

# KEY CONCEPTS AND TEKS ALIGNMENT

## SHAKE, RATTLE, & ROLL (TM)

---

### 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

# KEY CONCEPTS AND TEKS ALIGNMENT

---

## I. SOCIAL AND EMOTIONAL DEVELOPMENT DOMAIN

### A. SELF CONCEPT SKILLS

- I.A.1. Child is aware of where own body is in space and respects personal boundaries.
- I.A.2. Child shows self awareness and can express pride in age appropriate abilities and skills.
- I.A.3. Child shows reasonable opinion of his own abilities and limitations.
- I.A.4. Child shows initiative in independent situations and persists in attempting to solve problems.

### B. SELF REGULATION SKILLS

- I.B.1.a. Child follows classroom rules and routines with occasional reminders from teacher.
- I.B.1.b. Child takes care of and manages classroom materials.
- I.B.1.c. Child regulates his own behavior with occasional reminders or assistance from teacher
- I.B.2.a. Child begins to understand difference and connection between emotions/feelings and behaviors.
- I.B.2.b. Child can communicate basic emotions/feelings.
- I.B.3.a. Child sustains attention to personally chosen or routine (teacher directed) tasks until completed.
- I.B.3.b. Child remains focused on engaging group activities for up to 20 minutes at a time.

### C. RELATIONSHIPS WITH OTHERS

- I.C.1. Child uses effective verbal and non verbal communication skills to build relationships with teachers/adults
- I.C.2. Child assumes various roles and responsibilities as part of a classroom community.
- I.C.3. Child shows competence in initiating social interactions.
- I.C.4. Child increasingly interacts and communicates with peers to initiate pretend play scenarios that share a common plan and goal.
- I.C.5. Child initiates problem-solving strategies and seeks adult help when necessary.
- I.C.6. Child demonstrates empathy and caring for others.
- I.C.7. Child interacts with a variety of playmates and may have preferred friends.

## D. SOCIAL AWARENESS SKILLS

### A. LISTENING COMPREHENSION SKILLS

- II.A.1. Child shows understanding by responding appropriately.
- II.A.2. Child shows understanding by following two-step oral directions and usually follows three step directions.
- II.A.3. Child shows understanding of the language being spoken by teachers and peers.

### B. SPEAKING (CONVERSATION) SKILLS

- II.B.1. Child is able to use language for different purposes.
- II.B.2. Child engages in conversations in appropriate ways.
- II.B.3. Child provides appropriate information for various situations.
- II.B.4. Child demonstrates knowledge of verbal conversational rules
- II.B.5. Child demonstrates knowledge of nonverbal conversational rules.
- II.B.6. Child matches language to social contexts.

## II. LANGUAGE AND COMMUNICATION

### A. LISTENING COMPREHENSION SKILLS

- II.A.1. Child shows understanding by responding appropriately.
- II.A.2. Child shows understanding by following two-step oral directions and usually follows threestep directions.
- II.A.3. Child shows understanding of the language being spoken by teachers and peers.

## **B. SPEAKING (CONVERSATION) SKILLS**

- II.B.1. Child is able to use language for different purposes.
- II.B.2. Child engages in conversations in appropriate ways.
- II.B.3. Child provides appropriate information for various situations.
- II.B.4. Child demonstrates knowledge of verbal conversational rules.
- II.B.5. Child demonstrates knowledge of nonverbal conversational rules.
- II.B.6. Child matches language to social contexts.

## **C. SPEECH PRODUCTION SKILLS**

- II.C.1. Child's speech is understood by both the teacher and other adults in the school.

## **D. VOCABULARY SKILLS**

- II.D.1. Child uses a wide variety of words to label and describe people, places, things, and actions.
- II.D.2. Child demonstrates understanding of terms used in the instructional language of the classroom.
- II.D.5. Child increases listening vocabulary and begins to develop vocabulary of object names and common phrases.

## **E. SENTENCES AND STRUCTURE SKILLS**

- II.E.1. Child typically uses complete sentences of four or more words and grammatical complexity usually with subject, verb, and object orders.
- II.E.7. Child uses single words and simple phrases to communicate meaning in social situations.
- II.E.8. Child attempts to use new vocabulary and grammar in speech.

## **III. EMERGENT LITERACY READING**

### **A. MOTIVATION TO READ SKILLS**

- III.A.1. Child engages in pre-reading and reading-related activities.
- III.A.3. Child recognizes that text has meaning.

### **C. ALPHABET KNOWLEDGE SKILLS**

- III.D.1. Child retells or re-enacts a story after it is read aloud.
- III.D.2. Child uses information learned from books by describing, relating, categorizing, or comparing and contrasting.
- III.D.3. Child asks and responds to questions relevant to the text read aloud.
- III.D.4. Child will make inferences and predictions about text.

### **E. PRINT CONCEPTS**

- III.E.1 Child can distinguish between elements of print including letters, words, and pictures.
- II .E.2 Child demonstrates understanding of print directionality including left to right and top to bottom.
- III.E.3 Child can identify some conventional features of print that communicate meaning including end punctuation and case.

## **IV. EMERGENT LITERACY WRITING**

### **A. MOTIVATION TO WRITE SKILLS**

- IV.A.1. Child intentionally uses marks, letters, or symbols to record language and verbally shares meaning
- IV.A.2 Child independently writes to communicate his/her ideas for a variety of purposes.

### **B. WRITING AS A PROCESS**

- IV.B.1. Child discusses and contributes ideas for drafts composed in whole/small group writing\ activities.
- IV.B. 2. Child interacts and provides suggestions to revise (add, take out, change order) and edit (conventions) class-made drafts.
- IV. B.3 Child shares and celebrates classmate and individual written products

### **C. CONVENTIONS IN WRITING**

- IV.C.1. Child writes own name (first name or frequent nickname) using legible letters in proper sequence.

- IV.C.4. Child uses appropriate directionality when writing (top to bottom, left to right).

## V. MATHEMATICS

### A. COUNTING SKILLS

- V.A.1. Child knows that objects, or parts of an object, can be counted.
- V.A.3. Child counts 1– 10 items, with one count per item.
- V.A.4. Child demonstrates that the order of the counting sequence is always the same, regardless of what is counted.
- V.A.5. Child counts up to 10 items and demonstrates that the last count indicates how many items were counted.
- V.A.6. Child demonstrates understanding that when counting, the items can be chosen in any order.
- V.A.7. Child uses the verbal ordinal terms.
- V.A.8. Child verbally identifies, without counting, the number of objects from 1 to 5.
- V.A.9. Child recognizes one-digit \ numerals, 0–9.
- V.B.1. Child uses concrete objects, creates pictorial models and shares a verbal word problem for adding up to 5 objects.
- V.B.2. Child uses concrete models or makes a verbal word problem for subtracting 0–5 objects from a set
- V.B.3. Child uses informal strategies to separate up to 10 items into equal groups.
- V.C.1. Child names common shapes.
- V.C.2. Child creates shapes.
- V.C.3. Child demonstrates use of location words (such as "over," "under," "above," "on," "beside," "next to," "between," "in front of," "near," "far," etc.).
- V.D.2. Child recognizes how much can be placed within an object.

### E. CLASSIFICATION AND PATTERNS SKILLS

- V.E.1. Child sorts objects that are the same and different into groups and uses language to describe how the groups are similar and different.
- V.E.2. Child collects data and organizes it in a graphic representation.
- V.E.3. Child recognizes and creates patterns

## VI. SCIENCE

### A. PHYSICAL SCIENCE SKILLS

- VI.A.1. Child observes, investigates describes, and discusses properties and characteristics of common objects.
- VI.A.2. Child observes, investigates describes and discusses position and motion of objects.
- VI.A.3. Child uses simple measuring devices to learn about objects.
- VI.A.4. Child observes investigates describes and discusses sources of energy including light, heat, and electricity.

### B. LIFE SCIENCES SKILLS

- VI.B.1. Child observes, investigates, describes and discusses the characteristics of organisms.
- VI.B.3. Child observes, investigates, describes and discusses the relationship of organisms to their environments.

### C. EARTH AND SPACE SCIENCE SKILLS

- VI.C.1. Child observes, investigates, describes and discusses earth materials, and their properties and uses.
- VI.C.4 Child demonstrates the importance of caring for our environment and our planet.

## VII. SOCIAL STUDIES

### A. PEOPLE, PAST AND PRESENT SKILLS

- VII.A.1. Child identifies similarities and differences between himself, classmates and other children inclusive of specific characteristics and cultural influences.
- VII.A.2. Child identifies similarities and differences in characteristics of families.
- VII.A.3. Child connects their life to events, time, and routines.

### D. CITIZENSHIP SKILL

- VII.D.3. The child engages in voting as a method for group decision-making.

## **VIII. FINE ARTS**

### **A. ART SKILLS**

- VIII.A.1. Child uses a variety of art materials and activities for sensory experience and exploration.
- VIII.A.2. Child uses art as a form of creative self-expression and representation.
- VIII.A.3. Child demonstrates interest in and shows appreciation for the creative work of others.

### **B. MUSIC SKILLS**

- VIII.B.1. Child participates in classroom music activities including singing, playing musical instruments, and moving to rhythms.
- VIII.B.2. Child responds to different musical styles through movement and play.

### **C. DRAMATIC EXPRESSION SKILLS**

- VIII.C.1. Child creates or recreates stories, moods, or experiences through dramatic representations.

## **IX. PHYSICAL DEVELOPMENT**

### **A. GROSS MOTOR DEVELOPMENT SKILLS**

- IX.A.1. Child demonstrates coordination and balance in isolation (may not yet coordinate consistently with a partner).
- IX.A.2. Child coordinates sequence of movements to perform tasks.
- IX.A.2. Child coordinates sequence of movements to perform tasks.

### **B. FINE-MOTOR DEVELOPMENT SKILLS**

- IX.B.1. Child shows control of tasks that require small-muscle strength and control.
- IX.B.2. Child shows increasing control of tasks that require eye-hand coordination.

### **C. PERSONAL SAFETY AND HEALTH SKILLS**

- IX.C.1. Child practices good habits of personal safety.
- IX.C.2. Child practices good habits of personal health and hygiene.
- IX.C.3. Child identifies good habits of nutrition and exercise.