

NAEYC STANDARDS

SHAKE, RATTLE, & ROLL™

KEY CONCEPTS

Did you know that...?

- Listening to stories with rhyming and rhythm helps with language development.
- Sound is produced by vibration. A vibrating object pushes air molecules, creating a series of compression and rarefaction bands, which comprise the sound wave.
- Many materials can vibrate even if you cannot see them vibrating.
- Many insects detect sound waves through eardrums and hairs in unusual places, like on a leg, neck, or under a wing.
- A kazoo is a musical instrument that makes noise when air makes thin paper vibrate.
- Clapping compresses air and produces sound waves.
- Sound travels in waves through the air or water. Sound waves can move five times faster in water than they do in air!
- Different wavelengths result in different types of sounds. Long, slow waves make low sounds, and short, fast waves make higher pitched sounds.
- Humpback whales communicate to each other from afar. They use a layer of water deep in the ocean called the SOFAR channel, which carries low frequency sound waves for long distances.
- Speed can change the pitch of the sound. Low pitches have slower waves that are spaced farther apart, and high pitches have faster sound waves that are spaced closer together.
- Sounds can be loud or soft. The height of the sound wave reflects how loud or soft a sound is, with louder sounds waves having higher peaks.
- There are many ways to make sounds louder. One way includes squeezing the sound waves into a small space, such as when they travel from the environment into the middle ear.
- The shape of the outer ear helps people and other animals hear. The outer-ear shape allows for easy capturing and funneling of sound waves to the middle and inner ear.
- Sound can be integrated into play. Every day we use our senses (sight, sound, touch, and taste) to experience the world and gather information about it.
- When we can only use one sense, it is harder to gather as much information about an object, place, or activity than if we can use multiple senses.
- Some materials can stop or block sound waves, while others bounce waves. In general, hard materials bounce sound waves, while soft materials block sound waves.
- Objects can be altered to make them quieter. Adding soft materials that absorb sound waves can make objects quieter.
- Sound can travel around corners. Sound waves continue to spread out in a medium (such as air) until the energy completely dissipates. When objects such as posts or walls are encountered, sound waves will diffract, or bend around small objects and spread out beyond small openings.
- You can sometimes tell where a sound is coming from by recognizing what different objects or types of environments make that sound.
- Sound is directional. Ears use directional sound cues to locate objects in a given space.
- The bigger the space between an animal's ears, the better it can localize sound (identify where a sound is coming from). This is because sound waves will reach the ear closest to the sound before they reach the ear farthest from the sound. When there is more of a time difference between when the sound reaches the ears (and therefore the brain), it is easier for the animal to distinguish where the sound came from. Having more space between the ears allows for more of a time difference.

- Music is made up of sounds that are organized into patterns.
- Musical instruments make different sounds and have parts that vibrate to create those sounds.
- The Moog synthesizer was the first synthesizer to completely control what sounds were made by adjusting the voltage, or electrical force. It was invented by National Inventors Hall of Fame Inductee Robert Moog.
- Making up new music is a type of inventing and coding. Musicians and composers can create new patterns of notes, tempos, and musical tones.
- Code is a programming language. Code consists of a system of words, letters, figures, numbers, or symbols arranged in a pattern that creates a distinct reaction.
- Code is a creative tool. Codes can inspire critical thinking and enable people to communicate ideas in new and innovative ways.

NAEYC ACCREDITATION CRITERIA FOR CURRICULUM

2.A.01

UITPK

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

UITPK

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

UITPK

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

2.A.04

UITPK

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

2.A.05

UITPK

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

2.A.06

UITPK

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.