www.nextgenscience.org/	www.k12.wa.us/CoreStandards/		http://www.careertech.org/career-ready-practices	http://www.p21.org/storage/documents/1.__p21_framework_2-pager.pdf
NEXT GENERATION SCIENCE STANDARDS For States, By States	CCSS COMMON CORE STATE STANDARDS — WASHINGTON —	COMMON CORE STATE STANDARDS INITIATIVE PREPARING AMERICA'S STUDENTS FOR COLLEGE & CAREER	Learning that works for America CTE® **CCTC Common Career Technical Core**	21st CENTURY SKILLS

Science and Engineering Practices

S1. Asking questions (for science) and defining problems (for engineering)

S2. Developing and using models

S3. Planning and carrying out investigations

S4. Analyzing and interpreting data

S5. Using mathematics and computational thinking

S6. Constructing explanations (for science) and designing solutions (for engineering)

S7. Engaging in argument from evidence

S8. Obtaining, evaluating, and communicating information

Mathematical Practices

M1. Make sense of problems and persevere in solving them

M2. Reason abstractly and quantitatively

M3. Construct viable arguments and critique the reasoning of others

M4. Model with mathematics

M5. Use appropriate tools strategically

M6. Attend to precision

M7. Look for and make use of structure

M8. Look for and express regularity in repeated reasoning

English Language Arts Practices/Portraits

E1. They demonstrate independence

E2. They build strong content knowledge

E3. They respond to the varying demands of audience, task, purpose, and discipline

E4. They comprehend as well as critique

E5. They value evidence

E6. They use technology and digital media strategically and capably

E7. They come to understanding other perspectives and cultures

Career Ready Practices

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Skills

1. Learning & Innovation
Creativity and innovation
Critical thinking and problem solving
Communication and collaboration

2. Information, Media and Technology
Information literacy
Media literacy
Information, communications and technology literacy

3. Life and Career
Flexibility and adaptability
Initiative and self-direction
Social and cross-cultural skills
Productivity and accountability
Leadership and responsibility

Core Subjects and 21st Century Themes

Global awareness
Financial, economic, business and entrepreneurial literacy
Civic literacy
Health literacy
Environmental literacy

Science and Engineering Practices

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

Disciplinary Core Ideas

PHYSICAL SCIENCES
PS1: Matter and Its Interactions
PS2: Motion and Stability: Forces and Interactions
PS3: Energy
PS4: Waves and Their Applications in Technologies for Information Transfer

LIFE SCIENCES
LS1: From Molecules to Organisms: Structures and Processes
LS2: Ecosystems: Interactions, Energy, and Dynamics
LS3: Heredity: Inheritance and Variation of Traits
LS4: Biological Evolution: Unity and Diversity

EARTH AND SPACE SCIENCES
ESS1: Earth's Place in the Universe
ESS2: Earth's Systems
ESS3: Earth and Human Activity

ENGINEERING, TECHNOLOGY, AND APPLICATIONS OF SCIENCE
ETS1: Engineering Design
ETS2: Links Among Engineering, Technology, Science, and Society

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Crosscutting Concepts

1. Patterns
2. Cause and Effect: Mechanisms and Explanation
3. Scale, Proportion, and Quantity
4. Systems and System Models
5. Energy and Matter: Flows, Cycles, and Conservation
6. Structure and Function
7. Stability and Change

Based on an original concept created by Caroline Kiehle, *Institute for Systems Biology*