

Comparison of CCR Mathematics Standards and Next Generation Science Standards¹

CCR Mathematics Standards	Next Generation Science Standards (NGSS)
<p>Mathematical Practices (How students are to engage across domains and levels)</p> <ol style="list-style-type: none"> 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct valid arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning. 	<p>NGSS Practices (How students are to engage across disciplines and levels)</p> <ol style="list-style-type: none"> 1. Asking questions (for science) and defining problems (for engineering) 2. Developing and using models 3. Planning and carrying out investigations 4. Analyzing and interpreting data 5. Using mathematics and computational thinking 6. Constructing explanations (for science) and designing solutions (for engineering) 7. Engaging in argument from evidence 8. Obtaining, evaluating, and communicating information
<p>Mathematical Levels</p> <ul style="list-style-type: none"> • Level A (K-1) • Level B (2-3) • Level C (4-5, and some 6) • Level D (6, 7-8) • Level E (High School) 	<p>Cross-cutting Concepts</p> <ul style="list-style-type: none"> • Patterns, similarity, and diversity • Cause and effect • Scale, proportion and quantity • Systems and system models • Energy and matter • Structure and function • Stability and change
<p>Mathematical Domains</p> <ul style="list-style-type: none"> • The Number System • Operations and Algebraic Thinking • Functions • Geometry • Measurement and Data • Statistics and Probability 	<p>Disciplinary Core Ideas</p> <ul style="list-style-type: none"> • Physical science • Life science • Earth & space • Engineering, technology, and application to science
<p>Preparing Students for STEM fields (See Appendix E, pp., 119-121)</p>	

¹ CCR Math Standards are taken from *College and Career Readiness Standards for Adult Education* (<http://lincs.ed.gov/publications/pdf/CCRStandardsAdultEd.pdf>) and information on Generation Science Standards can be found at <http://www.nextgenscience.org/next-generation-science-standards>