameworks offer a guide for the development of curriculum and assessment and assist educators in lesson planning. (Hess & Kearns, 2010, 2011)

Graduated Understandings

The Graduated Understandings are comprised of Instructional Families and Element Cards. They present the areas of curricular emphasis within and across grades and the progression of learning within domains of the Common Core State Standards.

Core Content Connectors
# NCSC Curriculum Resources

This page contains all categories of resources, click on one of the links to quickly find lists of all resources available in that category.

<table>
<thead>
<tr>
<th>Core Content Connectors</th>
<th>CCCs by Common Core State Standards</th>
<th>Content Modules</th>
<th>Curriculum Resource Guides</th>
<th>Element Cards</th>
<th>Instructional Resource Guide</th>
<th>Instructional Families</th>
<th>Presentations</th>
<th>Systematic Activities for Scripted Systematic Instruction</th>
<th>Universal Design for Learning Units</th>
</tr>
</thead>
</table>

This page was last modified on 24 October 2014, at 13:36. This page has been accessed 36,873 times.
Core Content Connectors (CCC)

- Identify the most salient grade-level academic content for students with significant disabilities.

- Provide access to Maryland College and Career-Ready Standards (MCCRS).
Element Card Components

- Common Core State Standards (CCSS)
- Core Content Connectors (CCC)
- Progress Indicators
- Essential Understandings
- Suggested Instructional Strategies
- Supports and Scaffolds
Lesson units and plans differentiated by the Regional Community of Practice groups.
Six regional Community of Practice teams from across the state have differentiated model lesson units and plans from the Maryland Blackboard Learn website (msde.blackboard.com).

These lesson units and plans will be available on Maryland Blackboard Learn in the near future.
Section 2a

MATHEMATICS
Mathematics
The Standards for Mathematical Practice describe the areas of expertise that educators at all levels and content areas should develop in their students.

Teachers in content areas outside of math ensure that students are using math – at all grade levels – to make meaning of and access content.
Relationships and Convergences found in the MCCRS in Math, ELA, and Science Education

**Math**
- M1. Make sense of problems & persevere in solving them
- M2. Reason abstractly & quantitatively
- M3. Construct viable arguments & critique reasoning of others
- M4. Model with mathematics
- M5. Use appropriate tools strategically
- M6. Attend to precision
- M7. Look for & make use of structure
- M8. Look for & express regularity in repeated reasoning

**Science**
- S1. Ask questions & define problems
- S2. Develop and use models
- S3. Plan & carry out investigations
- S4. Anlayze & interpret data
- S5. Use mathematics & computational thinking
- S6. Construct explanations & design solutions
- S7. Engage in argument from evidence
- S8. Obtain, evaluate & communicate information

**ELA**
- E1. Demonstrate independence in reading complex texts, and writing and speaking about them
- E2. Build a strong base of knowledge through content rich texts
- E3. Obtain, synthesize, and report findings clearly and effectively in response to task and purpose
- E4. Read, write, and speak grounded in evidence
- E5. Read, write, and speak grounded in evidence
- E6. Use technology & digital media strategically & capably

The diagram illustrates the intersections and connections between Math, Science, and ELA, highlighting common skills and competencies across these subjects.
#1- Make Sense of Problems and Persevere in Solving Them

<table>
<thead>
<tr>
<th>Teacher Behaviors</th>
<th>Student Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ Offer authentic performance tasks.</td>
<td>■ Analyze the information in the task.</td>
</tr>
<tr>
<td>■ Support the use of a second or third strategy to solve problems if the first one doesn’t work.</td>
<td>■ Check thinking by asking, “Does this make sense?”</td>
</tr>
<tr>
<td>■ Think aloud when solving a problem.</td>
<td>■ Show patience and positive attitudes.</td>
</tr>
<tr>
<td></td>
<td>■ Check answers with a different method.</td>
</tr>
</tbody>
</table>
#2- Reason Abstractly & Quantitatively

**Teacher Behaviors**

- Encourage use of complementary reasoning skills.
- Support brainstorming as a way to create a context for a given equation.
- Foster the flexible use of different properties of operations and objects.

**Student Behaviors**

- Create and use multiple representations.
- Represent contextual situations symbolically.
- Interpret tasks logically in context.
- Estimate for reasonableness.
#3- Construct Viable Arguments and Critique the Reasoning of Others

<table>
<thead>
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<th>Student Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Create a safe and collaborative environment.</td>
<td>- Question others about their solutions.</td>
</tr>
<tr>
<td>- Model respectful discourse behaviors.</td>
<td>- Support beliefs and challenges with mathematical evidence.</td>
</tr>
<tr>
<td>- Promote student-to-student discourse.</td>
<td>- Form logical arguments with conjectures and counterexamples.</td>
</tr>
<tr>
<td>- Encourage students to justify their conclusions.</td>
<td>- Listen and respond to others.</td>
</tr>
</tbody>
</table>
#4- Model with Mathematics

### Teacher Behaviors

- Demonstrate the application of prior knowledge and strategies to solve problems.
- Facilitate discussion in evaluating the appropriateness of one model versus another model.
- Show how to relate the use of diagrams, tables, graphs, and formulas with important quantities.
- Discuss with students their choice of variables and procedures.

### Student Behaviors

- Choose/apply representations, manipulatives, or other models to solve tasks.
- Analyze relationships between a situation and critical data displayed in a table, flowchart, or scatter plot.
- Evaluate the appropriateness of the representation of the task. Use mathematics to represent and solve real-life tasks.
#5- Use Appropriate Tools Strategically

<table>
<thead>
<tr>
<th>Teacher Behaviors</th>
<th>Student Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure that appropriate tools are available at all times.</td>
<td>Research relevant resources from outside of the classroom, such as websites, to aid in problem solving.</td>
</tr>
<tr>
<td>Model the use of tools, including technology and manipulatives for understanding.</td>
<td>Use technology for understanding when appropriate.</td>
</tr>
<tr>
<td>Encourage dialogue about tool selection.</td>
<td>Choose appropriate tools for a given problem.</td>
</tr>
<tr>
<td>Post charts giving examples of when to use specific tools.</td>
<td></td>
</tr>
</tbody>
</table>
## #6- Attend to Precision

### Teacher Behaviors
- Use mathematical terms clearly and correctly.
- Clarify meanings of similar looking symbols (i.e., negative versus subtraction).
- Require identification of an efficient solution to a task.
- Model accuracy in mathematical computation.

### Student Behaviors
- Calculate accurately and effectively.
- Use mathematical language correctly and appropriately.
- Explain reasoning and use correct mathematical vocabulary.
- Pay attention to labeling measures for clarifying quantities.
#7 - Look For and Make Use of Structure

<table>
<thead>
<tr>
<th>Teacher Behaviors</th>
<th>Student Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Create an environment for exploring and explaining patterns.</td>
<td>- Look for, identify, and interpret patterns.</td>
</tr>
<tr>
<td>- Use open-ended questioning that makes connections with previously worked problems that appeared difficult.</td>
<td>- Decompose complex problems into simpler, manageable chunks.</td>
</tr>
<tr>
<td>- Encourage the identification of mathematical patterns.</td>
<td>- Make connections to skills previously learned when solving new problems.</td>
</tr>
</tbody>
</table>
#8 - Look For and Express Regularity in Repeated Reasoning

**Teacher Behaviors**

- Demonstrate ways in which recurring steps might reveal an all-purpose formula.
- Require thinking about the sensibleness of results at each step in the solution process.
- Ask questions that require conceptual understanding of and fluency with mathematical composition and configurations.

**Student Behaviors**

- Notice repeated calculations and look for general methods and shortcuts.
- Make generalizations.
- Formulate connections between tasks.
Section 2b

Teaching math concepts
2. NBT.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.

2.NO.1h9 Write or select expanded form for any three-digit number.
CCSS/MCCRS

7.G.6 Solve real-world and mathematical problems involving area, volume, and surface area of two and three dimensional objects.

CCC

7.GM.1h1 Add the area of each face of a prism to find surface area of three-dimensional objects.
N.RN.2 Rewrite expressions involving radicals and rational exponents using properties of exponents.

HS.NO.1a1 Simplify expressions that include exponents.
Levels of Abstraction

Concrete
Manipulatives, models to represent a math concept

Representational
Manipulatives, pictures, drawings connected to symbols

Abstract
Numbers and symbols
Concrete Stage: (with like objects in problem)

Kayla has two cars. Jamal has 3 cars. How many cars are there?
Concrete Stage: (with representational objects)

Kayla has two cars. Jamal has 3 cars. How many cars are there?
Concrete Stage

Kayla has two cars. Jamal has 3 cars. How many cars are there?
Kayla has two cars. Jamal has 3 cars. How many cars are there?

2 + 3 = 5
Kayla has two cars. Jamal has 3 cars. How many cars are there?

2 + 3 = 5
Snapshot of Math lesson plan from Maryland Blackboard Learn.
Represent and Interpret Data

Essential Questions:

- Why is data collected and analyzed?
- How can information be gathered, recorded, and organized?
- What aspects of a graph help people understand and interpret the data easily?
Lesson Plan: Grade 3

Represent and Interpret Data

<table>
<thead>
<tr>
<th>Varities of Apples in a food store</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Red Delicious</td>
<td>🍎🍎🍎</td>
</tr>
</tbody>
</table>
| Golden Delicious                  | 🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎苹果  =  10 apples
| McIntosh                          | 🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎苹果  =  10 apples
| Jonathan                          | 🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎apple  =  5 apples
Represent and Interpret Data

Related Core Content Connectors (CCC):

- Collect data, organize into a picture or bar graph.
- Select the appropriate statement that describes the data representations based on a given graph (picture, bar, line plots).
Lesson Plan: Grade 3

Represent and Interpret Data

<table>
<thead>
<tr>
<th>Number of red apples vs. green apples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Red</strong></td>
</tr>
<tr>
<td><img src="image" alt="Red Apples" /></td>
</tr>
<tr>
<td><strong>Green</strong></td>
</tr>
<tr>
<td><img src="image" alt="Green Apples" /></td>
</tr>
</tbody>
</table>
Section 3

English Language Arts: Process of differentiating lessons
English Language Arts
ELA Lesson Planning Process

MDK12
Grade and Content (selected units)

MCCRS & CCCs
https://wiki.ncgapartners.org/index.php/Core_Content_Connectors

Lessons

Develop Activities with UDL in mind

Modified timing to meet the needs of SWSCD

Do the activities in the lessons fulfill the expectation of the standard?
Do the activities in the lessons fulfill the expectation of the standard?

Modified timing to meet the needs of SWSC D

Lesson Overview

During this lesson, students will be expected to ask and answer questions about a text. Students should also be able to identify various sources (e.g., word wall, book talks, visuals/images, Internet) that can be used to gather information or to answer a question (how do we find out). Students will:

- Answer questions about key details in a text read, read aloud, or viewed.
- Retell/identify key details in an informational text.
- Identify various sources (e.g., word wall, book talks, visuals/images, Internet) that can be used to gather information or to answer a question (how do we find out).

Teacher Planning, Preparation, and Materials

Teacher Planning: Pre-read the story and decide which pages will be stopping points to discuss one main topic for each teaching session. Teacher will also need to determine questions to ask about topics and/or resources chosen.

Text/Resources:

George Washington by Caroline Crosson Gilpin (National Geographic Kids)

Text Complexity Considerations:

Quantitative Measure: 56PL

Reader and Task Considerations: The historical leaders and experiences will likely be unfamiliar to most first graders.

The following websites provide alternative strategies and information for differentiation of lesson:

Apply appropriate elements of UDL

http://videxchange.carl.org/getstarted

English Language Learners

http://www.wida.us/standards/CAN_DOs/

Special Education and 504

http://www.ldonline.org/educators

http://marylandlearninglinks.org
Develop Activities with UDL in mind

Directions: Circle all the roles George Washington held in his life.

- Insert a picture of a farmer
- Insert a picture of a baseball player
- Insert a picture of a singer
- Insert a picture of a soldier
- Insert a picture of President Washington

My Glossary / George Washington

- Glue Picture
- Glue Picture
- Glue Picture
- Glue Picture

- Glue Picture
- Glue Picture
- Glue Picture
- Glue Picture

- Glue Picture
- Glue Picture
- Glue Picture
- Glue Picture

George Washington Timeline

He became president

Where Would I Find It?

Directions: Circle or mark the resources where you can find more information on George Washington.

- Insert a picture of a website (internet)
- Insert a picture of a map
- Insert a picture of a menu
- Insert a picture of a phonebook
Section 3a

Snapshot of differentiated lesson plan.
RL.6.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

6.RL.b2 Refer to details and examples in a text when explaining what the text says explicitly.
“Belonging”

Students explore the concept of belonging and its effect upon, and possible conflicts with, an individual’s sense of self. This lesson guides students in an examination of a poem that addresses the themes of belonging and identity using figurative language.
“Belonging”

Differentiated:

This lesson helps students with understanding the concept of belonging. In daily life, students are faced with discovering who they are in relation to the group with which they are involved (classmates, co-workers, clubs, family). Understanding word choices, multiple meaning words and use of language is a functional life skill that is directly linked to daily behavior choices across multiple group settings and is essential to promote self-advocacy.
Essential question:

In what ways does our need to feel a sense of belonging conflict with our individuality?
Lesson Plan: Grade 6

“Belonging”

Essential Question Differentiated:

How does my understanding of who I am help me with belonging as an appropriate group member?
The students should be able to differentiate between literal and figurative meanings of various forms of figurative language including similes, metaphors, and personification.

- Review literal and figurative language. Use picture/tactile representations with an array of answer choices. Support communication with multiple modal representations of the language.

<table>
<thead>
<tr>
<th>Literal: words function exactly as defined.</th>
<th>vs.</th>
<th>Figurative: figure out the meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is raining steadily and heavily. (It’s raining cats and dogs.)</td>
<td>Tom runs like a duck. (Tom is awkward when he moves.)</td>
<td></td>
</tr>
<tr>
<td>Definition</td>
<td>Example</td>
<td>Picture</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>To be in the relation of a member, supporter, resident, etc.</td>
<td>I <em>belong</em> to the Ravens fan Club.</td>
<td></td>
</tr>
<tr>
<td>To have the proper qualifications to be a member of a group</td>
<td>Cal Ripken <em>belongs</em> in the Baseball Hall of Fame.</td>
<td></td>
</tr>
<tr>
<td>To be a part of</td>
<td>That cap <em>belongs</em> on the tube of toothpaste.</td>
<td></td>
</tr>
</tbody>
</table>
Seems I Test People
by James Berry

My skin sun-mixed like basic earth
My voice having tones of thunder
My laughter working all of me as I laugh
My walk motioning strong swings
It seems I test people
### Seems I Test People by James Berry

<table>
<thead>
<tr>
<th>Text Line</th>
<th>Means…</th>
<th>Looks Like:</th>
</tr>
</thead>
<tbody>
<tr>
<td>My skin sun-mixed like basic earth</td>
<td>I have brown skin</td>
<td><img src="symbol.png" alt="Image" /></td>
</tr>
<tr>
<td>My voice having tones of thunder</td>
<td>I am really loud.</td>
<td><img src="symbol.png" alt="Image" /></td>
</tr>
<tr>
<td>My laughter working all of me as I laugh</td>
<td>My whole body shakes when I laugh.</td>
<td><img src="symbol.png" alt="Image" /></td>
</tr>
</tbody>
</table>
Section 4

NCSC Assessment
### Alternate Maryland State Assessment (Alt-MSA) Comparison Crosswalk to National Center and State Collaborative (NCSC)

<table>
<thead>
<tr>
<th>Alt-MSA</th>
<th>NCSC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Portfolio Assessment</strong></td>
<td><strong>Online Assessment</strong></td>
</tr>
<tr>
<td>6 Month Testing Window</td>
<td>Student or Teacher Interact with Computer</td>
</tr>
<tr>
<td>Instruction and Assessment Combined</td>
<td>2 Month Testing Window</td>
</tr>
<tr>
<td>10 test items per content area</td>
<td>Summative Assessment (End of Year)</td>
</tr>
<tr>
<td>Assesses Reading/Mathematics/Science</td>
<td>Up to 30 test items per content area</td>
</tr>
<tr>
<td>Aligned to Maryland State Curriculum Standards/Common Core</td>
<td>Assesses ELA (Reading and Writing)/Mathematics</td>
</tr>
<tr>
<td>Eligibility Criteria with IEP Guidelines and Decision-Making Resources</td>
<td>Eligibility Criteria with IEP Guidelines and Decision-Making Resources</td>
</tr>
<tr>
<td>Baseline and Mastery Artifacts</td>
<td>Pre-session, Session I, and Session II</td>
</tr>
<tr>
<td>Teacher Developed</td>
<td>State/Vendor Developed</td>
</tr>
<tr>
<td>Modifications/Scaffolding Built In</td>
<td>Item based with 4 Levels of Complexity Built In</td>
</tr>
<tr>
<td>(Work Sample Artifact, Video, Audio, Data Chart)</td>
<td>(Multiple Choice, Short Constructed Response, Performance Tasks)</td>
</tr>
<tr>
<td>Alt-MSA Test Administration Team</td>
<td>Test Administrator</td>
</tr>
<tr>
<td>Alt-MSA Handbook Training-Signed Test Administration and Certification of Training Form and Non-Disclosure Agreement Signed</td>
<td>Certification Module and Exam</td>
</tr>
<tr>
<td>Can use AT devices and computer software programs to present Mastery Objective to student (such Clicker, Kidspiration, MS Word-tools/forms, Classroom Suite, Inspiration, and Pixwriter, Smart board and a Word Processor)</td>
<td>Non-Disclosure/Test Security Agreement Signed</td>
</tr>
<tr>
<td>Flexibility for Presentation on Devices and Platforms</td>
<td>No Prompting Allowed</td>
</tr>
<tr>
<td>Prompting allowed</td>
<td>NCSC Accommodations Allowed</td>
</tr>
<tr>
<td>Maryland Accommodations Allowed</td>
<td>NCSC is currently in discussions if a similar policy will be implemented</td>
</tr>
<tr>
<td>Full Physical (Medically Fragile) Excusal</td>
<td></td>
</tr>
</tbody>
</table>
NCSC Timeline

2013-2014
• Maryland Reviews Instructional NCSC Materials
• Maryland aligns the current alternate assessment to the Maryland College and Career Standards

2014-2015
• Maryland Provides Professional Development to Teachers with Support from CoP
• Monthly assessment updates held with the Division of Special Education and Assessment Teams
• Last Year for Alt-MSA Reading and Mathematics Assessment

2015-2016
• 1st Year of the NCSC Operational Assessment in Maryland
• Continuing Professional Development Support to Teachers
• Alt-MSA for Science in grades 5, 8 and 10 continues in Maryland
NCSC Assessment

Technology-based

- Flexibility for presentation on devices/platforms
- Universal Design for Learning (UDL)
- Accommodations are built-in
- Adaptive and multi-tiered
Types of test items (up to 30 Items per content)

- Multiple choice
- Short constructed response
- Performance tasks

Line drawings vs. photos
NCSC Assessment

Assessment Features:

- Alternate Color Themes
- Answer Masking
- Audio Player
- Line Reader
- Magnification
- Read Aloud and Re-read Item Directions, Response Options, Passages
NCSC Assessment

Accommodations:

- Assistive Technology
- Paper Version of Test Items
- Scribe/Transcription
- Sign Language
- Tactile Graphics
- Braille
Administration of the NCSC Assessment

- Testing window of approximately two months
- Approximately 1.5 to 2 hours per content area, divided between at least two sessions with flexibility to stop and resume
- Administered by trained staff familiar to the student (e.g., the student’s teacher)
Questions???