

# ARKANSANS FOR EDUCATION FREEDOM

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## How Common Core Influences MATH Curriculum

The Common Core State Standards Initiative (CCSSI) calls for controversial constructivism pedagogy in Math and does not prepare students for STEM (Science, Technology, Engineering and Math).

**What is constructivism?** This approach goes all the way back to social reformers in the 1930s. It is a social - emotional approach to learning which uses a "*collaborative construction* of knowledge through *social negotiation*, not competition among learners for recognition [emphasis added]"<sup>i</sup>

**Where do constructivist math standards come from?** The most recent constructivist math comes from a reform group known as the National Council of the Teachers of Mathematics (NCTM). The NCTM released similar standards in 2006, called Focal Points which failed miserably after being revised 3 times, when tested under No Child Left Behind.

### Where is it noted in the CCSS?

- It calls for "*abstract*" learning approaches, favoring them over standard algorithm and rote memorization.<sup>ii</sup> Common language found in the CCSS that point to Constructivism include asking students to construct, draw or illustrate, argue or explain math. For example, standard 3 says, "construct a viable argument and critique the reasoning of others."<sup>iii</sup>
- Another example of abstract approach includes the controversial Transformational Geometry.
- The group that wrote the standards, Achieve Inc, did a crosswalk and found the CCSS Math and the NCTM Focal Points, nearly identical saying, "Overall, the CCSS are *well aligned to the Focal Points*."<sup>iv</sup>
- A blog article from the University of Arkansas Department of Ed Reform, Dr. Jay P Greene, calls the CCSSI constructivist<sup>v</sup>
- The CCSS does the exact opposite of The 2008 National Math Advisory Panel Recommendations, which advise against constructivism, citing research does not support it<sup>vi</sup>
- Dr. James Milgram, CCSS Validation Committee Member, notes that time spent on failed methods, and pushing standard algorithm 1-2 years further along, places our children up to 2 years behind international expectations before the 7th grade<sup>vii</sup>
- Teachers are speaking out about being forced to use constructivist methods, attend teacher re-training and seeing negative results in the classroom<sup>viii</sup>

**Will the students be tested on the right answer or the method?**

- These methods of problem solving are not optional, and must be demonstrated on the PARCC Assessment.<sup>ix</sup>
- Grade 4: "Type II tasks call for written arguments/justifications, critique of reasoning..."<sup>x</sup>

**CCSS Math does not prepare for STEM (Science, Technology, Engineering and Math)**

- Does not prepare for STEM: University of Arkansas Professor Dr. Sandra Stotsky<sup>xi</sup>
- Not Internationally benchmarked: CCSS Validation Committee Member, Dr. Ze'Ev Worman<sup>xii</sup>
- Leaves our kids 2 years behind, does not prepare for STEM: The Pioneer Institute<sup>xiii</sup>
- CCSS prepares for introductory community college, not 4 year university or STEM: CCSS Lead math author, Jason Zimba<sup>xiv</sup>

**CCSS is Cognitively/Developmentally Inappropriate**

- The Early Childhood Professional Development Community says it is cognitively inappropriate for elementary age children who are still in the concrete phase of their development.<sup>xv</sup>
- Dr Gary Thompson refers to it as cognitive child abuse<sup>xvi</sup>

**SUMMARY**

Well-respected and credentialed members of the education community have clearly demonstrated that the CCSSI employs constructivism and that these approaches and standards were not internationally benchmarked or properly vetted. Because the standards call for a certain approach, *any textbook that is aligned to the CCSS will utilize those approaches*. Standards and assessments drive curriculum and this is most visible in the math standards. This cannot be addressed on a local school board level in Arkansas for two reasons: 1. the local school boards are bound to the demands of the appointed state school board and must implement the CCSS. 2. Many districts no longer have a local school board due to consolidation or state takeover. The CCSSI must be repealed so that we can restore common sense and cognitively appropriate math in Arkansas schools.

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<sup>i</sup> [http://www.ucdoer.ie/index.php/Education\\_Theory/Constructivism\\_and\\_Social\\_Constructivism](http://www.ucdoer.ie/index.php/Education_Theory/Constructivism_and_Social_Constructivism)

<sup>ii</sup> <http://www.corestandards.org/Math/Practice/MP2/>

<sup>iii</sup> <http://www.corestandards.org/Math/Practice/MP3/>

<sup>iv</sup> <http://www.achieve.org/files/CCSSandFocalPoints.pdf>

<sup>v</sup> <http://jaypgreene.com/2013/03/21/constructive-criticism-for-common-core-constructivism-deniers/>

<sup>vi</sup> <http://www2.ed.gov/about/bdscomm/list/mathpanel/report/final-report.pdf>

<sup>vii</sup> <ftp://math.stanford.edu/pub/papers/milgram/ZimbaMilgramStotskyFinal.pdf>

<sup>viii</sup> <http://www.publicedread.com/2013/04/constructivism-reformed-into-common-core.html>

<sup>ix</sup> <https://commoncoregeometry.wikispaces.hcps.org/Unit+1>

<sup>x</sup> <http://www.parcconline.org/samples/mathematics/grade-4-mathematics>

<sup>xi</sup> <http://www.uaedreform.org/downloads/2013/11/common-cores-invalid-validation-committee.pdf>

<sup>xii</sup> <http://pioneerinstitute.org/featured/common-core-english-and-math-standards-not-properly-validated/>

<sup>xiii</sup> <http://pioneerinstitute.org/news/lowering-the-bar-how-common-core-math-fails-to-prepare-students-for-stem/>

<sup>xiv</sup> <https://www.youtube.com/watch?v=eJZY4mh2rt8>

<sup>xv</sup> [http://www.edweek.org/media/joint\\_statement\\_on\\_core\\_standards.pdf](http://www.edweek.org/media/joint_statement_on_core_standards.pdf)

<sup>xvi</sup> <https://www.youtube.com/watch?v=D-G72KmZdV4>