

We Skoolhouse



# Ready-Made Curriculum: Balls and Ramps



# A Practical Guide for Exploration

Each unit offers a suggested flow of experiences designed to support deep, meaningful learning through play. You'll notice intentional repetition—this is purposeful. Repeating activities builds memory, mastery, confidence, attention, and focus, forming the foundation for long-term learning.

The experiences are open-ended & process-driven, focusing on how children learn rather than what they produce. This allows for a range of learning styles & encourages exploration at each child's unique pace.

## Flexibility Matters

Each unit includes a suggested daily activity guide to support your planning—but it's not meant to be followed rigidly or completed in a set order:

- **Follow the children's lead:** If they're deeply engaged, slow down. If interest fades, it's okay to pause and return later. Some children need time to warm up to new ideas—don't move on too quickly. Repeating an invitation over several days can spark richer engagement.
- **Move at your own pace:** Stretch a week into two, repeat activities as long as needed, and allow units to grow over time.
- **Revisit, don't rush:** There's no need to introduce a new unit each month. Returning to a familiar concept—like revisiting water after exploring texture or paint—deepens understanding and strengthens memory. Revisiting isn't starting over—it's going further.

**This guide is about making space for curiosity, experimentation, and meaningful learning. Use it as a springboard—trust yourself, trust the children, and allow learning to unfold naturally.**



# Unit: Balls and Ramps

Exploring balls and ramps invites preschoolers into a world of movement, experimentation, and discovery. Through rolling, dropping, chasing, building, and adjusting, preschoolers develop early physics concepts, spatial awareness, and problem-solving skills—all through active, playful investigation.

Domain	How It Supports Development
<b>Physical</b>	Strengthens gross motor skills as children carry, roll, chase, and retrieve balls. Fine motor precision is developed as they create balls with loose parts and place balls on ramps. Enhances hand-eye coordination and body awareness.
<b>Cognitive</b>	Deepens scientific inquiry and critical thinking as children test hypotheses about speed, angle, force, and distance. Hands-on ramp building supports early engineering concepts and problem-solving skills.
<b>Language</b>	Expands descriptive, comparative, and predictive language ("The ball goes faster on the steep ramp," "Let's make a taller ramp!"). Promotes cause-effect reasoning and sequence storytelling linked to experimentation.
<b>Social-Emotional</b>	Fosters cooperation, negotiation, and resilience as children collaborate to design ramps, share materials, and adapt to unexpected results. Encourages persistence and emotional regulation through trial and error.

# Unit: Balls and Ramps Exploration

**Focus:** Hands-on exploration of balls, ramps, and movement through play, observation, experimentation, and storytelling — fostering critical thinking, physical science concepts, and creativity.

**Books:** The Ball Book, by Joshua David Stein, Role, Slope, & Slide, by Michael Dahl, & Simple Machines, by D. J. Ward

**Songs:** "Take Me Out to the Ball Game" and Bounce Patrol: Let's Move Song

**Vocabulary:** Momentum, velocity, incline, gravity, acceleration, friction, force, motion, trajectory, bounce, curve, obstacle, speed, angle, resistance, launch, momentum, prediction, cause, effect, distance, slope

## Week 1: Introduction to Balls

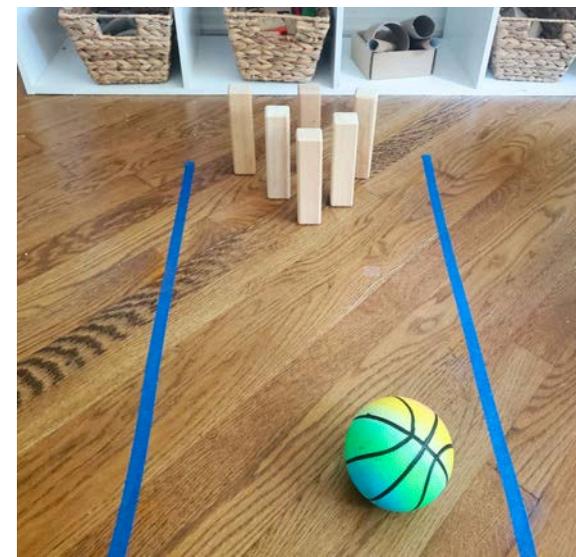
**Focus Concept:** What Is a Ball?

Day	Activity	Prompt/Focus
Monday	Group Discussion + Free Ball Exploration (basket of different balls)	What do you know about balls?
Tuesday	Compare and Contrast Materials and Chart: Things That Are Balls vs. Things That Are Not	What makes something a ball?
Wednesday	Create a Ball with Loose Parts (foil, fabric, paper, string)	Can you make a ball?
Thursday	Clay Ball Challenge (make balls with clay)	What shapes or sizes can you create?
Friday	Free Ball Play + Reflect (drawing or dictating ball discoveries)	What did you learn about balls?

## Week 2: Movement and Ramps

**Focus Concept:** How Do Balls Move?

Day	Activity	Prompt/Focus
<b>Monday</b>	Free Ramp & Ball Exploration	"How does the ball move?"
<b>Tuesday</b>	Size Investigation (small vs. large balls on same ramp. Can also explore ramp height)	"How does the size of the ball or height of ramp change movement/speed?"
<b>Wednesday</b>	Let's Rock & Roll (what rolls, what doesn't?)	"Which objects roll well? Which don't?"
<b>Thursday</b>	Balls, Ramps, and Paint (dip balls in paint & roll down paper covered ramp)	What marks can you observe?
<b>Friday</b>	DIY Bowling (balls + blocks or plastic bottles)	"How can we set up a game?"



# Week 3: Experimenting with Different Surfaces

**Focus Concept:** What Changes a Ball's Movement?

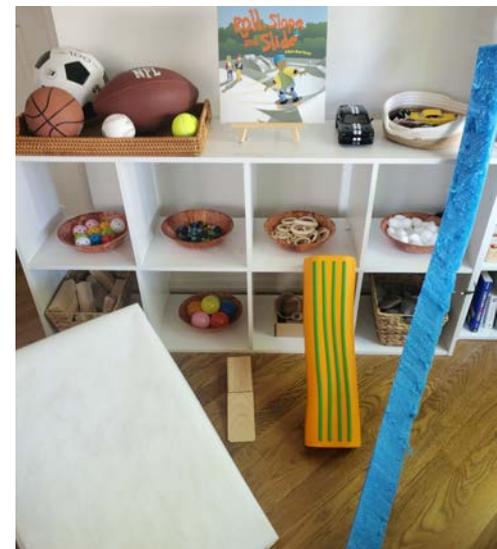
Day	Activity	Prompt/Focus
<b>Monday</b>	Exploring Friction (ramps with different textures: sandpaper, fabric, wood slices)	What happens when the surface changes?
<b>Tuesday</b>	Marble Runs (pipe insulation, tubes, legos, recycled materials, paper plates + blocks)	How can we build a path for marbles?
<b>Wednesday</b>	Marble Art Run (paint and marbles in a container lined with paper)	What paths and marks do marbles make?
<b>Thursday</b>	Predict & Test (which ball will go fastest?)	Why do you think that?
<b>Friday</b>	Create Your Own Ramp or Ball Challenge	How can you create it?



# Week 4: Balls, Stories, and Games

**Focus Concept:** What Can We Create With Balls?

Day	Activity	Prompt/Focus
<b>Monday</b>	New Games with Balls (children invent their own ball games)	What new ways can we play?
<b>Tuesday</b>	Counting and Sorting Balls (by size, color)	How many ways can we arrange them?
<b>Wednesday</b>	Storytelling (create a story about balls)	What adventures could a ball have?
<b>Thursday</b>	Collaborative or Individual Sculptures (building with balls, ramps, & loose parts)	What can we create together?
<b>Friday</b>	Favorite Ball Activity + Reflection	Which exploration was your favorite?



# Integrating Balls & Ramps Exploration Across Centers

Integrating elements of your investigation across the centers gives children repeated opportunities to explore and deepen their understanding in diverse ways. When materials and provocations connected to the broader topic appear throughout the environment, children can build, imagine, experiment, and express ideas across contexts. This natural repetition strengthens memory, supports flexible thinking, and invites children to transfer and expand their knowledge. Rather than isolating learning to one area, weaving the investigation through the classroom honors how young children learn best—through play, exploration, and meaningful, ongoing connections.

- **Dramatic Play Area**

- Add different balls, fabrics, and jerseys to spark imagination.
- Set up a pretend sports field, small basketball hoop, or bowling alley with props.
- Add clipboards and signs so children can "design" their own games.

- **Blocks and Construction**

- Offer balls alongside blocks for building ball tracks, tunnels, or obstacle courses.
- Provide ramps of different materials for ball experiments.
- Introduce tubes and gutters for open-ended ball transport building.



# Integrating Ball Exploration Across Centers (Cont'd)

- **Science and Discovery Center**

- Set up a ball investigation table (weigh, measure, test rolling distance via experimentation).
  - Include tools such as measuring tape, magnifying glasses, and scales to support investigations.
- Offer different surfaces (carpet, tile, sandpaper) to test rolling speed.

- **Art Studio**

- Provide paint and balls for rolling or stamping art experiences.
- Offer clay, dough, or open-ended materials for children to form and sculpt different types of balls.
- Add images of balls and/or athletes that play different sports that involve balls.

- **Sensory**

- Fill with water beads (orbeez) and materials to explore; small nets, cups, bowls, and spoons
- Bring in a small ball pit for a full body experience.
- Freeze small balls in ice for a sensory melting activity.

- **Outdoor Exploration**

- Large ball play with hills, outdoor ramps, and long open spaces.
- Bring balls or toy cars to the playground to roll down slides.
- Nature ramps: roll balls down grassy slopes, sand hills, or dirt mounds.

