NAEYC STANDARDS

ZOOM™

KEY CONCEPTS

Did you know that . . .

- Buoyancy is an object's tendency to float.
- Engineering is a broad discipline that includes many specialized fields. The term engineering comes from the Latin words "ingenium" meaning "cleverness" and "ingeniare" meaning "to contrive, devise."
- Verbal and nonverbal communication is essential to teamwork. In a fast-paced game, children understand the value of listening as a communication tool.
- There are a multitude of job opportunities in the STEM field. Exposing children to a few options opens their minds to the many possibilities in their future.
- Prototyping is making a model that brings an idea into reality.
- Chemistry is the study of matter and how it transforms and interacts with other substances.
- The term polymer comes from the Greek word "poly," meaning many, and "meros," meaning parts. Children explore science using a polymer material that resembles snow.
- Primary colors are red, blue, and yellow. Mixing primary colors together results in secondary colors, which are green, orange, and purple. Mixing secondary colors together results in tertiary colors, which are yellow-orange, yellow-green, red-orange, red-purple, blue-purple, and blue-green.
- A mixture is a combination of different substances whose physical and chemical properties do not change when mixed together.
- A solution is a special type of mixture in which one substance dissolves in another substance.
- Children explore polymer science through play by comparing and contrasting the properties of various types of slime.
- Many veterinarians use the same tools to help sick animals that doctors use. Children will explore some of these tools, such as x-rays and stethoscopes.
- Our heart is a muscle that pumps blood to the rest of our body. It is one of the most important organs in our whole body.
- You can hear your heart pumping blood if you use a stethoscope. It sounds like, "thump, thump, thump."
- Structures such as houses and buildings begin on paper.
- Architects begin designing structures with a drawing called a blueprint.
- There are many tools that they can use to draw a blueprint and often times just start out with paper, pencil, and an architect's scale.
- Wide foundations support tall structures.
- Some aspects of demolition require careful planning. Architects, engineers, and construction crews often work together to make sure that only targeted areas are demolished. They must also think about where the debris goes.
- The solar system consists of the sun and a collection of objects, including planets, their moons, and asteroids that are held in orbit around the sun by its gravitational pull on them.
- Earth is always moving. It simultaneously rotates once every 24 hours on its axis and orbits around the sun once every 365 days.
- Properties of matter like color, size, texture, and shape form the foundation for science and engineering.
- Matter is anything around us that takes up space and can be found in three common states which are solids, liquids, and gases.
- The Earth orbits, or goes around the sun, while it is rotating. Rotation is the action of spinning on an axis.

Orbiting is when an object moves in a circular path around another object.

- Constant rotation and orbiting of the Earth can make it difficult for scientists to determine an exact landing location when launching rockets that come back to Earth, land on the moon, or even on other planets.
- There are many factors that scientists have to consider when launching and landing rockets, such as the speed at which the Earth is rotating and orbiting, the rate at which the rocket is moving, and the distance that the rocket has to travel to its landing location.

NAEYC ACCREDITATION CRITERIA FOR CURRICULUM

2.A.01

U I T P K

The program has a written statement of philosophy and uses one or more written curricula or curriculum frameworks consistent with its philosophy that address central aspects of child development.

2.A.02

U I T P K

A clearly stated curriculum or curriculum framework provides a coherent focus for planning children's experiences. It allows for adaptations and modifications to ensure access to the curriculum for all children.

2.A.03

U I T P K

The curriculum guides teachers' development and intentional implementation of learning opportunities consistent with the program's goals and objectives.

2.A.04

U I T P K

The curriculum can be implemented in a manner that reflects responsiveness to family home values, beliefs, experiences, and language.

2.A.05

U I T P K

Curriculum goals and objectives guide teachers' ongoing assessment of children's progress.

2.A.06

U I T P K

The curriculum guides teachers to integrate assessment information with curriculum goals to support individualized learning.

2.A.07

U I T P K

The curriculum guides the development of a daily schedule that is predictable yet flexible and responsive to

individual needs of the children. The schedule provides time and support for transitions, includes both indoor and outdoor experiences, and is responsive to a child's need to rest or be active.

2.A.08

U I T P K

Materials and equipment used to implement the curriculum:

- Reflect the lives of the children and families.
- Reflect the diversity found in society, including gender, age, language and abilities.
- Provide for children's safety while being appropriately challenging.
- Encourage exploration, experimentation, and discovery.
- Promote action and interaction.
- Are organized to support independent use.
- Are rotated to reflect changing curriculum and accommodate new interests and skill levels.
- Are rich in variety.
- Accommodate children's special needs.

2.A.10

T P K

The curriculum guides teachers to incorporate content, concepts, and activities that foster social, emotional, physical, language, and cognitive development and that integrate key areas of content including literacy, mathematics, science, technology, creative expression and the arts, health and safety, and social studies.

2.A.11

T P K

The schedule provides children learning opportunities, experiences, and projects that extend over the course of several days and incorporates time for: play, self-initiated learning, creative expression, large-group, small-group, and child-initiated activity.

2.A.12

P K

The curriculum guides teachers to plan for children's engagement in play (including dramatic play and blocks) that is integrated into classroom topics of study.

2.E.03

T P K

Children have opportunities to become familiar with print. They are actively involved in making sense of print, and they have opportunities to become familiar with, recognize, and use print that is accessible throughout the classroom:

- Items belonging to a child are labeled with his or her name.
- Materials are labeled.

- Print is used to describe some rules and routines.
- Teaching staff help children recognize print and connect it to spoken words.

2.E.05

P K

Children have multiple and varied opportunities to write:

- Writing materials and activities are readily available in art, dramatic play, and other learning centers.
- Various types of writing are supported including scribbling, letter-like marks, and developmental spelling.
- Children have daily opportunities to write or dictate their ideas.
- Children are provided needed assistance in writing the words and messages they are trying to communicate.
- Children see teaching staff model functional use of writing and are helped to discuss the many ways writing is used in daily life.

2.F.02

T P K

Children are provided varied opportunities and materials to build understanding of numbers, number names, and their relationship to object quantities and to symbols.

2.F.03

T P K

Children are provided varied opportunities and materials to categorize by one or two attributes such as shape, size, and color.

2.F.04

T P K

Children are provided varied opportunities and materials that encourage them to integrate mathematical terms into everyday conversation.

2.F.05

P

Children are provided varied opportunities and materials that help them understand the concept of measurement by using standard and non-standard units of measurement.

2.F.06

P K

Children are provided varied opportunities and materials to understand basic concepts of geometry by, for example, naming and recognizing two- and three-dimensional shapes and recognizing how figures are composed of different shapes.

2.G.02

P K

Children are provided varied opportunities and materials to learn key content and principles of science such as the difference between living and nonliving things (e.g., plants versus rocks) and life cycles of various organisms (e.g., plants, butterflies, humans). Earth and sky (e.g., seasons; weather; geologic features; light and shadow; sun, moon, and stars). Structure and property of matter (e.g., characteristics that include concepts such as hard and soft, floating and sinking) and behavior of materials (e.g., transformation of liquids and solids by dissolving or melting).

2.G.03

P K

Children are provided varied opportunities and materials that encourage them to use the five senses to observe, explore, and experiment with scientific phenomena.

2.G.04

P K

Children are provided varied opportunities to use simple tools to observe objects and scientific phenomena.

2.G.05

P K

Children are provided varied opportunities and materials to collect data and to represent and document their findings (e.g., through drawing or graphing).

2.G.06

P K

Children are provided varied opportunities and materials that encourage them to think, question, and reason about observed and inferred phenomena.

2.G.07

P K

Children are provided varied opportunities and materials that encourage them to discuss scientific concepts in everyday conversation.

2.G.08

P K

Children are provided varied opportunities and materials that help them learn and use scientific terminology and vocabulary associated with the content areas.