Pre-K Independent Projects

Hello Students, Families and Caregivers,

This resource packet includes multiple projects that students can work on at home independently or with family members or other adults. Each project can be completed over multiple days, and the projects can be completed in any order. These projects are standards-aligned and designed to meet the Remote Learning instructional minutes guidelines by grade band.

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## Pre-K Week 1 Project: Simple Machines

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<th>Estimated Time</th>
<th>Total Time: 35 - 40 minutes (over 5 days). Work at the pace that works best for you and your child.</th>
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### Grade Level Standard(s)

**Literacy** - 2.A. Demonstrate interest in stories and books; 2.A.ECa. Engage in book-sharing experiences with purpose and understanding; 5.A. Demonstrate growing interest and abilities in writing.


**Science** - 12.C. Explore the physical properties of objects; 12.D. Explore concepts of force and motion.

**Social Studies** - 15.A.ECa. Describe some common jobs and what is needed to perform those jobs; 15.A.ECb. Discuss why people work; 18.B.ECa. Understand that each of us belongs to a family and recognize that families vary.

### Curriculum Connection

**Teaching Strategies Creative Curriculum - Simple Machines Study**


### Caregiver Support Option

**Recommended:** Talk with your child about simple machines that you see around your home and neighborhood: screw-top bottles, nuts and bolts, ramps, slides, tongs, tweezers, brooms, etc. Create a list of the simple machines you find. If possible, give your child simple machines that he or she can use and ask questions about how they work. How is the simple machine used? What does it do?

### Vocabulary

**General:** simple machine, inclined plane, lever, screw, pulley

### Materials Needed

Pencils, paper, crayons, glue or tape, common household items that serve as simple machines (tools - screws, nuts, bolts; materials to make miniature ramps/slides, or other examples of simple machines found nearby).

**Optional Materials: Books on Simple Machines**

<table>
<thead>
<tr>
<th>Question to Explore</th>
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<tbody>
<tr>
<td>● What is a simple machine? Who uses them?</td>
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<tr>
<td>● What is an inclined plane?</td>
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<td>● What is a lever?</td>
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<td>● What is a screw?</td>
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<td>● What is a wheel?</td>
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<tr>
<th>Student Directions</th>
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<tr>
<td>Each activity below has directions for you to follow.</td>
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<table>
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<th>Music and Movement</th>
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<td>1. Syllable Stroll (Day 1)</td>
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<td>2. Predict and Experiment (Day 2)</td>
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<td>3. Artistic Understanding (Day 3)</td>
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<td>4. Pretend Play (Day 4)</td>
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<td>5. Predict and Experiment (Day 5)</td>
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**Day 1: I Use, You Use, We All Use Simple Machines!**

**Introduce the Topic:** Ask your child the following question: “Do you know what machines help us live and do our jobs?” Listen to your child’s response - they may not know what machines are, and you may have to explain that a machine is a tool that people use to make their lives easier. Machines are built to do things for/with us, and we use them everyday in almost every job!

**Learn & Discuss:** Talk with your child about simple machines that you see around your home and neighborhood (or if they remember any from school) and create a list of the simple machines you find. Many common simple machines are: doorstops, ramps and slides, seesaws, screwdriver and screws, hammer and nails, tongs, screw-top bottles and bottle cap openers, nuts and bolts, ramps, tweezers, brooms, scissors, etc.

<table>
<thead>
<tr>
<th>Simple Machines Found at Home</th>
<th>Simple Machines Found in Neighborhood</th>
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</table>

*See above for examples of things you may be able to find.*
Extend the discussion by asking your child more about each item. Ask:

- How does this machine work? What does it do?
- Who uses this machine?
- Count and write the total number of machines in each column. Ask your child to compare the lists - did you find more/less machines at home or outside your home?

**Syllable Stroll:** After you have identified the simple machines in your home, take a stroll back to those items and break their names into syllables (syllables are the small chunks of sound in a word that, when blended together, create the word we say/read). For each chunk of sound, you will clap one time. At the end, repeat the entire word and say the number of syllables.

Follow this pattern of breaking apart the word and clapping the syllables of other common simple machines:

- For scissors - say: ‘scis’ and clap once, then say: ‘sors’ and clap once. Repeat the whole word, ‘scissors’ and say “It has two syllables.”
- Tweezers - say: ‘twee’ (clap) - ‘zers’ (clap); repeat the word ‘tweezers’ (2 syllables)
- Hammer - say ‘ham’ (clap) - ‘mer’ (clap); repeat the word ‘hammer’ (2 syllables)
- Seesaw - say ‘see’ (clap) - ‘saw’ (clap); repeat the word ‘seesaw’ (2 syllables)

See what other words you can break down into syllables (sound chunks) and how many syllables they have! Some words may have only one syllable, and many will have two, three, or more syllables.

**Simple Machine Memory:** Go to the last page in this packet to play a game of Simple Machine memory. Cut out all the pictures, and place them randomly, upside down. Take turns with your child to turn over two cards at a time, trying to make matches. If you flip over two that match, you get to name what simple machine is found, and keep the match! If you do not make a match, you must flip the two cards back over. Remind your child to try and remember where the pictures are so they can remember which cards match!

**Day 2: Simple Machines Are Everywhere: Inclined Planes**

- **Introduce the Topic:** Remind your child that simple machines are everywhere, and they help make our lives easier in so many different ways! One type of simple machine is called an “inclined plane.”
- **Learn & Discuss:** Prepare for a discussion with your child about a very special type of simple machine: an inclined plane.
- **Show your child** the diagram on the next page, and ask him/her if they have ever seen the item pictured (it is a slide). After, read the text, touching each word as you say it, that explains what an inclined plane is.
An inclined plane is a flat surface. One end of the surface is higher than the other. It acts like a ramp. It doesn't move when you use it.

Explain to your child that an inclined plane is used to move things, including people, up or down on a ramp. Show your child the picture of the slide again and remind them this is a simple machine called an inclined plane. If your child needs encouragement, guide them with questions such as:
- How do people use slides?
- Does a slide move people up or down on an inclined plane?

**Predict and Experiment:**
- Expand upon your child’s understanding of inclined planes by building one together and testing the predictions, or hypothesis, that you all create while creating the activity.
- Review the list of simple machines in your home. Were any inclined planes? If yes, remind your child what they do to help make life easier. If there are none in your home, brainstorm ones that you have seen in other places.
- Then, ask your child: “Is it easier to move something up a short inclined plane or a long inclined plane?” After you ask your child their prediction, tell them that you will be building an inclined plane and doing an experiment to find out!

**What You Need:**
- short inclined plane, like a short cookie sheet
- long incline plane, like a long cookie sheet
- can of soup
- 3 thick books
- camera or crayons and paper
- rubber band
- string

**What You Do:**
1. Predict which inclined plane will make moving the can to the top of the books easiest. Take a picture or draw the plane.
2. Place the pile of books on the table. Lean the short plane on the edge of the pile of books. Put the can at the bottom of the inclined plane. Tie the rubber band to the soup can with the string (one side of string tied to can, one side tied to rubber band). Pull the rubber band until the can is at the top of the plane. Note how much the rubber band stretched.
3. Repeat step 2 with the long cookie sheet.
4. Take a picture or draw the plane that made the work easiest.

**What Do You Think?** Make a claim. A claim is something you believe to be true. Is the length of an inclined plane important? Use the results of your experiment to support your claim.
*(Hint: It should be easier on the longer plane, but take more time. It should be quicker on the short plane, but is harder/needs more strength.)*
Day 3: Simple Machines Are Everywhere: Levers

- **Introduce the Topic:** Remind your child that simple machines are everywhere, and they help make our lives easier in so many different ways! One type of simple machine is called a “lever.”

- **Learn & Discuss:** Prepare for a discussion with your child about a very special type of simple machine: levers.

- **Show your child** the following diagram, and ask them if they have ever seen the item pictured (it is a seesaw). After, read the text, touching each word as you say it, that explains what a lever is.

A **lever** is a flat surface with two ends, and a pivot point in the middle. It helps move things for you when you use it. To use a lever, you push on one side, and the other side will lift up, like a seesaw.

Explain to your child that a lever is used to move things, up or down on a pivot (the point in the center). Show your child the picture of the seesaw again and remind him/her this is a simple machine called a lever. If your child needs encouragement, guide them with questions such as:
- How do people use levers?
- Are there any parts of your body that we use as a lever?
  (Hint: Your arms and your jaw are both considered levers)

**Alliteration Station:** Create a poem using alliteration (choosing words that all start with the same letter). Ask your child what word they hear at the beginning of the word ‘lever.’ They may need to be reminded that it is the L sound, like at the beginning of the word Lever. Have your child repeat the word lever. Next, using only words that start with ‘L,’ complete the following alliteration poem, “Levers lift!” The poem can be silly, as long as the words start with the same “L” sound! Have your child draw their favorite L-word in the space next to the poem. (You can use any ‘L’ words - lemons, lamps, logs, lids, etc.)

**Levers Lift!**

Levers lift _______________________.

Levers lift _______________________.

Levers lift _______________________.

Levers lift _______________________.

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Artistic Understanding: Invite your child to create any type of artwork they want, using the levers you can find around the house. Scissors, hole punchers, and staplers are all commonly found simple machines that are actually levers! Show your child how to safely use these tools. (If need be, use them together. You may have to work hand-on-hand for some tools to ensure safety.) Allow your child to cut, paste, and punch out things, then glue or tape them in the space below:

Day 4: Simple Machines Are Everywhere: Screws, Nuts, and Bolts

- **Introduce the Topic:** Remind your child that simple machines are everywhere, and they help make our lives easier in so many different ways! One type of simple machine is a screw.
- **Learn & Discuss:** Prepare for a discussion with your child about a very special type of simple machine: screws.
- **Show your child** the following diagram, and ask them if they have ever seen the item pictured (it is a screw). After, read the text, touching each word as you say it, that explains what a screw is.

A screw has many uses. It can hold materials together. It can also help push or move things.
Explain to your child that a screw is used to hold things together, and we use other tools to help us - like a screwdriver. Show your child the picture of the screw again and remind him/her this is a simple machine called a screw. If your child needs encouragement, guide him/her with questions such as:

- How do people use screws?
- What types of community helpers use screws (i.e., construction workers, builders, decorators, to name a few)

**Pretend Play:** Many different community helpers use screws for their jobs. From your discussion of community workers, let your child pick one, and pretend play to be that worker. Examples could include:

- Pretend to build a house as a construction worker
- Pretend to build furniture as a carpenter
- Pretend to hang up pictures on the wall as an interior decorator

**Extension Activity:** If you want your child to have hands-on practice with screws, use anything that has a bottle cap! Technically, a bottle cap is a screw - so many milk, juice, or soda bottles work as examples! This is also great practice for their fingers. Give your child many (opened and clean) bottles and their matching screws, and see if your child can find the right match and screw them on! This can be part of your pretend play.

**Measuring Our Tools:** Discuss with your child that there are many different sized screws that we can use, and the size is very important to making sure it holds things together the right way. Use any type of standard object to measure the screws below - you can use anything you have more than one of, i.e., same-sized blocks, paper clips, buttons, etc., to place in a row and use to count its length.

Ask your child to measure each of the screws, and decide which screw is the longest, which is the shortest, and which one is medium length. Ask your child to explain how they knew which was longest, and which was shortest. (Hint: Your child should have used more items/bigger numbers to measure the biggest screw, and less items/smaller numbers to measure the smallest screw). If able, give your child real life screws of differing sizes to measure and compare.
Day 5: Simple Machines Are Everywhere: Wheels

- **Introduce the Topic:** Remind your child that simple machines are everywhere, and they help make our lives easier in so many different ways! One type of simple machine is a wheel.

- **Learn & Discuss:** Prepare for a discussion with your child about a very special type of simple machine: wheels.

- **Show your child** the following diagram, and ask them if they have ever seen the item pictured (it is a wheel from a wagon or car). After, read the text, touching each word as you say it, that explains what a wheel is.

A **wheel** has many uses.
Spinning the wheel causes it to move. We use wheels to help us move many things, much faster and easier!

Explain to your child that a wheel is usually used to move things around, and we use them so much we barely notice! Show your child the picture of the wheel again and remind him/her this is a simple machine called a wheel. If your child needs encouragement, guide him/her with questions such as:

- How do people use wheels?
- What types of things do we see being moved around by wheels?
  (Hint: Answers could be anything! Wheels on a bus or bike move people. Wheels on a wheelbarrow move dirt or rocks, etc.)

**Predict and Experiment:** Review the list of simple machines in your home. Did any include wheels? If yes, remind your child what they do to help make life easier. If there are none in your home, brainstorm ones that you have seen in other places. Then, ask your child: “Is it easier or harder to move something with wheels?” After you ask your child their prediction, tell him/her that you will be doing an experiment to find out!

**What You Need:** • ruler • hardcover book • large rubber band • toy car with rolling wheels • tape

**What You Do:**
1. Place the ruler on a table.
2. Open the book to the middle. Put the rubber band around the pages on one side. Push the rubber band down to the spine of the book. Close the book.
3. Place the book at the end of the ruler away from you. The rubber band should be toward you.
4. Pull the book to the other end of the ruler. Watch how far the rubber band stretches.
5. Repeat step 4 with the book sitting on the car. You may have to tape the book to the car.
6. Which time did the rubber band stretch the least?

**What Do You Think?** Make a claim. A claim is something you believe to be true. Do wheels and axles make it easier to move things? Use the results of your experiment to support your claim.
**Additional Resources:**
Check out these additional resources with your child to extend your child’s exploration of simple machines! As you work through these resources, continue to ask your child open-ended questions, such as:

- What is your favorite simple machine? Why?
- If you could build another simple machine what would it be? What would it help people do?
- Which experiment did you like? Why?

**Read Alouds**

- **PebbleGo** (articles, activities, and video)
  - Username = cps Password = cps
  - Simple Machines - [https://site.pebblego.com/modules/2/categories/2987](https://site.pebblego.com/modules/2/categories/2987)

- **PBS Learning Media**
  - Get Up & Go Play!: Simple Machines (video)
    [https://www.pbslearningmedia.org/resource/c3f37c7d-6df0-4f0e-82b7-bb7dc72e1284/go-outside-and-play-simple-machines-kids-clubhouse-adventures/](https://www.pbslearningmedia.org/resource/c3f37c7d-6df0-4f0e-82b7-bb7dc72e1284/go-outside-and-play-simple-machines-kids-clubhouse-adventures/)
  - The Cat in the Hat Knows a Lot About That! (video)
  - Curious George: Ramp-n-Roll | Lesson Plan (lesson)

- **Music and Movement Videos**
  - Six Simple Machines Rap - Jack Hartman
    [https://www.youtube.com/watch?v=_NTCToqZ_3Q](https://www.youtube.com/watch?v=_NTCToqZ_3Q)
  - Let’s Have Fun with Simple Machines - Planet Nutshell
    [https://www.youtube.com/watch?v=LD-qfOWGY0k](https://www.youtube.com/watch?v=LD-qfOWGY0k)

- **Museum of Science and Industry**
  - Simple Machines Game [https://www.msichicago.org/play/simplemachines/](https://www.msichicago.org/play/simplemachines/)

**Day 5 - Read and Remember:** Now that you have learned about many different types of simple machines that we use every day, it’s time to read and discuss! Cut out the images and words from each day’s activities, and create a mini book to read! After reading it to your child once or twice, allow your child to re-read the book to you. (Remember, they may not remember all the words, and that’s okay. They will likely read what they are seeing in the pictures, while practicing moving their finger to “read” the words.)
<table>
<thead>
<tr>
<th><strong>Inclined plane (slide)</strong></th>
<th><strong>An inclined plane</strong> is a flat surface. One end of the surface is higher than the other. It acts like a ramp. It doesn’t move when you use it.</th>
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<td><strong>Lever (seesaw)</strong></td>
<td><strong>A lever</strong> is a flat surface with two ends, and a pivot point in the middle. It helps move things for you when you use it. To use a lever, you push on one side, and the other side will lift up, like a seesaw.</td>
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<td><strong>Screw</strong></td>
<td><strong>A screw</strong> has many uses. It can hold materials together. It can also help push or move things.</td>
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<td><strong>Wheel</strong></td>
<td><strong>A wheel</strong> has many uses. Spinning the wheel causes it to move. We use wheels to help us move many things, much faster and easier!</td>
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Day 1 - Simple Machine Memory Game Cards

- Inclined plane (slide)
- Inclined plane (slide)
- Lever (seesaw)
- Lever (seesaw)
- Screw
- Screw
- Wheel
- Wheel
# Pre-K Week 2 Project: Balls

| Estimated Time          | Total Time: 35 - 40 minutes (over 5 days)  
<table>
<thead>
<tr>
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<th>Work at the pace that works best for you and your child.</th>
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<td></td>
<td><strong>Math</strong> - 6.A. Demonstrate beginning understanding of numbers, number names, and numerals; 6.D. Compare quantities using appropriate vocabulary terms; 9.A. Recognize, name, and match common shapes; 9.B. Demonstrate an understanding of location and ordinal position, using appropriate vocabulary; 10.A. Generate questions and processes for answering them; 10.B. Organize and describe data and information; 10.C: Determine, describe, and apply the probabilities of events.</td>
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<td><strong>Science</strong> - 12.C. Explore the physical properties of objects. 12.D. Explore concepts of force and motion.</td>
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<td><strong>Social Studies</strong> - 15.A.ECa. Describe some common jobs and what is needed to perform those jobs; 15.A.ECb. Discuss why people work; 18.B.ECa. Understand that each of us belongs to a family and recognize that families vary.</td>
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| Curriculum Connection   | Teaching Strategies Creative Curriculum - Balls Study  
|                        | [tinyurl.com/TGCCStudy](tinyurl.com/TGCCStudy) |
| Caregiver Support Option| Invite your child to learn about balls with you by asking questions each day. Participate with your child in the suggested activities below to facilitate shared learning. |
| Materials Needed        | Paper, variety of writing utensils, variety of balls, recycled bottles  
|                        | **If writing utensils are unavailable, free drawing application, such as Kids Doodle:** [tinyurl.com/KidsDoodle](tinyurl.com/KidsDoodle)  
|                        | **Optional Materials:** Books on Balls  
|                        | “Round Like a Ball” by Lisa Ernst; “A Ball for Daisy” by Chris Raschka; “ABCs for Balls” by Nina Snyder; “Pete the Cat: Play Ball!” By James Dean; “Balls” by Melanie Davis Jones; “The Story of Red Rubber Ball” by Constance Kling Levy and Hiroe Nakata. |
| Question to Explore     | 1. What do you know about balls?  
|                        | 2. How do balls move? |
Day 1: What do you know about balls? Let’s Explore!

- **Introduce the Topic:** Ask your child the following question: “What do you know about balls?” Encourage your child to write a list of their ideas as you discuss, using inventive spelling and their knowledge of letter sounds.
- **If you are able,** access the “Learning Letter Sounds Song” by Jack Hartmann to support your child’s knowledge and application of letter sounds: tinyurl.com/LLSounds
- **Remember that children are exploring writing** at this age, and that correct spelling is not required. If your child knows his or her letter sounds, encourage him or her to use inventive spelling. If not, letter strings or even lines and scribbles are appropriate for this age—as long as your child sees him or herself as a writer. The development of writing at this age is provided below:

Source: Teaching Strategies GOLD Objectives for Development and Learning
https://gold.teachingstrategies.com/content/GOLD/helpitems/GOLD_Progressions_EN.pdf
Extend the discussion by asking your child more about what they know about each type of ball. Ask:

- Who uses that type of ball?
- What do people do with that sort of ball?

**Ball Hunt:** Invite your child to go on a scavenger hunt around your home for any and all kinds of balls they can find. Create a box or a special place to gather the ball collection. Some balls you might guide your child to collect are:

- sports balls (soccer ball, baseball, tennis ball, basketball, etc); pet balls; exercise balls; cotton balls; stress balls.

When your child is finished, invite them to observe, feel, and move the balls, and make comparisons between the different types. Draw attention to their shape, size, texture, and movement by asking questions such as:

- What shapes are these balls? Are all balls the same shape?
- Which ball is the largest? Which ball is the smallest? Can you put them in order from smallest to largest?
- What does that ball feel like? Is it soft or hard? Is it squishy?
- How does that ball move?

**A Tisket, A Tasket Ball Toss Game:** Play a fun game of ball toss with your child! Using the newly gathered collection of balls and any sort of bucket, basket, or container that you have at home, invite your child to throw the balls from the collection into the basket. Incorporate music into the game by singing the following nursery rhyme prior to each throw:

_A tisket, a tisket, throw the ball in the basket!
Throw your ball, throw your ball,
Throw your ball in the basket!

- Make the game exciting and challenging by moving the container each time your child throws a ball, perhaps moving further away, or making the basket higher or lower.
- Help your child learn spatial awareness concepts by using vocabulary such as “up,” “down,” “above,” “below,” “beside,” “behind,” “right,” and “left” as you change the position of the container.
Day 2: How do balls move? Read: What Can You Do with a Ball?

<table>
<thead>
<tr>
<th>You can throw a ball.</th>
<th>You can catch a ball.</th>
</tr>
</thead>
<tbody>
<tr>
<td>You can kick a ball.</td>
<td>You can roll a ball.</td>
</tr>
<tr>
<td>You can spin a ball.</td>
<td>You can bounce a ball.</td>
</tr>
<tr>
<td>You can make a ball float.</td>
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</tbody>
</table>

What’s your favorite way to make a ball move? Can you think of any other ways that balls move?
Rhyme Time! Playing simple word games with your child is a great way to teach them to recognize
the different sounds in words. Review with your child what rhyming words are: words that sound the
same at the end (for example, bat and cat). Invite your child to brainstorm as many words as he/she
can that begin with the following words related to balls and how they move.

- **ball** (tall, fall, mall, hall, call, doll)
- **roll** (bowl, mole, toll, goal)
- **kick** (pick, sick, lick, trick, wick)
- **throw** (bow, mow, low, row, woe)
- **float** (boat, moat, wrote, tote)
- **spin** (bin, pin, tin, win, shin, fin)

Make it easier for your child by modeling rhymes and having them repeat the rhyming words. You
can also help your child by providing them with a sound and inviting your child to think about how
the word would be different with that sound at the start.

Subtraction Bowling: If you are able, view a video example of this activity here:
tinyurl.com/SubtractionBowl

Gather recycled bottles, boxes, or paper towel tubes and any sort of ball from around your home.
Have your child count how many bottles you have to start with. Invite your child to go “bowling” with
you by setting the bottles (or other objects) up at one end of a room or hallway and rolling the ball
towards them to knock them over. Take turns rolling the ball to knock over bottles. After each player’s
turn, practice the idea of subtraction by asking the following:

- How many bottles did you knock over?
- How many bottles are still standing?
- How many bottles are there altogether?

Point out to your child that no matter how many bottles he or she knocks over each time, the total
number of bottles is always the same. You can incorporate writing and numeral identification by
having your child keep score of how many bottles each player knocks down in each round. Use a
number line such as the one below to support your child in identifying and writing numerals he or she
might not know yet.

![Number Line](image-url)

Day 3: Why Do Balls Fall Down?

- **Discuss and Predict:** Prior to reading the story below, invite your child to revisit the ball
collection they gathered earlier in the week. Ask them to predict what will happen to these
balls if they hold them up and drop them to the ground. Ask:
  - Which direction will the balls go in if you drop them? Will they go up or down?
  - What happens to a ball when you throw it above you?
  - Will all of the balls go in the same direction?
Will all of the balls move at the same speed? Will any of the balls move faster or slower than the others? Why do you think that this will happen?

- Read and Learn: Following your discussion and your child’s predictions, read the book below on gravity with your child.

Link for English version - [https://site.pebblego.com/modules/2/categories/2991/articles/2097](https://site.pebblego.com/modules/2/categories/2991/articles/2097)
Link for Spanish version - [https://site.pebblego.com/modules/12/categories/9040/articles/9072](https://site.pebblego.com/modules/12/categories/9040/articles/9072)
Earth's Gravity
Huge objects, like planets, have strong forces of gravity. Smaller objects, like people or cars, are pulled toward the center of these huge objects. Everything on Earth is pulled toward the planet’s center.

Sir Isaac Newton
Sir Isaac Newton was an English scientist. He was the first to discover that the moon circles Earth because of Earth's gravity. He also learned that gravity pulls all objects toward each other.

Gravity and Weight
The amount of gravity pulling on an object is measured as weight. Strong gravity makes an object heavy. Weak gravity makes it light. Objects fall at the same speed, unless other forces act on them.

Air Resistance
Air resistance can affect a falling object too. An object’s shape determines how much air resistance it has. A parachute creates a lot of air resistance. It falls to the ground slowly.

Glossary Terms
- measure - to find out the size, weight, speed, or amount of something
- force - a power that causes something to change or move
- mass - the amount of material in an object

Following your reading, ask your child questions to understand how gravity acts on balls to pull them towards the ground. For example, ask your child:
- What makes balls fall to the ground when they drop them?
- When you throw a ball up in the air, why does it always come back down again?
- What makes some balls feel heavier than others?
- What makes some objects fall down to the ground sooner than others?
Bounce It Out! Now that you and your child have read about and discussed gravity, it’s time to get moving! Invite your child to observe his or her ball collection again, and to make predictions about which balls are the bounciest. Ask:

- Which ball do you predict will bounce the greatest number of times? Why?
- Which ball do you predict will bounce the fewest number of times? Why?

Test out your child’s predictions by dropping each ball in their collection from the same height. Ask your child to count how many times each ball bounces, and to tally that number in a chart on paper such as in the chart below. After your child tallies, invite your child to write the numeral corresponding to that tally, using the number line below as a reference.

<table>
<thead>
<tr>
<th>Tennis Ball</th>
<th>Basketball</th>
<th>Bowling Ball</th>
<th>Baseball</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

Using the chart, ask your child:

- Which ball bounces the greatest number of times? How do you know?
- Which ball bounces the fewest number of times? How do you know?

Day 4: Who uses balls?

- **Take Me Out to the Ball Game (Song):** Invite your child to sing the “Take Me Out to the Ball Game” song with you. If you are able, play the song here: [tinyurl.com/ToTheBallGame](http://tinyurl.com/ToTheBallGame)

The lyrics are as follows:

*Take me out to the ball game, take me out to the crowd.*
*Buy me some peanuts and Cracker Jack- I don’t care if I never get back!*
*So let’s root, root, root for the home team. If they don’t win, it’s a shame.*
*For it’s 1-2-3 strikes you’re out at the old ball game!*

Ask your child which sport they think that this song is about. Draw attention to the clues in the lyrics by asking questions such as:

- Which sport do you get strikes in?
- Which sport do players get “out” in?
- Which sports have home teams and away teams?
Read & Discuss: Read the following book about the various ways in which people use balls in their everyday lives and in their jobs.

<table>
<thead>
<tr>
<th>Athletes use balls to play sports.</th>
<th>Construction workers use balls to demolish, or tear down, buildings.</th>
</tr>
</thead>
<tbody>
<tr>
<td>People use balls to play with their pets.</td>
<td>People use balls to exercise.</td>
</tr>
<tr>
<td>Office workers use balance balls to sit at their desks.</td>
<td>Clothing makers use balls of yarn to make clothes.</td>
</tr>
<tr>
<td>Bakers use balls of dough to make bread and cookies.</td>
<td>Kids use balls to have fun!</td>
</tr>
</tbody>
</table>
After reading, ask your child to create a list of all of the ways that they use balls in their life. Practice inventive spelling and encourage your child to use letter sounds to sound out the words as they write.

**Pretend Play:** Inspire your child’s imagination by playing this fun game of charades! Call out the name of a type of ball and invite your child to act out how to play with it. For example, if you call out bowling ball, your child would pretend to roll a bowling ball, or if you called out baseball, your child might pretend to swing a baseball bat and run the bases. Some other ideas:

- swinging a golf club to hit a golf ball
- shooting a basketball into a hoop
- serving a tennis ball with a tennis racket
- kicking a soccer ball

**Day 5: Have a Ball! Celebration of Learning**

- **Imaginary Ball Game:** Invite your child to pretend they are bouncing imaginary balls with their hands. Invite your child to pretend they are bouncing the imaginary ball with different parts of their body. Moving from head to toe, demonstrate bouncing it with your head, shoulders, elbows, knees and toes. Play lively music during this activity and ask your child to “bounce” to the rhythm.

- **Ask the Audience: Which Sport Played with a Ball Do You Prefer?:** Invite your child to conduct a poll of your family members and friends (via phone and video, if possible) to ask them which sport, played with a ball, they prefer. Track the results of the poll by using the simple table below. With each response, invite your child to write the person’s name in the column of the sport they voted for.

- At the end, ask your child:
  - How many votes did each sport receive? Can you write the numbers for each?
  - Which sport was the most popular, or received the most votes?
  - Which sport was the least popular, or received the fewest votes?

<table>
<thead>
<tr>
<th>Basketball</th>
<th>Soccer Ball</th>
<th>Baseball</th>
</tr>
</thead>
</table>

Basketball | Soccer Ball | Baseball
Writing a Ball Book: End your exploration of balls by inviting your child to make his/her very own Ball Book! On each page of paper, invite your child to draw and write about a different type of ball and how they might use it. Your child can write about themself and their family in the book! Encourage them to use inventive spelling and letter sounds when they are writing. To support your child with learning and applying letter sounds when writing, use the “Learning Letter Sounds Song” by Jack Hartmann, if you are able: tinyurl.com/LLSounds

Additional Digital Resources: Check out these additional resources with your child to extend your child’s exploration of balls! As you work through these resources, continue to ask your child open-ended questions, such as:

- What different ways do balls move?
- Why do some balls move differently than others?
- How do balls help us and other people?
- How do we use balls in ways that are safe and fun for everyone?

Read Alouds

- Pete the Cat: Play Ball! https://www.youtube.com/watch?v=T6JBRZj1T5E
- A Ball for Daisy https://www.youtube.com/watch?v=0luvEThB5AE
- Round Like a Ball https://www.youtube.com/watch?v=8vSY12i4vB1
- PebbleGo (articles, activities, and video) Username = cps Password = cps
- Spheres - https://site.pebblego.com/modules/2/categories/8686/articles/8673
- PBS Learning Media
  - Do you want to do an experiment with Elmo and Abby? Test out how high a ball will bounce based on the height it’s dropped from. Murray Experiment: Bouncing Balls | Sesame Street (video) https://www.pbslearningmedia.org/resource/sesame-murray-experiment-bouncing-ball/murray-experiment-bouncing-balls-sesame-street/ What makes a ball bouncy? Help Murray experiment with different types of balls to see how high they bounce.
- Good Sport https://www.pbslearningmedia.org/resource/arct14.pre.artsport/good-sport/ Play catch with your child, and help him/her practice being good sports. Talk to your child about winning and losing. Explain that it's not if you win or lose, it's how you play the game, in this activity from Arthur.
- Songs and Movement
  - Sports Balls Song for Kids https://www.youtube.com/watch?v=EZXI7l3eaOs
  - Learning Letter Sounds Song (for inventive spelling support) https://www.youtube.com/watch?v=Qy1Kmt9sMOA
  - Sports that Use a Ball (visual dictionary) http://www.visualdictionaryonline.com/sports-games/ball-sports.php