Unit 10: Sand

Content Area: **English Language Arts**
Course(s):
Time Period: **Trimester 3**
Length: **4-6 Weeks**
Status: **Published**

Brief Summary of Unit

This unit provides a comprehensive exploration of sand, designed to encourage inquiry and discovery through hands-on activities and observations. The curriculum guides learners through understanding the characteristics of sand, where it is found, how it is used to create various items, who works with sand, and even how sand itself is formed. It incorporates vocabulary development, physical activities, artistic expression, and encourages family involvement and community exploration. The unit culminates in a "Celebrating Learning" event where children can share their discoveries.

Essential Questions

• What do we know about sand? What do we want to find out?

• What are the characteristics of sand?

• Where is sand found?

• What do we make with sand?

• Who works with sand?

• How can we make our own sand?

Enduring Understandings

• What we already know about sand and we want to find out

• The characteristics of sand

• Where sand is found

• What can be made with sand

• People who work with sand

• How sand can be made

Students Will Know

• Key vocabulary related to sand, its properties, and associated concepts: sand, grain, variety, specimen, mold, gritty, abrasion, control, absorb, saturated, friction, hourglass, shore, ripple, dune, volcanic, wildlife, sandpaper, grit, sandbag, artistic, sand sculpture, leeks, mason, employment, adobe, stucco, glassblowing, rake, technique, compound, crumble, repetition, fine, description

• Different textures and colors of sand

• The feeling of jumping on sand versus a hard surface and why sand is used in playgrounds

• The effects of water on sand (e.g., wet vs. dry sand, movement of objects, sandbags)

• The concept of ripples and sand dune

• Animals that live or nest in sand

• Uses of sand in everyday objects and structures (e.g., sandpaper, cement, mortar, bricks, glass, sand sculptures)

• Plants that can grow in sandy conditions

• Professions that involve working with sand (e.g., stonemasons, bricklayers, glass workers, park/golf course workers)

• How sand is naturally formed through erosion, weathering, and ocean processes.

Students Will Be Skilled At

• Observation and Comparison: Observing sand samples, fabrics of different textures, and comparing characteristics like softness, grit, wet vs. dry, and how objects move over sand

• Exploration and Discovery: Gathering sand samples, experimenting with sand molds, sandbags, and making ripples/dunes

• Measurement: Measuring sand in cups, distances jumped, and comparing weights of sand

• Creating and Constructing: Making sand specimens, sand dough, sand art/sculptures, and potentially experimenting with mortar

• Inquiry and Investigation: Asking questions, exploring how sand gets wet, how sandbags are used, and how sand is made

• Identification: Identifying areas around the school where sand can be observed, different colors of sand,

animals living in sand, and objects made from sand

• Collaboration and Communication: Participating in discussions, shared writing activities, and preparing for/sharing at a celebration of learning

• Physical Activities: Engaging in various movements, games, and jumps related to sand and its properties

Evidence/Performance Tasks

• Discussions and Shared Writing: Documenting observations, ideas, and questions about sand's characteristics, locations, uses, and formation

• Question of the Day Responses: Verbal or written answers demonstrating understanding of daily concepts

• Hands-on Exploration and Experiments: Demonstrating understanding through manipulation of materials (e.g., making sand specimens, stacking sandbags, creating sand dough, attempting to make sand from other materials)

• Observational Drawings and Photos: Documenting discoveries

• Displays and Presentations: Children' gathering work samples, photos, and sand samples for a celebration, and sharing their learning

• Participation in Small Group Options and Games: Engaging with intentional teaching cards and Mighty Minutes activities related to math, literacy, and physical skills

Learning Plan

"Celebrating Learning" section, with daily breakdowns:

• Exploring the Topic:

• Investigation 1: What are the characteristics of sand? 5 days

• Investigation 2: Where is sand found? 5 days

• Investigation 3: What do we make with sand?

• Investigation 4: Who works with sand? 4 days

• Investigation 5: How can we make our own sand? 4 days

• Celebrating Learning: 2 days

"Exploring the Topic" and five "Investigation" phases, culminating in a "Celebrating Learning" event. Each day typically includes:

• Interest Areas: Hands-on activities and materials set up for exploration (e.g., sand samples, magnifying glasses, art supplies, sand molds, measuring tools, technology with images/videos, library resources, cooking supplies, construction materials, rock tumblers)

• Outdoor Experiences: Activities designed to engage with sand in an outdoor environment, such as looking for sand around the school, jumping in sand, long jumping, making ripples and dunes in a sandbox, experimenting with sandbags, and visiting community sites like parks or construction sites

• Physical Fun: Incorporates specific "Intentional Teaching Cards" focusing on movement and physical skills (e.g., “Beach-Ball Kicker,” “Moving Through the Forest,” “Wonderful Warm-Ups,” “Follow the Leader,” “Stand Up and Dance,” “Bounce & Catch,” “Jump the River”)

• Family Partnerships: Strategies to involve families, such as introductory letters, requests for sand-related items, encouragement to look for sand in the community, assistance with site visits, preparing sandbags, and inviting family members who use sand in their work or hobbies to visit the classroom or attend the celebration

• Wow! Experiences: Special events designed to excite and deepen learning, including walks to find sand, visits from experts (e.g., sand artist, stonemason, glass worker, golf course worker), and site visits to construction areas

• Question of the Day: Open-ended questions to stimulate thinking and discussion related to the daily topic15....

• Large Group Activities: Include a mix of:

Movement, Games, Songs, and Rhymes using "Mighty Minutes" cards (e.g., “Move to the Beat,” “The Feelings Dance,” “High Knees,” “Say It, Show It,” “The Name Game,” “Mirror, Mirror,” “High in the Tree,” “Ten Wiggly Steps,” “Syllable Surprise,” “All Thumbs,” “Traffic Jam,” “My Name, Too!” “Bounce, Bounce, Bounce,” “Mr. Forgetful,” “Action Counting,” “Willy’s Week,” “The Name Dance,” “Howling at the Moon,” “Humpty-Dumpty,” “We Like Clapping,” “Come Play With Me,” “Listen for Your Name,” “Hully, Gully, How Many?” “Wind-Up Robots,” “Disappearing Rhymes,” “Crazy Compounds,” “Let’s All Follow,” “Syllable Stroll,” “Leaping Sounds,” “Tiny Teamwork”)

Discussion and Shared Writing: Focused conversations and collaborative writing about examining sand samples, sand in the neighborhood, sand vs. dirt, sandboxes, investigation questions, sand's texture, jumping in sand, wet sand, moving objects over sand, hourglasses, beaches, sand dunes, colors of sand, site visits, animals in sand, sandpaper, sandbags, sand art, sand sculptures, plants in sand, masons, glass workers, golf courses, construction sites, making sand, comparing sand, and preparing for/sharing at the celebration

• Read-Alouds: Nonfiction and fiction books featuring sand, deserts, beaches, wildlife, sandbags, and various stories, including bilingual selections (e.g., "The Gigantic Turnip," "Highlights High Five Bilingüe™" series, "Where the Wild Things Are," "Sand Dwellers: From Desert to Sea," "Xochitl and the Flowers," "I Know the River Loves Me/Yo sé que el río me ama," "Little Chanclas")

• Small Group Options: Focused activities using "Intentional Teaching Cards" (e.g., “Show Me Five,” “Number Cards,” “Which Has More?” “Guessing Jar,” “I’m Thinking of a Shape,” “Shape Bingo,” “Walk a Letter,” “Textured Letters,” “Color Hunt,” “Sticky Tables,” “Putting Puzzles Together,” “Treasure Hunt,” “Bounce & Count,” “Story Problems,” “Rhyming Chart,” “Rhyming Tubs,” “Can You Find It?” “My Shadow

and I," "Patterns," "Perler Patterns," "Knowing Our Friends," "Book Cover Memory Game," "Buried Shapes," "Geoboards," "Dig It!" "Secret Numbers," "Picture Patterns," "Patterns Under Cover," "Reading Nonfiction Books," "Will You Read to Me?" "Missing Lids," "Straw Shapes," "Searching the Web," "Photo Writing," "My Clothes Today," "Applesauce," "Fruit Muffins," "Dramatic Story Retelling," "Picture Walk & Talk," "Same Sound Sort," "Tongue Twisters," "Ramp Experiments," "The Long and Short of It," "That's How You Do It!" "Writing Poems," "Stepping Stones," "We're Going on an Adventure," "Alphabet Books," "Making My Name," "Tap It, Clap It, Stomp It, Jump It," "Sink or Float?" "Shake, Rattle, and Roll," "Author & Illustrator," "The "Me" Book," "Play Dough Weaving," "Clay Engraving," "Conference Conversations," "Memory Games")

Materials

• Sand and Samples: Sand samples (various types), sand from sandbox/sensory bin, wet sand, dry sand, sand dough (ingredients and recipe)

• Containers and Tools: Containers for samples, measuring cups, scoops, rakes, sand molds, large bins, funnels, water bottles, small clear jars, plastic baggies, masking tape, plastic spoons, feely box, balance scale, hourglass, sifters, strainers, small brushes, mallets, hammers, rolling pins, mortar and pestle, protective eyewear

• Art and Construction Supplies: Clear contact paper, scissors, markers, large pieces of cardboard, paint, brushes, materials to rub on boards (e.g., tissues), sandpaper (various grits), wooden blocks, sand blocks, glue, cardstock, clay (air-dry or play dough), plastic/wooden carving tools, construction paper

• Technology and Media: Camera, photos (taken on Day 2 walk, long jumpers, heavy objects over sand, ripples/dunes, beaches, interesting sand colors/textures, animals in sand, sandbags, sand sculptures, plants in sand, masonry, glass making, golf courses, construction sites, erosion/weathering), microscopic images of sand, bookmarked images of beaches around the world, videos of sand melting into glass, computer, appropriate internet search engines, audio recorder

• Textile and Fabric Samples: Flannel, satin, burlap, a variety of textures

• Objects for Exploration/Demonstration: Chunks of cement, mortar, bricks, various balls (different sizes/textures), small sticky notes, wooden blocks, sandbox toys, natural pumice stone, gardening tool, fresh leek, golf clubs, firm balls, glass objects, plastic plates, solid rocks, delicate shells, rock tumbler, pipe cleaners, attribute blocks, counters, manipulatives, toy cars, geometric solids, tangram shapes, treasure items, classroom objects, ribbons/yarn, everyday objects, photos or pictures cut from magazines, various sizes/shapes of containers with lids, drinking straws, household objects

• Paper and Writing Materials: Paper, writing materials, chart paper, crayons, pencils, clipboards, index cards.

• Books and Reading Materials: Nonfiction and fiction books featuring sand, deserts, beaches, wildlife, sandbags, counting books, poetry books, and bilingual selections. Specific titles include: The Gigantic Turnip

Where the Wild Things Are, Sand Dwellers: From Desert to Sea, Xochitl and the Flowers, I Know the River Loves Me

Book Discussion Cards (50, 51, 52) and Book Conversation Cards (01, 07)

• Intentional Teaching Cards: A wide range of cards are referenced for physical activities, math, and literacy skills, including P39, M16, M04, M19, M17, M20, M88, LL17, LL15, LL61, LL75, P14, P37, P22, P35, P19, P11, M23, M87, M18, M22, LL10, LL44, M51, M47, M14, M85, LL30, LL67, M30, M21, M89, M37, M45, M38, LL66, LL64, M58, M42, LL15, LL26, LL57, LL71, M28, M90, LL06, LL77, LL12, LL16, M84, M25, LL78, LL27, M55, M36, SE01, LL34, LL29, LL52, LL10, M81, M61, LL69, LL76, P02, P34, LL72, LL08

• Mighty Minutes: Numerous "Mighty Minutes" cards for various large group activities, including 91, 142, 180, 15, 151, 107, 51, 102, 151, 148, 153, 72, 26, 147, 146, 114, 35, 30, 55, 140, 163, 126, 189, 186, 104, 149, 60, 196, 81, 89, 187, 124, 125, 158, 165, 42, 85, 21, 194, 106, 171, 161, 58, 88, 198, 99, 155, 53, 107, 04, 112, 17, 173, 82, 28

Standards

I. Social/Emotional Development

- Standard 0.1: Children demonstrate self-confidence.

0.1.1 Express individuality by making independent decisions.

0.1.2 Express ideas for activities and initiate discussions.

0.1.3 Actively engage in activities and interactions with teachers and peers.

- Standard 0.2: Children demonstrate self-direction.

0.2.1 Make independent choices and plans from a broad range of diverse interest centers.

0.2.2 Demonstrate self-help skills.

0.2.3 Move through classroom routines and activities with minimal teacher direction and transition easily from one activity to the next.

- Standard 0.3: Children identify and express feelings.

0.3.1 Recognize and describe a wide range of feelings, including sadness, anger, fear, and happiness.

- Standard 0.4: Children exhibit positive interactions with other children and adults.

0.4.1 Engage appropriately with peers and teachers in classroom activities.

0.4.2 Demonstrate socially acceptable behavior for teachers and peers.

0.4.6 Demonstrate verbal or nonverbal problem-solving skills without being aggressive.

II. Language Arts Literacy

- Standard 1.1: Children participate in conversations and discussions.

1.1.1 Engage in conversations about familiar topics.

1.1.2 Ask and answer questions related to the topic.

- Standard 1.2: Children comprehend and use new vocabulary.

1.2.1 Use new vocabulary related to the topic.

1.2.2 Understand and follow multi-step directions.

- Standard 1.3: Children express themselves through and develop an appreciation of dramatic play and storytelling.

1.3.1 Play roles observed through life experiences.

1.3.3 Participate with others in dramatic play, negotiating roles and setting up scenarios using costumes and props.

- Standard 1.4: Children demonstrate emergent reading skills.

1.4.1 Show interest in books and print materials.

- Standard 1.5: Children demonstrate emergent writing skills.

1.5.1 Use drawing and writing to express ideas.

III. Mathematics

- Standard 3.1: Children use numbers and counting.

3.1.1 Count with understanding and recognize how many are in a set.

- Standard 3.2: Children identify and describe shapes.

3.2.1 Identify and describe two- and three-dimensional shapes.

3.2.2 Understand and use positional words.

- Standard 3.3: Children compare and measure.

3.3.1 Compare and order objects by length, size, weight.

3.3.2 Use non-standard units to measure.

- Standard 3.4: Children sort and classify objects.

3.4.1 Sort and classify objects based on one or more attributes.

- Standard 3.5: Children recognize and create patterns.

3.5.1 Recognize and extend simple patterns.

IV. Science

- Standard 4.1: Children explore and investigate the natural and physical world.

4.1.1 Observe and describe objects and events.

4.1.2 Ask questions about observations.

4.1.3 Conduct simple investigations to answer questions.

4.1.4 Make predictions and test them.

- Standard 4.2: Children understand properties of objects and materials.

4.2.1 Identify and describe properties of objects.

4.2.2 Explore how objects can be changed.

- Standard 4.3: Children understand basic concepts of force and motion.

4.3.1 Explore different ways objects move.

4.3.2 Understand that forces cause changes in motion.

- Standard 4.4: Children understand concepts related to structures and engineering.

4.4.1 Explore how structures are built and designed.

4.4.2 Use tools and materials to design and build.

V. Health, Safety, and Physical Education

- Standard 2.2: Children demonstrate large motor skills.

2.2.1 Demonstrate locomotor skills.

2.2.2 Demonstrate non-locomotor skills.

2.2.3 Demonstrate manipulative skills.

- Standard 2.3: Children demonstrate small motor skills.

2.3.1 Develop eye-hand coordination.

2.3.2 Demonstrate fine motor skills.

VI. Visual and Performing Arts

- Standard 5.1: Children express themselves through and develop an appreciation of dramatic play and storytelling.

5.1.3 Participate with others in dramatic play, negotiating roles and setting up scenarios using costumes and props.

- Standard 5.2: Children express themselves through and develop an appreciation of the visual arts.

5.2.1 Create two- and three-dimensional works of art while exploring color, line, shape, form, texture, and space.

VII. Social Studies, Family, and Life Skills

- Standard 6.1: Children understand themselves and their families.

6.1.1 Share information about themselves and their families.

- Standard 6.3: Children understand their community.

6.3.1 Explore and identify places and people in their community.

6.3.2 Understand the roles of community helpers.

- Standard 6.4: Children demonstrate problem-solving skills.

6.4.1 Identify a problem and generate possible solutions.

6.4.2 Use materials and resources to solve problems.

VIII. Technology

- Standard 8.1: Children use technology tools for learning and communication.

8.1.1 Explore and use various technological tools.

Suggested Strategies for Modifications

Using a variety of hands-on activities, movement, small group options, visual activities, along with discussions to support diverse learners and learning styles. Students experience hands-on exploration of technology and materials that provide multiple entry points for learners.

This link includes content specific accommodations and modification for all populations:

https://docs.google.com/spreadsheets/d/1fmQ5llgX1HZdIPa7duX33pfmonGDoVFag9eE2DpbLfM/edit?usp=sharing