Balls Study: Table of Contents

Get started by reviewing the Table of Contents in the Teaching Guide.

The highlighted text indicates the sample resources found in this Touring Guide. The Teaching Guide provides all the information needed to go step-by-step and day-by-day through the entire study: background information to get started, preparatory resources to help begin the study and explore the topic, daily guidance for investigations, and suggestions on how to celebrate and close the experience.
Why Investigate Balls?

At the start of every study is a “Why Investigate...?” section that provides context.

All the study topics in *The Creative Curriculum® for Preschool*—such as balls, trees, and buildings—are topics that already interest children and are familiar and fascinating to them. This is one of the major distinguishing features of *The Creative Curriculum® for Preschool*: The study topics are relevant to—rather than removed from—the everyday lives of children. The studies involve children in hands-on exploration, problem solving, and communication.

Children love balls. They play with them in many different ways. They throw them, catch them, kick them, and roll them with seemingly endless delight. Children learn how natural forces, such as gravity and friction, affect the movement of balls, and they enjoy making balls, marbles, and other rolling objects change speed and direction. The universal and enduring appeal of balls is evident in the traditional games children play with them and in the ways they invent their own ball games.

This study shows how to use children’s interest in balls to help them explore social studies and science concepts related to the features and nature of balls, and to use skills in literacy, math, technology, and the arts as they investigate.

How do the children in your room show their interest in balls? What do they say about balls?
A “Web of Investigations” is also included at the beginning of every study. This section introduces the concept of an idea web, a way to think about the important ideas related to a topic and the areas that children might explore. Each study includes a preliminary idea web that has extra space for teachers to record their own ideas.

In this way, teachers can adapt the Teaching Guide to the resources that are available in the community and the particular learning they want to emphasize.
Putting It Into Practice

Here’s an example of one teacher’s idea web.

Notice how she begins with the study topic—balls—and branches out to identify many areas of exploration that interest the children in her classroom. From the idea web, this teacher and her class are able to identify what they already know about balls. Then they identify the questions they want to answer.
At a Glance, Investigation 1

Next Step: Plan and Prepare

The “At a Glance” pages that precede every exploration and investigation help teachers with planning. They provide a bird’s-eye view of what the next few days will look like.

The number of days the teacher sees on the “At a Glance” chart will vary according to the question(s) being investigated and how involved children become.

Questions for Exploration or Investigation—
In addition to children’s own questions, these preselected questions actively involve children in the topic they are studying. Children explore them by engaging in hands-on experiences that enable them to practice important investigatory skills.

Question of the Day—
As part of the morning arrival routine and with help from the teacher or a family member, children answer a question related to something planned for that day.

Materials—The "At a Glance" chart shows all the materials and books the teacher needs to gather for each day of the investigation.

Children’s Literature—
During each study, the teacher uses both fiction and nonfiction books from the Teaching Strategies® Children’s Book Collection. Thenonfiction titles relate closely to the study topic.

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### AT A GLANCE

#### Investigation 1

<table>
<thead>
<tr>
<th>Do all balls bounce?</th>
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</thead>
<tbody>
<tr>
<td><strong>Vocabulary</strong>—<strong>English</strong>: circumference, length, shorter, longer, sphere</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
</tr>
</thead>
</table>
| **Interest Areas** | Toys and Games: sorting trays; a variety of small balls  
Technology: eBook version of The Three Billy Goats Gruff |
| Toys and Games: sorting trays; a variety of small balls and circles |

<table>
<thead>
<tr>
<th><strong>Question of the Day</strong></th>
<th>Do you think all balls bounce?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is your head bigger or smaller than this ball?</td>
<td></td>
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</tbody>
</table>

| **Large Group** | Movement: The Imaginary Ball  
Discussion and Shared Writing: Which Balls Will Bounce? |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials: Mighty Minutes 41, “The Imaginary Ball”; ball collection; numeral cards; digital camera; Play Ball</td>
<td></td>
</tr>
</tbody>
</table>

| **Read-Aloud** | The Three Billy Goats Gruff  
Book Discussion Card 06 (first read-aloud) |

| **Small Group** | Option 1: Rhymes With Ball  
Intentional Teaching Card LL10, “Rhyming Chart”; poem or song with rhyming words; prop that illustrates poem or song |
|----------------|-----------------------------------------------|
| Option 2: Rhyming Zoo  
Intentional Teaching Card LL14, “Did You Ever See…?”; pictures of familiar animals; audio recorder |

<table>
<thead>
<tr>
<th><strong>Mighty Minutes</strong></th>
<th>Mighty Minutes 30, “Bounce, Bounce, Bounce”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mighty Minutes 33, “Thumbs Up”; two items with the same initial sound</td>
<td></td>
</tr>
</tbody>
</table>

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Day 3

Make Time for...

**Outdoor Experiences**

**Bouncing Balls**
- Test balls outside to see which balls bounce the highest. Invite the children to make predictions and test them.
- Invite the children to test how balls bounce on different surfaces, e.g., rocks, sand, grass, and concrete.
- If possible, have children test the balls by dropping them from various heights, e.g., slide, steps, and climber.

**Physical Fun**
- Use Intentional Teaching Card P05, “Throw Hard, Throw Far,” and follow the guidance on the card.

**Family Partnerships**
- Send home a note to families encouraging them to talk with their children about their favorite childhood ball games.

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**Spanish:** circunferencia, longitud, más corto, más largo, esfera

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**Outdoor Experiences**—
These activities either relate to the study topic or present an intentional opportunity for promoting children’s gross motor skills.

**Family Partnerships**—
This section offers suggestions for involving children’s families in the program.

**WOW! Experiences**—
(not shown on this page) Each study suggests special events that can enhance children’s experiences, such as having visitors in the classroom, going on site visits, or engaging in celebrations of learning.
Day 1, Investigation 1

Each *Teaching Guide* contains the day-by-day, step-by-step guidance that helps teachers implement each study.

Notice that guidance for using the additional resources, such as *Intentional Teaching Cards™* and *Book Discussion Cards™*, is included throughout every daily plan.

An important feature of *The Creative Curriculum®* for Preschool is that the daily plans offer a structure, not a script. As children raise questions about a topic, the teacher can adapt the plans to follow children’s interests. The curriculum combines the flexibility many teachers want with the assurance that they’re still meeting their state and Head Start early learning standards.

### Day 1

#### Investigation 1

**Do all balls bounce?**

**Vocabulary**

*English:* See *Book Discussion Card 06, The Three Billy Goats Gruff (Los tres cabritos)* for words.

**Question of the Day:** Do you think all balls bounce?

**Large Group**

**Opening Routine**

- Sing a welcome song and talk about who’s here.

**Movement: The Imaginary Ball**

- Read *Play Ball*.
- Review Mighty Minutes 41, “The Imaginary Ball.” Follow the guidance on the card using the numeral card variation.

An important concept in movement experiences is *body awareness*. This activity helps children explore what their bodies can do.

**Discussion and Shared Writing: Which Balls Will Bounce?**

- Gather the collection of balls.
- Ask, “Do all balls bounce? I wonder which ones bounce best. Let’s find out.”
- Hold up each ball and ask, “Do you think this ball will bounce well?”

- Record children’s predictions about which balls will bounce, and create two groups: balls they think will bounce and balls they think will not bounce. Let each child test a prediction. Be sure to include some balls that won’t bounce and others that don’t bounce well, e.g., cotton ball, orange, or football. After testing each ball, have the children re-sort the balls. (They may want more than two categories.) Take photos of children testing their predictions and the sets of sorted balls. Call attention to the football and wonder aloud why it didn’t bounce like the others. Reinroduce the term *sphere* to describe balls and point out that the football is not a sphere.

- Say, “I wonder which balls bounce the highest and why some bounce higher than others. During outdoor time today and tomorrow, we can try to find out.”

Before transitioning to interest areas, talk about the sorting trays and small ball collections in the Toys and Games area and how children can use them.
The Balls Study
Investigating the Topic

Choice Time
As you interact with children in the interest areas, make time to:
• Observe children as they sort the balls in the Toys and Games area.
• Describe what you see children doing, e.g., "You put all the smooth balls in this section and all the bumpy balls in that section."
• Ask, "Can you think of another way to sort the balls?"
• Record what children say and do.

Instead of praising children by saying, "Good job," encourage children by explaining exactly what they are doing that is appropriate and noteworthy. For more information on this topic see Intentional Teaching Card SE18, "Encouragement."

Read-Aloud
Read The Three Billy Goats Gruff.
• Use Book Discussion Card 06, The Three Billy Goats Gruff. Follow the guidance for the first read-aloud.
• Tell children that the book will be available to them on the computer in the Technology area.

Option 1: Rhymes With Ball
• Review Intentional Teaching Card LL10, "Rhyming Chart."
• Follow the guidance on the card using the word ball.

Option 2: Rhyming Zoo
• Review Intentional Teaching Card LL14, "Did You Ever See...?" Follow the guidance on the card.

For more information on supporting children’s phonological awareness, see Volume 6: Objectives for Development & Learning.

Small Group

Mighty Minutes®
• Use Mighty Minutes 30, "Bounce, Bounce, Bounce." Follow the guidance on the card.

Large-Group Roundup
• Recall the day’s events.
• Show the rhyming chart you made during small-group time. Invite the children to recall rhyming words.

Support for English- and dual-language acquisition—
Guidance to help teachers support the English- and dual-language learners in their classrooms is embedded throughout the Teaching Guides.

Book Discussion Cards™—The Book Discussion Card supports teachers during read-alouds. See pages 42-43 to review Book Discussion Card™ 06, "Billy Goat’s Gruff."

Intentional Teaching Cards™—Prompts to use particular Intentional Teaching Cards™ are included in every daily plan. See pages 44-46 to examine three Intentional Teaching Cards™.

Reference to Vol. 6—
The Teaching Guide prompts teachers to refer to this knowledge-building volume for more detailed information. See pages 48-49 for this excerpt.

Mighty Minutes®—
Teachers are directed to Mighty Minutes® activities during each day of the study. Refer to page 47 to review the Mighty Minutes® that are suggested for Day 1, Investigation 1 of the Balls Study.
Day 1, Investigation 1
Book Discussion Card™ 06, “Billy Goats Gruff”

During Day 1, Investigation 1 of the Balls Study, teachers are directed to Book Discussion Card™ 06, “The Three Billy Goats Gruff.”

Objective 18 Comprehends and responds to books and other texts
   a. Interacts during reading experiences, book conversations, and text reflections

Related Objectives: 1a, 3b, 8a, 9a, 15b, 22a, 32

Vocabulary
- valley: land in between mountains or hills that often has a river or stream running through it
- boulder: a very big, heavy rock
- hooves: the hard covering nubs: small bumps or lumps
- skin and bones: very, very skinny
- hideous: very, very ugly
- planks: trembled: shook
gulp: a big swallow
wobbled: didn't stand very steadily
stomped: 1

1. First Read-Aloud
During the first read-aloud, teachers focus on the characters’ thoughts and actions: “I wonder how Little Billy Goat plans to get all three of them past the troll.”

2. Second Read-Aloud
During the second read-aloud, teachers comment on and ask questions about the other characters: “Why do you think the troll let the first two Billy Goats Gruff cross the bridge? Didn’t he have a pretty good idea of what was happening?”

“Then we'll find more grass,” said Big Billy Goat Gruff.

“But where?” asked the middle brother.

“Where are we going to find more grass?”

“I know!” said Little Billy Goat Gruff, feeling very smart. “We’ll go to the meadow on the other side of the river! We can stay for days, and eat and eat, and soon we will be very, very full!”
The Three Billy Goats Gruff
Retold by Bonnie Dobkin

Facing a shortage of food, three billy goat brothers must cross a bridge to get to a meadow of fresh grass. But the journey is dangerous—there’s a disgusting troll living under the bridge who is hungry and quite eager for a tasty goat supper. Can the brothers outsmart the treacherous troll who stands between them and their next meal? Let’s find out!

3. Third Read-Aloud
During the third read-aloud, teachers help children reconstruct the story themselves: “What is happening here?” “What happens next?”