Practices in Mathematics, Science, and English Language Arts*

Mathematics	Science	English Language Arts
M1. Make sense of problems and persevere in solving them.	S1. Asking questions (for science) and defining problems (for engineering).	E1. They demonstrate independence.
M2. Reason abstractly and quantitatively.	S2. Developing and using models.	E2. They build strong content knowledge.
M3. Construct viable arguments and critique the reasoning of others.	S3. Planning and carrying out investigations.	E3. They respond to the varying demands of audience, task, purpose, and discipline.
M4. Model with mathematics.	S4. Analyzing and interpreting data.	E4. They comprehend as well as critique.
M5. Use appropriate tools strategically.	S5. Using mathematics, information and computer technology, and computational thinking.	E5. They value evidence.
M6. Attend to precision.	S6. Constructing explanations (for science) and designing solutions (for engineering).	E6. They use technology and digital media strategically and capably.
M7. Look for and make use of structure.	S7. Engaging in argument from evidence.	E7. They come to understanding other perspectives and cultures.
M8. Look for and express regularity in repeated reasoning.	S8. Obtaining, evaluating, and communicating information.	

*The common Core English Language Arts uses the term "student capacities" rather than the term "practices" used in Common Core Mathematics and the Next Generation Science Standards.

Math

Science

M1: Make sense of problems and persevere in solving them

M2: Reason abstractly & quantitatively

M6: Attend to precision

M7: Look for & make use of structure

M8: Look for & make use of regularity in repeated reasoning

M4. Models with mathematics

S2: Develop & use models

S5: Use mathematics & computational thinking

S1: Ask questions and define problems

S3: Plan & carry out investigations

S4: Analyze & interpret data

S6: Construct explanations & design solutions

E2: Build a strong base of knowledge through content rich texts

E5: Read, write, and speak grounded in evidence

M3 & E4: Construct viable arguments and critique reasoning of others

S7: Engage in argument from evidence

E6: Use technology & digital media strategically & capably

M5: Use appropriate tools strategically

S8: Obtain, evaluate, & communicate information

E3: Obtain, synthesize, and report findings clearly and effectively in response to task and purpose

E1: Demonstrate independence in reading complex texts, and writing and speaking about them

E7: Come to understand other perspectives and cultures through reading, listening, and collaborations

Commonalities Among the Practices in Science, Mathematics and English Language Arts

ELA

Based on work by Tina Chuek
ell.stanford.edu