Ricki Sabia, JD
NCSC Parent Training and Technical Assistance Specialist
ricki.sabia@uky.edu
rickisabia@gmail.com

January 2014 This work was supported by a grant from the US Department of Education, Office of Special Education Programs (H373X100002, Project Officer: Susan.Weigert@ed.gov). The contents do not necessarily represent the policy of the US Department of Education, and no assumption of endorsement by the Federal government should be made.
In 2010, the U.S. Department of Education awarded the National Center and State Collaborative (NCSC) a grant to develop a new alternate assessment in math and ELA by the 2014-15 school year*.

25 states and five national centers are working together in NCSC. [http://www.ncscpartners.org/](http://www.ncscpartners.org/)

NCSC is also developing instructional resources based on Common Core State Standards (CCSS) that can be used in any state [https://wiki.ncscpartners.org](https://wiki.ncscpartners.org)

* some states may have a different timeline.
NCSC Member “States”

- Original states are Arizona, Connecticut, District of Columbia, Florida, Georgia, Indiana, Louisiana, Pacific Assessment Consortium (PAC-6), Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, and Wyoming
- States that joined later are Arkansas, California, Delaware, Idaho, Maine, Maryland, Montana, New Mexico, New York, Oregon, and the US Virgin Islands
Other Alternate Assessment Consortia: Dynamic Learning Maps

- Iowa, Kansas, Michigan, Mississippi, Missouri, New Jersey, North Carolina, Oklahoma, Utah were part of the original grant

- Washington, West Virginia, Wisconsin, Illinois, North Dakota, Vermont, Virginia, Alaska joined later
College and Career Readiness
Some Students with Intellectual Disabilities Are Going To College

- The Higher Education Opportunity Act (2008) includes two major provisions that may facilitate entry into higher education for students with an intellectual disability.
  - Implementation of model demonstration sites
  - Availability of financial aid if enrolled

- See [www.thinkcollege.net](http://www.thinkcollege.net) for more information on the variety of programs that have been developed (many before 2008)
Cross walking College and Career Readiness

- All kids
  - Key Cognitive Strategies
    - Problem solving, reasoning, analysis, interpretation, critical thinking
  - Key Content
    - Reading, Math, Science, Social Studies
  - Academic Behaviors
    - Self monitoring, time management, using information resources, social interaction skills, working in groups
  - Contextual Skills and Awareness
    - Seeking help with admissions, procedures, career development
      » (Conley, 2007)

- Students with Significant Cognitive Disabilities
  - Academic Access
  - Career Development
  - Social Network
  - Self Determination
  - Integration with College Systems & Practices
  - Coordination and Collaboration
College and Career Readiness
The Key Functional Life Skills

Important for ALL students including those with significant cognitive disabilities:

- Communicative competence
- Social skills to function well in small groups
- Independent and team work skills
- Problem Solving
- Reading/writing/math
- Skills for identifying and requesting supports
NCSC Model
**Curriculum**
- Common Core State Standards
- Learning Progressions
- Core Content Connectors

**Instruction**
- Grade-level Lessons
- Accommodations
- Systematic Instruction - carefully planned sequence for instruction (MASSIs/LASSIs)

**Assessment**
- Formative (ongoing during school year, monitors learning)
- Summative (end of year or course, evaluates learning)

**Communicative Competence**

---

**Notes:**
- Instruction
- Grade-level Lessons
- Accommodations
- Systematic Instruction - carefully planned sequence for instruction (MASSIs/LASSIs)

**Assessment:**
- Formative (ongoing during school year, monitors learning)
- Summative (end of year or course, evaluates learning)
Quality Indicators for Instructional Resources

- Promote Common Core State Standards;
- Set high expectations for all students;
- **Apply principles of Universal Design for Learning (UDL); and**
- Apply evidence-based teaching practices for students with the most significant cognitive disabilities.
SCHEMA for Common Core State Standards Resources
NCSC Instructional Resources

WHAT TO TEACH
- Common Core State Standards
  - Content Modules
- Core Content Connectors
- Learning Progressions
- Instructional Families
- Graduated Understandings
  - Element Cards

HOW TO TEACH
- Curriculum Resource Guides
  - Ele Unit UDLs
  - MS Unit UDLs
  - HS Unit UDLs
  - Ele MASSIs & LASSIs
  - MS MASSIs & LASSIs
  - HS MASSIs & LASSIs
  - Instructional Resource Guide

= Standards documents
⚠ = Documents that promote teacher understanding of the content
〇 = Documents that promote instruction of the content
Learning Progressions Framework (LPF)

- Shows the steps (learning targets) that students typically take to progress through a content area (e.g. math) to get deeper, broader, more sophisticated understanding.

- Represents, though the targets, the essential core concepts and processes learned in a content area (sometimes called the “big ideas”).

Hess, Karin K., (December 2011). *Learning Progressions Frameworks Designed for Use with the Common Core State Standards in English Language Arts & Literacy K-12.*
Core Content Connectors (CCCs)

- Based on the learning progressions framework (LPF) and the CCSS
- Focus on the knowledge and skills from CCSS needed at each grade to promote success at the next
- Break progress indicators from LPF into teachable and assessable segments of content; and
- Operate as a starting point for instruction based on the CCSS
Curriculum Resource (CR) Guide

- Provides guidance for teaching the CCSS to students with the most significant cognitive disabilities
- Provides examples for making instruction accessible for a wide range of students in multiple grade levels
6. How Do I Make Instruction on “Reading Informational Texts” Accessible to ALL the Students I Teach?

6.1 Teach Prerequisites Concurrently While Teaching Skills Related to Reading Informational Texts: Remember that students can continue to learn basic literacy skills in the context of this grade level content.

Basic literacy skills that can be worked on as a part of a lesson relating to informational text:

- Answering literal recall questions
- Making inferences that are relevant and meaningful, possible not related to written text
- Determining the main idea or the most important events in a personally relevant stories (e.g., auto-biographies)
- Differentiating between nonfiction and fiction texts
- Identifying author’s purpose
- Vocabulary acquisition
- Using visual cues to find important information (e.g., highlighting or added visuals)
### Example of UDL Table in ELA CR Guide

6.2 Incorporate Universal Design for Learning (UDL) in planning, and provide for additional Differentiated Instruction when Teaching Reading Informational Texts

<table>
<thead>
<tr>
<th>Sensory Differences such as Blindness, Visual Impairment, Deafness, or Deaf/Blindness</th>
<th>Physical Disability or Motor Differences (such as weakness or motor planning difficulty)</th>
<th>Extremely limited evidence of experience/skill or motivation/attention</th>
<th>Limited or no speech</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use a talking device such as an avatar; use large print text, raised text or Braille; use objects and images to represent vocabulary words and answers to questions; use online dictionaries that will pronounce the words and read the definitions aloud; use matching picture cards with words and their meanings; add sound effects when appropriate (e.g., sound of a whale, busy city streets, a tornado); preteach basic concepts of a topic using objects; color photos related to topics; Smartboard can be used during instruction.</td>
<td>Student scans an array of possible options and uses a switch to select the correct vocabulary word or answer to questions; use computer representation of word meanings that can be manipulated with switch; place response options on a slant board or eye gaze board; create a vocabulary matching exercise in the classroom that the student can walk or ride on in wheelchair to find the matching words and meanings (this can include picture clues or objects).</td>
<td>Use motivating objects (e.g., pizza, coloring markers in a box, piece of a Lego set) to incorporate key vocabulary and details from text; incorporate technology including computer representations, videos, animations, and talking avatar; allow students to self-select topics for study; use You Tube that is related to instruction; Smartboard can be used during instruction.</td>
<td>Have student use online dictionary to pronounce and define words; use online visual dictionary to increase vocabulary; students can use one to one correspondence to match words or objects with definitions; preteach vocabulary using AAC devices; highlight vocabulary words within the context of the print, keep to one vocabulary word per page and keep an AAC device with matching word with the text; use an iPad during instruction.</td>
</tr>
</tbody>
</table>

*Suggestions from other columns may be applicable here.*
6. How Do I Make Instruction on “Equations” Accessible to ALL the Students I Teach?

6.1 Teach Prerequisites and Basic Numeracy Skills Concurrently: Remember that students can continue to learn basic numeracy skills in the context of this grade level content.

Basic numeracy skills that can be worked on as a part of a lesson relating to equations:

- Number identification
- Equal and/or same
- Symbol identification (+, -, =, x, ÷)
- Addition and subtraction
- Creating sets
### 6.2b Incorporate Universal Design for Learning (UDL) in planning, and provide for additional differentiated instruction when teaching Equations.

<table>
<thead>
<tr>
<th>Options for Representation</th>
<th>Some examples of options for teaching equations to students who may present instructional challenges due to:</th>
<th>\</th>
<th>\</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sensory Differences such as Blindness, Visual Impairment, Deafness, or Deaf/Blindness</strong></td>
<td><strong>Physical Disability or Motor Differences (such as weakness or motor planning difficulty)</strong></td>
<td><strong>Extremely limited evidence of experience/skill or motivation/attention.</strong></td>
<td><strong>Lack of or extremely limited use of speech.</strong></td>
</tr>
</tbody>
</table>
| **Provide auditory options:**  
- Talking calculator when solving equations;  
- Text-to-speech software or voice recordings to read aloud story problems  
- Single message sequence voice—output devices to count aloud  
- Captioning software that presents auditory information visually | **Reduce Physical Effort**  
- When reading word problems, student can scan array of key math operation words and select correct key word and operation for equation  
- Place equations and graphic organizers on slant board or eye gaze board  
- Display flip chart, interactive white board or other teaching materials at student eye level  
- Utilize a switch instead of a computer mouse or software that allows the mouse to be controlled with the students’ head rather than their hands | **Illustrate through multiple media**  
- Utilize interactive whiteboard  
- Incorporate interactive websites that provide nonlinguistic tools for exploring math concepts:  
  - Illuminations  
  - Math Open Reference | **Provide customized display of information**  
- Consistent model by utilizing modes of communication used by students (point to symbols representing concepts, operations)  
- Teacher model competent use of AAC during instruction |
| **Provide tactile options:**  
- Object cues, using miniature objects or other tangible symbols to assist with problem comprehension and operations  
- Tactile equation mat  
- Create numbers and symbols out of tactile materials such as sandpaper or wikki stix | **Provide visual and manipulative options to scaffold representation of concepts:** | | |

**Examples:**

- **Provide auditory options:**
  - Talking calculator when solving equations;
  - Text-to-speech software or voice recordings to read aloud story problems;
  - Single message sequence voice—output devices to count aloud;
  - Captioning software that presents auditory information visually.

- **Provide tactile options:**
  - Object cues, using miniature objects or other tangible symbols to assist with problem comprehension and operations;
  - Tactile equation mat;
  - Create numbers and symbols out of tactile materials such as sandpaper or wikki stix.

- **Reduce Physical Effort:**
  - When reading word problems, student can scan array of key math operation words and select correct key word and operation for equation;
  - Place equations and graphic organizers on slant board or eye gaze board;
  - Display flip chart, interactive white board or other teaching materials at student eye level;
  - Utilize a switch instead of a computer mouse or software that allows the mouse to be controlled with the students’ head rather than their hands.

- **Illustrate through multiple media:**
  - Utilize interactive whiteboard;
  - Incorporate interactive websites that provide nonlinguistic tools for exploring math concepts:
    - Illuminations [http://illuminations.nctm.org/ActivitySearch.aspx](http://illuminations.nctm.org/ActivitySearch.aspx);

- **Provide customized display of information:**
  - Consistent model by utilizing modes of communication used by students (point to symbols representing concepts, operations);
  - Teacher model competent use of AAC during instruction.
Graduated Understandings: Element Cards

Provide a wide range of suggested instructional strategies and supports to promote instruction for students with diverse learning needs—including those without prior knowledge.
**CCSS:** 1.MD.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another

**CCC:** 1.DPS.1e1 Compare the values of the 2 categories of data in terms of more or less

**Strand:** Data, Probability and Statistics  
**Family:** Draw Conclusions from Data Collection

**Progress Indicator:** E.DPS.1e describing and comparing data and beginning to identify what the data do or do not show (e.g., bar graphs, line plots, picture graphs)

<table>
<thead>
<tr>
<th>Essential Understandings</th>
<th>Concrete Understandings:</th>
<th>Representation:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Can identify groups of objects in terms of more and less</td>
<td>• Identify and use the symbols for &lt;, &gt;, =</td>
</tr>
<tr>
<td></td>
<td>• Can match numbers from a graph to numbers on a number line</td>
<td></td>
</tr>
</tbody>
</table>

**Suggested Instructional Strategies:**
- Teach the concept of more or less using example, non-example; apply to data on graph
- Use or create a graph that provides a visual of the values in each category such as a bar graph
- Teach the concept of more or less using a number line

**Supports and Scaffolds:**
- Number line
- Snap cubes to create a concrete bar graph
Provides data sheets and skills tests

Contains:
- definitions of key vocabulary,
- lesson objectives,
- essential questions and materials, and
- lesson components (introduction of the lesson, direct instruction and/or facilitation of activities, practice, closure/review and exit assessment)
Break class into small groups to answer exercises.

1. Using figures (rectangles and squares) drawn on grid paper or formed on Geoboards, find the perimeters and areas.

2. Remind students that answers should/must include the appropriate units of measure.

**Multiple means of representation:** Use models and/or drawings during large group instruction. Allow students to have a copy of a drawing or a model at their desks.

**Multiple means of expression:** Provide a list of formulas to determine area and perimeter or provide options for using manipulatives and/or computer models.

**Multiple means of engagement:** Allow students to use paper/pencil, manipulatives, computer, etc. to complete exercises.
Additional Considerations for Emerging Readers and Emerging Communicators

1. Provide picture and/or tactile representations of relevant vocabulary, paired with the written word, each time a salient concept/vocabulary word for rectangle, area, and perimeter is mentioned during the presentation or discussion, as well as the meanings of each word.

2. Create math journals to record vocabulary, formulas, and notes.

3. Provide the formulas for area and perimeter as the concepts of each are discussed.

4. During discussion, provide picture representation of real world uses for area and perimeter.

5. As students work in small groups or pairs, ensure they have a means for gaining their group members’ or partner’s attention and a means for contributing to the discussion.

6. Students may use their math journals or a graphic organizer to collect/store information gathered during group.

7. To find area and perimeter, use grid paper, count/mark/tally each unit along the length of the figure to determine length and count/mark/tally each unit along the width of the figure to determine the width.

8. Use the formulas to determine area and perimeter.
   - A list of formulas may be used by the student as a reference.

9. Student may be presented with manipulatives of a unit and the rectangle drawn on grid paper.
   - Students determine area and perimeter by placing the manipulative units on each unit around the rectangle on the grid paper to demonstrate perimeter as well as within the rectangle to demonstrate area.
   - Using manipulatives may be demonstrated electronically, using a computer program or PowerPoint, to count units virtually to determine area and perimeter.

See Resources: See PowerPoint, Slides 1 and 2.

10. As answers are reviewed, be sure to reference the appropriate units of measure. For example, if students determine the perimeter of a 3inch by 4inch figure is 14, reply, “That is correct. It is 14 inches.” If they determine the area is 12, reply, “That is correct. It is 12 inches square.”
   - Remind students to record the appropriate unit.
   - Model how to write the appropriate units.
   - Present students with an alternative representation of unit to record in their math journals or graphic organizers.

Important Note for Communicators Considered Pre-Symbolic: Be sure students have a way to attain peer attention as well as to share and receive information. Limit measurements to one type: standard or metric unit.
Activities for when students need more intensive instruction on particular key points or on missing prerequisite knowledge

- Incorporates evidence-based instruction from research, including faded prompting

- Provides teaching scripts for educators who may not be familiar with the carefully planned steps of systematic instruction
Instructional Resource Guide

- Defines methods of prompting and feedback
- Explanation of Instructional Strategies
- Includes troubleshooting Q&A

Designed for use with MASSIs and LASSIs but can be used with UDL lessons, as well.
Professional Development

- Professional Development specialists hired by NCSC have been working with state education leaders and Communities of Practice to get feedback and develop PD.
- Many resources for PD will be on the wiki, including videos, webinars and PD modules.
Evaluation

- Post-grant governance group will manage and evaluate the Curriculum and Instructional Resources through long-term implementation and measurement of outcomes.
- NCSC project validity team will design a ‘post project’ validity evaluation and research agenda for states to implement as materials go to scale-including model demo projects and linking classrooms across states.
- Data will be used by states to improve existing and develop additional resources.
Teacher Response-Favorable!

Sample quote:
“I have had the pleasure of observing several classrooms across the state of Indiana where NCSC materials are being implemented on a daily basis. Wow! The impact is powerful, students are responsive, and teachers are dedicated to increased academic achievement. I look forward to continued professional development and implementation as schools and districts become more familiar with the valuable NCSC resources and form their own Project SUCCESS teams.”

Amy Howie, Project SUCCESS Director
NCSC Assessment
Format

- Approximately 30 items for each subject (1.5-2 hours)

- These 30 items will cover approximately 10 CCCs
  - Most of the assessment items ask the student to select the correct response (e.g. multiple choice).
  - Some items will require the student to construct a response (e.g. write a short answer or use an alternate way to respond e.g. picture symbols)
Some students will use the online testing program directly on the computer. APIP built in supports are used.

For other students, the teacher may print out testing materials and enter student responses into the computer.
Evidence-Centered Design for NCSC

Domain Analysis
- Develop CCCs from CCSS

Domain Modeling
- Create Design Patterns infused with UDL

Conceptual Assessment Framework
- Create Summary Task Templates

Assessment Implementation
- Author families of assessment tasks

Assessment Delivery
- Design assessment administration. Conduct cog labs and field tests
Parent Documents
Parent Resources
http://www.ncscpartners.org/resources As of 1/10/2014

- NCSC IEP Team Guidance For Participation
- NCSC Newsletter and Website Information for Parents
- NCSC Model of Curriculum Instruction and Assessment
- NCSC CCR Policy Paper Summary
- NCSC Project Description One Page
- NCSC Background
- NCSC Diagram and Explanation
- NCSC AA-AAS FAQs
- NCSC Communicative Competence
- NCSC College and Career Readiness Summary