

Cosmic Coders: Standards & Alignment

Common Core State Standards for Mathematics:

- CCSS.Math.Content.4.OA.5: Generate and analyze patterns. Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.
- CCSS.Math.Content.4.MD.A.1: Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit.
- CCSS.Math.Content.4.MD.A.2: Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit.
- CCSS.Math.Content.6.EE.B8: Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.
- CCSS.Math.Content.6.EE.B7: Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p , q and x are all nonnegative rational numbers.

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Common Core State Standards for English Language Arts:

- CCSS.ELA-Literacy.SL.4.1/CCSS.ELA-Literacy.SL.5.1/CCSS.ELA-Literacy.SL.6.1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 4-6 topics and texts, building on others' ideas and expressing their own clearly.
- CCSS.ELA-Literacy.W.4.5/CCSS.ELA-Literacy.W.5.5/CCSS.ELA-Literacy.W.5.5: With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.

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Next Generation Science Standards:*

- NGSS 3-5-ETS1-2: Engineering Design

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International Society for Technology in Education:

- 1.1d Technology Operations: Students understand the fundamental concepts of technology operations; demonstrate the ability to choose, use and troubleshoot current technologies; and are able to transfer their knowledge to explore emerging technologies.

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Habits of Mind:

16 thinking habits developed by Art Costa and Bena Kallick to empower students to succeed in a 21st-century learning environment.

- Applying Past Knowledge to New Situations
- Creating, Imagining, and Innovating
- Finding Humor
- Gathering Data Through All Senses
- Listening with Understanding and Empathy
- Managing Impulsivity
- Persisting
- Remaining Open to Continuous Learning
- Responding with Wonderment and Awe
- Striving for Accuracy
- Taking Responsible Risks
- Thinking & Communicating with Clarity and Precision
- Thinking About Thinking
- Thinking Flexibly
- Thinking Interdependently

21st Century Skills:

A set of widely-applicable abilities essential for success in the information age.

- Communication and Collaboration
- Creativity and Innovation
- Critical Thinking and Problem Solving
- Flexibility and Adaptability
- Initiative and Self-Direction
- Information, Media, and Technology Literacy
- Leadership and Responsibility
- Productivity and Accountability
- Social and Cross-Cultural Skills

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