

Instructional Shifts-Rigor

Kindergarten

Why Common Core?

Initiated by the National Governors Association (NGA) and Council of Chief State School Officers (CCSSO) with the following design principles:

- Result in College and Career Readiness
- Based on solid research and practice evidence
- Fewer, higher and clearer

The CCSS Requires Three Shifts in Mathematics

1. **Focus:** Focus strongly where the standards focus.
2. **Coherence:** *Think* across grades, and *link* to major topics
3. **Rigor:** In major topics, pursue *conceptual understanding*, procedural skill and *fluency*, and *application*

Rigor: Illustrations of Conceptual Understanding, Fluency, and Application

- Here rigor does not mean “hard problems.”
- It’s a balance of three fundamental components that result in deep mathematical understanding.
- There must be variety in what students are asked to produce.

Frequently Asked Questions

- How can we assess fluency other than giving a timed test?
- Is it really possible to assess conceptual understanding? What does it look like?
- Aren't the Common Core State Standards for Math all about application and meaningful tasks?

Rigor

➤ Conceptual Understanding:

K.CC.4 **Understand** the relationship between numbers and quantities; connect counting to cardinality.

➤ Procedural Skill and Fluency:

K.OA.5 **Fluently** add and subtraction within five.

➤ Application:

K.OA.2 **Solve** addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

Sample Problems Activity

- Work on a few problems from each aspect of rigor.
- Be prepared to discuss something you observed from one of the problems you tried.
- How can assessing (with tests, HW problems, exit tickets) all 3 aspects of rigor affect student learning?
- What does it look like when we are asking

Video

- <https://www.teachingchannel.org/videos/skip-counting-with-kindergarteners>
- Where is the rigor?

Exit Ticket

- How can we involve students to improve fluency without timed tests?
- How are conceptual understanding, fluency and application related?

Resources

- www.teachingchannel.org
- www.achievethecore.org