



NEXT GENERATION SCIENCE STANDARDS

1. Scientific 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



Golden Apple
Science Program

Transforming Teachers and Teaching ...

At Golden Apple, our mission is to inspire, develop and support teacher excellence in Illinois, especially in schools of need.

Because the critical contributor to student achievement is the quality of the teacher in the classroom, Golden Apple provides exceptional teacher preparation for teachers at all stages of their careers.

Through our innovative programs offering method, resource and mentorship, we work to transform teachers and teaching, enriching both student and teacher lives.



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2. Crosscutting Concepts

1. Patterns
2. Cause and effect:
Mechanism 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



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3. Disciplinary Core Content

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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