

Explorers Curriculum for Toddlers and Twos

Things That Roll and Spin



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Let's Explore Things That Roll and Spin

Table of Contents

| | |
|--|----|
| Let's Explore Things That Roll and Spin | 1 |
| Getting Ready to Explore | 2 |
| Invitations to Explore Through Play | 3 |
| A Basket of Balls | 4 |
| Things to Push and Pull | 6 |
| Investigating Beach Balls, Part 1 | 8 |
| Investigating Beach Balls, Part 2 | 10 |
| A Collection of Cylinders | 12 |
| Ramps and Tubes | 14 |
| Rolling with Paint | 16 |
| Traveling Along | 18 |
| Lazy Susan Trays | 20 |
| Bowling | 22 |
| Real Wheels | 24 |
| Enhancing Our Play Spaces | 26 |
| Enhancing Our Daily Routines | 27 |
| Things That Roll and Spin in the World Around Us | 28 |
| Books About Things That Roll and Spin | 29 |
| Songs, Rhymes and Games | 30 |
| Moving On | 32 |

Let's Explore Things That Roll and Spin

Infants are inherently curious about the things in their world. They eagerly grasp objects, shake them, and put them in their mouths. By their second and third years of life, children are already developing a more sophisticated understanding of how things move and change. Now, a guiding question might be, "What can I make this thing do?"

Things that roll and spin often hold a particular fascination. Because these things usually move smoothly and predictably, they are perfect for trial-and-error experimentation. Perhaps it feels empowering to interact with such highly responsive, child-powered play objects.

There's a social aspect of play, too. Rolling a ball back and forth is one of the first interactive games we share with young children. And it is often one of the first ways that toddlers communicate their desire to play with one another.

This topic might be a fit for your group if -

- Balls, trucks, or other rolling toys are favorite play objects.
- You've noticed children experimenting with ways that they can roll and move objects.

Let's Talk About Things That Roll and Spin

Use words like these during everyday conversations with children.

ball
wheel
round
roll
spin
bounce
throw
toss
catch
chase

Words to describe distance: near, far,
short, long, and so on



Getting Ready to Explore Things That Roll and Spin

With your teaching team, think about, and discuss the following questions.

- **How have children in our group shown us that they are interested in things that roll and spin?**

Talk about what you have seen children do when they play with balls, trucks, and other play objects that roll and spin. What do they seem most curious about? How can you tell?

- **What are our learning goals for individual children and the group as a whole?**

As you plan, consider the words, skills, and concepts that children can learn and practice as they play. Choose experiences that support specific objectives for learning. Strive to create well-rounded plans that support all domains of development.

This also means tuning in to the opportunities for different kinds of learning within each experience. A simple play experience with things that roll and spin may help a child build balance and coordination, social skills, mathematical thinking, and more.

- **How will we extend children's thinking and learning?**

Consider experiences that children have already had with things that roll and spin. Then, look for logical next steps that will help children make connections gradually over time.

Let families know that the group seems interested in things that roll and spin. Invite them to tell about their child's experiences at home.



Invitations to Explore Things That Roll and Spin

Use the ideas on the following pages to set the stage for open-ended exploration through play. These unhurried play invitations follow a simple cycle.

1. Adults gather and offer interesting materials for children to explore.

We make space for materials and schedule ample time for exploration. We ensure that children have access to each play invitation many times over days or weeks.

2. Children take the lead as they experiment and explore.

They are welcome to follow their own interests and use materials in their own ways. Supervision and guidance are provided to protect safety.

3. Adults notice when a child wants to interact with them.

For example, the child might point to something, offer a play object, ask a question, or ask us to play. As we talk with children, we often pause to give them time to think and respond. We make time for meaningful, back-and-forth interactions with each child.

4. Over time, adults make subtle changes to enhance and extend play.

We might add a few more materials or change how the materials are arranged in the space. Our actions are guided by our observations of children. We want to help children satisfy play urges, construct knowledge, and deepen their understanding.



A Basket of Balls

Let's investigate a collection of balls. How are they alike, and how are they different?

Materials

- A variety of toddler-safe balls of different shapes, sizes, and textures, such as
 - textured sensory balls
 - O-balls
 - toddler-sized sports balls
 - large wool dryer balls
 - traditional rubber play balls
 - soft fabric balls
- A large basket for balls
- A similar, empty basket

Safety Spotlight

Avoid soft, foam balls that can come apart when children bite, pinch, or tear them. Pieces of foam are toxic and can be a choking hazard.

Arrange the balls in one of the baskets. Place the basket on the floor in an active play area where children will notice it. Place an empty basket nearby.

Play and Investigation Possibilities

Watch and listen to notice how children explore the balls. You may see children investigate and play in some of these ways.

| |
|---|
| Empty all of the balls out of the basket. |
| Explore balls by squeezing, mouthing, or dropping them. |
| Carry balls around the room. |
| Push a ball forward with both hands to make it roll. |
| Visually track and chase after moving balls. Bend and crawl to retrieve balls. |
| Attempt to catch a moving ball by wrapping arms around it. |
| Throw a ball forward by extending his arm at the shoulder or elbow. |
| Experiment with overhand, underhand, and cross-body throws. Begin to draw her arm back, rotate her trunk, and/or take a step forward when throwing. |
| Attempt to sit on or lie on larger balls. |
| Drop or toss balls into an empty basket. |

A Basket of Balls (cont.)

Interactions to Support Learning

Notice how children show that they want to interact with you. Once children invite you to join in the play, follow their lead. Here are some responses that may be a fit.

- Describe what you see children or balls doing. Use words like *carrying* and *tossing*, and *rolling* and *bouncing*.
- Focus on spatial relationships as you describe where balls are. “Oops! The red ball rolled *under the table*. Can you reach it?”
- Ask questions that children can answer with words or actions, such as, “Which ball do you want?” or, “Where did our fuzzy, purple ball go?”
- Describe the color, size, pattern, and texture of balls. Use words like *striped*, *bumpy*, and *squishy*. Compare balls, noticing which ones are larger, which ones roll farther, and so on.
- If a child seems interested, count together as they take balls out of or drop them into baskets. Use words for quantity like *none*, *more*, and *all*.
- Play a game of roll-and-catch with an interested child. Move nearer or farther as needed so that the game is enjoyably challenging for the child.
- Make a game of tossing balls into the empty basket. Celebrate successful tosses together with cheers or high fives.
- Notice together how balls move and bounce differently on different surfaces, such as carpet and hard floor. Then, take balls outside for further investigation.

Including Every Explorer

Soft fabric balls and hollow, woven balls are easier to grip. Be sure to include some balls like these if your group has young toddlers or children with limited use of hands. Many toddlers benefit from insightful social support during play experiences like this one. It can be hard to wait for a turn with a favorite ball. And, it can be confusing to figure out who a ball belongs to when one child rolls it, but another retrieves it.

This experience offers special opportunities to build and strengthen:

Social and Emotional Development – SE1.2, SE2.1, SE2.2

Physical Development and Health – PH1.1, PH1.2, PH1.3

Mathematical Thinking – MT1.1, MT1.2, MT3.1, MT4.1



Things to Push and Pull

Let's investigate a collection of movable large objects.
How can we use our bodies to push and pull big things?

Materials

Your selection of objects to push and pull will depend on the ages and abilities of children in your group. Here are some possibilities.

- large cardboard boxes
- laundry baskets
- push toys, such as popcorn poppers, doll strollers, lawnmowers, and shopping carts
- wagons
- ride-on toys without pedals
- simple, real baby strollers

Choose an indoor or outdoor space where children have plenty of room to move. Arrange several items like those listed above to create an invitation to play. You could make a collection of things that are all similar. For example, you might include four lawn mower toys or six laundry baskets. Or, you could offer an assortment that includes several familiar items children have used before alongside several new things to try.

Play Possibilities

Watch and listen to notice how children use the large play objects. You may see children investigate and play in some of these ways.

| |
|---|
| Try different strategies to push and pull large play objects. |
| Use large play objects to transport smaller items around the room. |
| Sit on and in large play objects. |
| "Give a ride" by pushing or pulling another child. (Or ask for a ride.) |
| Turn wheeled play objects over to investigate wheels. |
| Solve a problem, such as a play object that tips over or gets caught on a chair. |
| Use large objects for pretend play. A cardboard box might become an imaginary car, or a two-year-old might sit in a stroller and pretend to be an infant. |

Helpful Hints

Families and friends of the classroom may be able to loan play objects for this investigation. For example, a family who often travels may have a folding stroller that their child rarely uses or has outgrown.

Things to Push and Pull (cont.)

Interactions to Support Learning

Notice how children show that they want to interact with you. Once children invite you to join in the play, follow their lead. Here are some responses that may be a fit.

- Describe what a child is doing. “You’re sitting in the stroller. You’re moving it by kicking your feet.”
- Wonder aloud as you play alongside children. “I wonder if this big stuffed dog will fit in my (toy) shopping cart.” Pause to give children time to think and respond.
- Provide guidance to protect children’s safety. Patiently explain safety rules and help a child think of alternative ways to play.
- Encourage children to communicate with one another when they seem interested in doing so. “Can you say, ‘push me, please?’”
- When children encounter challenges, help them notice what is happening. “When you go around the corner fast, your wheel slips off the path.” Resist the temptation to solve the problem for the child. Instead, give them time and space to figure things out on their own.
- When you engage in imaginative play with children, let them make decisions and steer the play.

Including Every Explorer

Children who are less steady on their feet will do best with low, stable play objects.

It’s always true for toddlers and twos: having duplicates of popular items helps reduce conflict and competition!

This experience offers special opportunities to build and strengthen:

Social and Emotional Development - SE1.2, SE2.1, SE2.2

Cognitive Development – CD 1.1, CD2.1, CD3.1

Physical Health and Development – PH1.1, PH1.3, PH3.2

Creativity and Aesthetics - CA 3.1



Investigating Beach Balls, Part 1

Let's play with inflatable balls. How are they like or different from other balls?

Materials

- beach balls, various sizes and colors
- manual balloon pump (optional)

This play experience can take place indoors or outdoors. Before children arrive, place inflated beach balls in an area where children can actively play. If you have a manual pump, save at least one beach ball to inflate later with interested children.

Health Spotlight

Use a pump - rather than your mouth - to inflate balls for children in group care settings.

Play Possibilities

Watch and listen to notice how children explore the beach balls. You may see children investigate and play in some of these ways.

Move beach balls by patting, tossing, bouncing, or kicking them. Discover that beach balls weigh less than other balls.

Look at patterns and colors on beach balls.

Try to sit, lean, or lie across a beach ball.

Smack or tap a beach ball to make different sounds.

Invite a peer or adult to roll and catch a beach ball.

Notice how the stripes on a beach ball spin as the ball moves.

Investigate the inflation valve on a beach ball and try to open it.

If some beach balls are transparent or translucent, experiment with looking through them.

Notice when a damaged beach ball begins to leak or deflate.

Helpful Hint

Inexpensive balloon pumps can be found with party supplies at many stores.

Investigating Beach Balls part 1 (cont.)

Interactions to Support Learning

Notice how children show that they want to interact with you. Once children invite you to join in the play, follow their lead. Here are some responses that may be a fit.

- Describe what you see children or balls doing. Use words like *patting* and *kicking*, and *spinning* and *bouncing*.
- Ask questions that children can answer with words or actions, such as, “Which ball do you want?”, or, “Where did our big, striped ball go?”
- Notice spatial relationships. “Your ball is rolling *down the hill*.” Or, “Your ball bounced *over the shelf*.”
- Describe the color, size, pattern, and features of the balls. Use words like *striped*, *translucent*, and *round*.
- Invite an interested child to play a game of roll-and-catch or toss a beach ball into a laundry basket.
- Invite an older two-year-old to try to keep a beach ball in the air by slapping it up before it can touch the ground. Count how many volleys occur before the ball lands.
- Show children how you use a balloon pump to inflate a beach ball. Explain that the pump pushes air into the ball and invite interested children to help use the pump.
- If a beach ball begins to leak, investigate with interested children to see where the air is seeping out. Try using tape or a patch for inflatable toys to repair the ball.
- After children have ample time to explore beach balls in their own way, introduce one or more of the extension activities from *Investigating Beach Balls, part 2*.

Including Every Explorer

Beach balls can be an ideal play object for children with disabilities because they are soft and lightweight. However, they can also be slippery and difficult to grasp. Consider including some beach balls that are 12 inches or less in diameter. Toddlers can carry these more easily by wrapping their arms around them.

This experience offers special opportunities to build and strengthen:

Social and Emotional Development - SE2.1

Physical Development and Health - PH1.1, PH1.2, PH1.3

Mathematical Thinking – MT2.1, MT3.1, MT4.1

Science and Technology - ST3.1, ST3.2



Investigating Beach Balls, part 2

Now that we're familiar with beach balls, let's try moving them in some new ways. What will we discover?

Materials

- beach balls, various sizes and colors
- yarn
- parachute or blanket
- pool noodles cut in half to make shorter noodles

These experiences can take place indoors or outdoors. Offer them after children have had ample time to explore beach balls in their own ways. Plan to introduce these experiences gradually across several days, rather than trying to do everything at once.

- a. Place a beach ball on a parachute or blanket. Invite interested children to help you stretch and shake it to bounce the ball.
- b. Tie a piece of yarn through the closed valve of a beach ball. Hold the end of the tether or hang it so that the ball is slightly above children's heads. Children can spin, strike, and catch the suspended ball.
- c. Invite two-year-olds to use halved pool noodles to strike beach balls.

Safety Spotlight

"**Eyes on**" and "**within arm's reach**" are our supervision guidelines to ensure that children do not bite/mouth pool noodles, wrap string around their bodies, or experiment in other unsafe ways. Because these experiences require direct supervision, put materials away at times when you cannot stay nearby or are distracted by other responsibilities.

Investigation Possibilities

Watch and listen to notice how children try new ways to play with beach balls. You may see children investigate and play in some of these ways.

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|--|
| Experiment with cause and effect to move beach balls in new ways. |
| Repeat a new idea again, again, again. Will the same thing happen each time? |
| Watch and notice how others are moving beach balls. Copy/try out new ideas. |
| Shriek with excitement or talk eagerly about what is happening. |
| Navigate turn-taking (with support) and decide what to do when someone has a different opinion about using a beach ball. |

Investigating Beach Balls, part 2 (cont.)

Interactions to Support Learning

Notice how children show that they want to interact with you. Once children invite you to join in the play, follow their lead. Here are some responses that may be a fit.

- Name and describe new materials such as *tether*, *parachute*, and *foam noodle*.
- Notice together when interesting things happen. “Oh! When you slapped the [tethered] beach ball, it swung way out!”
- Think about what will happen next and make predictions. “If we all pop the blanket up at the same time, what do you think will happen? Would you like to try?”
- Model and teach children how to use materials safely. Focus on helping children figure out what they *can do*, rather than only telling them what not to do. For example, rather than telling a child, “Don’t hit people with the pool noodle,” encourage her to hit a beach ball with the pool noodle instead.
- Follow children’s lead as simple, inventive games emerge. Mirror children’s enthusiasm for new ideas.

Including Every Explorer

Adapt experiences so that every interested child can participate. For example, a child with limited mobility might sit on an adult’s lap to help hold a parachute. A tethered ball could be lowered to just a few inches above the floor for a child to bat or kick with careful supervision.

Some children may feel overwhelmed or overstimulated by noisy, busy experiences like these. Tune in to cues that a child is beginning to feel uncomfortable. You may be able to change the game's focus to help children shift to a lower activity level. Other times, you might invite a child to retreat to a quieter area in the play space.

This experience offers special opportunities to build and strengthen:

Social and Emotional Development - SE1.2, SE2.1, SE2.2

Cognitive Development - CD1.1, CD2.3, CD3.1

Physical Development and Health - PH1.1, PH1.2, PH1.3

Science and Technology - ST1.1, ST2.1, ST3.1, ST3.2

Science and Technology - ST2.1, ST3.1



A Collection of Cylinders

Let's investigate play objects that have a cylindrical shape. How are cylinders like and different from balls?

Materials

- a collection of cylindrical play objects, such as:
 - clean, empty canisters from oatmeal, grits, cornmeal, and snacks
 - wide bangle bracelets
 - cylinder-shaped (column) blocks
 - napkin rings and/or smooth, wooden craft rings
 - large spools
- baskets or trays for your collection(s)

Create an invitation to play by arranging a collection of cylinders in a basket or on a tray. This can be placed on a low table or in a floor play area. Older two-year-olds may also enjoy finding a collection of cylinders in their block-building area.

Play Possibilities

Watch and listen to notice how children explore the cylindrical items. You may see children investigate and play in some of these ways.

| |
|--|
| Empty a basket or tray by dumping items or removing items one by one. |
| Carry items around the room in hands or pockets, or transport them in a purse, with a toy truck, or in some other way. |
| Experiment with putting napkin rings on their fingers and bracelets around their wrists. Try fitting a foot into a canister, or try putting it on their head like a hat. |
| Hold an item up to his eye to look through it. |
| Move cylinders by sliding and rolling them. |
| Stack cylinders and arrange them in other ways. |
| Sort by finding items that are the same. |

Helpful Hints

Ask families and friends of the classroom to save empty food canisters.

A Collection of Cylinders (cont.)

Interactions to Support Learning

Notice how children show that they want to interact with you. Once children invite you to join in the play, follow their lead. Here are some responses that may be a fit.

- Name items using words like *canister*, *bracelet*, and *spool*.
- Describe and compare cylinders using words for color, texture, or size.
- Experiment with the round and flat sides of cylinders. Notice which sides can roll and which sides cannot.
- Investigate with children. Which cylinders are made of wood? How about silicone, plastic, or cardboard?
- Describe a children's specific actions as they slide, roll, arrange, or stack cylinders.
- Help a child notice what other children are doing with the cylinders.
- Count items with a child who seems interested. Count as you touch each canister in a row or each bracelet on a child's arm.

Including Every Explorer

Napkin rings, bangle bracelets, and other household items can make excellent play objects. However, special care should be taken to ensure that they are safe for very young children. Check for rough edges, peeling paint, and other potential hazards.

A natural cutting board sealant can be used to make wooden materials more durable. This makes it possible to wash and sanitize wooden play objects. Washing toys is essential if your group includes very young toddlers or any children who put items in their mouths.

This experience offers special opportunities to build and strengthen:

Cognitive Development – CD1.1, CD1.2, CD2.1, CD3.1

Physical Development and Health – PH2.1

Mathematical Thinking - MT1.2, MT2.1, MT3.1, MT4.1

Science and Technology - ST1.1, ST3.1, ST3.2



Ramps and Tubes

Let's investigate inclined planes. What can we discover?

Materials

- items to use as simple ramps, such as:
 - sheets of flat cardboard
 - large cardboard mailing tubes
 - infant-sized slides
 - plastic lids from large storage boxes
- a basket of toddler-safe balls, cylinders, and toy cars
- things that can be used to prop up one end of ramps, such as large blocks, cardboard boxes, or an empty shelf

Create an invitation to play by arranging ramp materials and roll-able objects in an active play area. Prop at least one ramp up, but leave other materials nearby for children to construct ramps independently.

You may wish to investigate different materials over time. For example, you might begin with balls on an infant slide. On another day, offer balls with sheets of cardboard and blocks for propping. A day or two later, introduce cardboard tubes. After children have had a chance to thoroughly investigate each new material, combine them for open-ended play.

Play Possibilities

Watch and listen to notice how children explore ramps and tubes. You may see children investigate and play in some of these ways.

| |
|---|
| Peek into a tube. Stretch their arm to reach into a tube. |
| Experiment with dropping and pushing objects down ramps or through tubes. |
| Notice that some objects "go" on their own, while others need to be nudged. |
| Cheer or clap when an object rolls through a tube or down a ramp. |
| Try to slide their own bodies down ramps. |
| Gather other play objects - such as blocks or toy animals - to try. |
| Notice that some things will fit in tubes, but some do not. Compare sizes. |
| Move ramps and tubes up or down to change the angle. |
| Experiment with large materials in other ways, such as sliding cardboard sheets along the floor or rolling large tubes. |

Ramps and Tubes (cont.)

Helpful Hints

- Ask families and friends of the program to save cardboard mailing tubes for your group. Architects and contractors may also be willing to donate old document tubes.
- Cardboard boxes can be flattened and cut to make sheets of cardboard.
- Families may be willing to loan their infant slides from home, allowing you to create a collection of small, free-standing ramps.

Interactions to Support Learning

Notice how children show that they want to interact with you. Once children invite you to join in the play, follow their lead. Here are some responses that may be a fit.

- Avoid the temptation to show children what to do. Give them time to figure out how to use materials on their own.
- Use the words *ramp*, *tube*, *roll*, and *slide*. Describe what a child is doing. “You’re dropping balls into the tube.”
- Add playful sound effects like “Whoosh!” and “Bumpity-bumpity-bump.”
- Present a problem that children can help solve. For example, try to fit a too-large ball into a tube. A child may offer a smaller ball or a larger tube.
- When a child builds a ramp, politely ask for a turn. “May I try?”
- Mirror children’s enthusiasm. Rather than saying “Good job!” say “You did it!”

Including Every Explorer

Infant slides and other sturdy, stationary ramps may be more accessible for younger toddlers and children with special needs. Teachers with older two-year-olds may wish to try some ramp experiences from the [Explorers Preschool Curriculum](#).

This experience offers special opportunities to build and strengthen:

Social and Emotional Development - SE3.2
Cognitive Development –CD1.2, CD2.1, CD2.4, CD3.1
Physical Development and Health - PH1.3, PH2.1
Science and Technology - ST1.1, ST2.1, ST3.1, ST3.2



Rolling with Paint

Let's have some messy fun. What will happen when we roll a ball through paint?

Materials

- non-toxic commercial or [homemade](#) finger paint
- spoons
- sensory balls, Wiffle balls, and/or other handheld balls that can be washed
- smock for children
- dish tub or another container to collect balls after painting
- blank paper (optional)
- damp washcloths or baby wipes for hands (optional)

For this playful experience, children will paint directly on the tabletop. Plan this experience for a time when you can stay nearby to provide close supervision and support.

As interested children join you, help them choose a paint smock and put it on. Next, invite them to choose colors of paint to spoon onto their places at the table. Each child can also choose a ball to work with.

Play Possibilities

Watch and listen to notice how children interact with the paint and balls. You may see children investigate and play in some of these ways.

| |
|--|
| Spread paint on the table with their hands. |
| Spread paint on their balls, turning the balls to paint different areas. |
| Roll their ball through the paint to make patterns, swirls, or tracks. |
| Rub painted hands together or use hands to spread paint on their arms. |
| Experiment with picking up their balls and pressing them down again. |
| Use fingers to make marks and lines in thick paint. |
| Notice how paint colors mix and blend as they work. |

Helpful Hints

Hand cleaning may be a two-step process. First, remove most of the paint with a baby wipe or moist washcloth. Then, wash hands at the sink.

You can press a large sheet of blank paper onto the table after each child is finished painting. Peel it up carefully and set it aside to dry. This makes a colorful print that can be displayed alongside a photo of the child at work.

Rolling with Paint (cont.)

Interactions to Support Learning

Notice how children show that they want to interact with you. Once children invite you to join in the play, follow their lead. Here are some responses that may be a fit.

- Ask questions that children can think about and answer with words or gestures. “Which color would you like next?” Or, “You’re spreading paint on the spiky sensory ball. How does that feel?”
- Talk about sizes and textures of balls.
- Notice together how paints swirl and blend. Talk about new colors that appear when the paint is mixed.
- Look closely at textures and patterns in paint.
- Talk about how the paint feels on a child’s hands.
- When everyone is finished, invite interested children to help you wipe off the table or help wash the balls.
- Later, look together at the paper prints and/or photos of children at work. Talk about the experience, describing what happened first, next, and last.

Including Every Explorer

Some children have an aversion to moist materials like finger paint. Invite but do not force participation. Provide calm, empathetic support if a child discovers that he doesn’t like the feeling of paint on his hands. Help him clean his hands and become engaged in other play that he enjoys. Later, you might invite the child to use a spoon or other tool to move a ball around in the paint.

This experience offers special opportunities to build and strengthen:

Social and Emotional Development – SE2.1
Cognitive Development - CD1.1, CD2.1, CD2.2, CD2.3
Science and Technology - ST1.1, ST2.1, ST3.1
Creativity and Aesthetics - CA2.1



Traveling Along

Let's investigate paths made of tape. How will these enhance our play with toy cars and trucks?

Materials

- blue painter's tape
- a basket or tray of handheld toy cars and truck

This experience can be shared in the usual space you share with children or in an alternative area, such as a toddler-safe gymnasium or gross motor room.

Before children arrive, use blue tape to make long lines on the floor. You might make a variety of lines, including straight lines, zig-zags, corners, and intersections. Place a tray or basket of cars and trucks nearby.

Investigation Possibilities

Watch and listen to notice how children interact with the tape lines. You may see children investigate in some of these ways.

| |
|---|
| Point to or pick at the tape. |
| Walk along, or hop over, tape lines. |
| Line up cars and trucks along a tape line. |
| Use their hand to move a car or truck along a tape line. |
| Push and release a car or truck to make it roll forward. |
| Pretend that a tape line is a road or driveway. Make vehicle sound effects. |
| Gather other objects to arrange on or around the tape lines. |
| Peel up and remove the tape from the floor. |

Safety Spotlight

Remove loose pieces of tape right away. Bits of tape can be a choking hazard.

Helpful Hints

Blue painter's tape is paper tape that uses a gentle adhesive. It is easy to peel off and usually won't leave sticky residue on floors.

Traveling Along (cont.)

Interactions to Support Learning

Notice how children show that they want to interact with you. Here are some responses that may be a fit.

- Notice the colors and other attributes of toy cars and trucks.
- Talk about interesting features of toy cars and trucks. “This is a dump truck. It has a deep bed for hauling dirt.”
- Describe a child’s specific actions with words like *rolling*, *turning*, and *arranging*.
- Use words to compare tape lines, such as *long* and *short* or *wide* and *narrow*.
- Talk about parts of lines using words like *beginning*, *corner*, *middle*, and *end*.
- Count cars in a row with an interested child.
- Model and use self-talk as you play alongside children. “I’m going to give my car a big push. I wonder if it will roll all the way to the end?”
- After children have had ample time to investigate the materials, offer arch blocks, cardboard tube tunnels, road signs, or other accessories to extend the play.
- If children are especially interested in peeling tape, go with it! Place pieces of masking tape on tabletops for children to pick and peel. Provide close supervision to help children re-stick or discard the peeled tape.

Including Every Explorer

Use blue tape on a light-colored floor to create a high-contrast path that may be visible to children with limited vision. Wide tape is sturdier and might be the best choice to pair with very young toddlers’ larger toys.

This experience offers special opportunities to build and strengthen:

Cognitive Development - CD1.2, CD2.1, CD3.1, CD3.2

Physical Development and Health - PH1.1, PH1.2, PH1.3, PH2.1

Mathematical Thinking - MT1.1, MT1.2, MT2.1, MT3.1

Social Studies - SS2.2

Creativity and Aesthetics - CA3.1



Lazy Susan Trays

Let's investigate trays that spin. What will we discover?

Materials

- wooden and/or plastic lazy Susan trays
- a basket of items to place on trays, such as play food, toy characters, or empty playdough canisters
- museum putty (optional)

Place one or more lazy Susan trays on a low table. If desired, use several pea-sized balls of museum putty to secure the bottom of each tray. Place a basket of items nearby to create an invitation to play.

Safety Spotlight

Provide direct supervision while children interact with lazy Susan trays. These are low-risk play objects, but fingers, loose clothing, and long hair should be kept away from moving parts.

Play Possibilities

Watch and listen to notice how children interact with spinning trays. You may see children investigate and play in some of these ways.

Notice unfamiliar objects (trays) on the table. Touch or pat them.

Discover that the trays move when touched. Experiment with moving a tray one way and then the other.

Discover that a tray can spin.

Try different techniques to make a tray spin smoothly or quickly.

Experiment with ways to stop a moving tray.

Place objects on a tray. Experiment to find out what happens to things when the tray is moved, spun, or stopped.

Lean down to examine how the tray moves.

Gather objects from around the room, such as books or dolls, to place on a tray.

Lazy Susan Trays (cont.)

Helpful Hint

A lazy Susan is a flat, round tray that can spin. Friends of your group may be able to loan lazy Susan trays. They can also be found at many thrift shops. Always check for safety before sharing with children.

Museum putty (also known as earthquake putty) can attach trays or other items to sealed surfaces like tabletops and shelf tops. Adults can remove items by slowly pulling and twisting them at the same time. Toddlers typically cannot remove items secured with museum putty, but close supervision is needed just in case.

Interactions to Support Learning

Notice how children show that they want to interact with you. Once children invite you to join in the play, follow their lead. Here are some responses that may be a fit.

- Describe what you see children doing. “You’ve put your hand down flat on the tray.”
- Use the words *spin* and *around*. Talk about *fast* and *slow* and *on* and *off*.
- Ask interesting questions that children can think about and answer with gestures or words. “You’ve put a cup on the tray. What do you think will happen when you spin the tray?”
- On another day, cover the top of a lazy Susan tray with paper. Two-year-olds can experiment by touching washable markers to the spinning tray.

Including Every Explorer

Museum putty can help prevent children from pulling bulky trays off the table. Older two-year-olds may prefer loose trays that they can carry around. Not every child will have the coordination to spin the trays, but each can experiment in her own way.

This experience offers special opportunities to build and strengthen:

Cognitive Development - CD1.1, CD2.1, CD3.1

Physical Development and Health – PH1.3, PH2.1, PD 2.2

Language Development - LD1.1, LD2.1

Science and Technology - ST1.1, ST2.1, ST3.1, ST3.2



Bowling

Let's play a simple cause-and-effect game. What strategies will we try?

Materials

- balls for bowling, such as beach balls or traditional hollow play balls
- objects to use as bowling pins, such as cylinder blocks or empty Gerber Puffs canisters, Pringles chip cans, or water bottles.

If desired, you may decorate your homemade bowling pins ahead of time. Many appealing design ideas can be found [online](#). However, children will also enjoy playing with simple, undecorated materials.

Create an invitation to play by standing several bowling pins near a ball. Place more balls and pins nearby.

Play Possibilities

Watch and listen to notice how children interact with the bowling set. You may see children investigate and play in some of these ways.

| |
|--|
| Investigate balls by holding, carrying, and rolling them. |
| Empty the basket of bowling pins. |
| Carry bowling pins around the room. |
| Arrange bowling pins in groups or lines. |
| Experiment with standing bowling pins up, knocking them down, rolling them, or using them in other ways. |
| Try rolling a ball to knock over pins. Try knocking over pins in other ways. |
| Experiment with various strategies for rolling balls with one or two hands, lifting a ball up, pulling it back, and/or pushing it forward. |
| Try rolling balls from different distances. |
| Clap or cheer when pins are knocked over. |
| Repeat the process of setting up pins, knocking them over, and setting them up again. |

Bowling (cont.)

Interactions to Support Learning

Notice how children show that they want to interact with you. Once children invite you to join in the play, follow their lead. Here are some responses that may be a fit.

- Model and describe what you are doing as you play alongside children. “I’m going to roll my ball to knock over the bowling pins.”
- Encourage children to move nearer to or farther from the pins as needed to provide an approachable challenge.
- Talk about *far* and *near*, *fast* and *slow*.
- Count pins that were knocked over. Count pins that are still standing.
- Use words like *none*, *few*, *most*, and *all* to describe pins.
- Comment on a child’s persistence. “You kept trying until you knocked over all of the pins!”
- Clap and cheer with children. “You did it!”
- With an interested child or a small group of two-year-olds, organize a slightly more structured bowling game. Make a starting mark and take turns bowling.
- Invite a two-year-old to teach another adult how to play the bowling game. This adult can listen attentively and ask questions for clarification.

Including Every Explorer

If your group includes a child with limited mobility, invite the child to sit on your lap as you push the ball forward together. A small, stationary ramp, such as an infant slide, can also be used to propel a ball toward the pins.

It’s always wise to have plenty of extra materials on hand. This will allow children who wish to bowl to have a satisfying experience, even if other children want to use some pins or balls in different ways.

This experience offers special opportunities to build and strengthen:

Social and Emotional Development –SE1.2, SE2.1

Cognitive Development - CD1.1, CD1.2, CD2.1, CD2.3

Physical Development and Health - PD1.3

Mathematical Thinking - MT1.1, MT1.2, MT3.1



Real Wheels

Let's investigate some real tires and wheels. What will we discover?

Materials

- ❑ wheels and tires for wagons, wheelbarrows, carts, ride-on toys, bicycles, inline skates, and so on

This experience is most suitable for older toddlers and two-year-olds. Before children arrive, arrange a collection of wheels in an indoor or outdoor play area. You may wish to begin with just a few and add more over time.

Safety Spotlight

Inspect wheels and tires carefully before placing them in the play space to ensure that they do not have not sharp edges or small, loose pieces. This experience requires direct supervision.

Play Possibilities

Watch and listen to notice how children interact with the wheels. You may see children investigate and play in some of these ways.

| |
|--|
| Look closely at wheels and tires. Investigate by touching and smelling them. |
| Lift and carry wheels and tires. Struggle with heavy or bulky ones. |
| Sit on or in larger wheels and tires. |
| Stack wheels and tires or arrange them in other ways. |
| Investigate wheels that are attached to toys. Possibly attempt to remove them. |
| Balance wheels and tires on edge. |
| Push wheels and tires to make them roll. Try different techniques for rolling. |
| Chase after and stop a rolling wheel or tire. |
| Incorporate wheels and tires in block play or in other imaginative ways. |

Helpful Hint

Families and friends of the program may be able to loan some wheels to your group. A wide variety of wheels can also be found at farm and hardware stores.

Real Wheels (cont.)

Interactions to Support Learning

Notice how children show that they want to interact with you. Once children invite you to join in the play, follow their lead. Here are some responses that may be a fit.

- Describe wheels and tires using words for color, shape, or texture.
- Compare the size and weight of wheels and tires.
- Notice that some wheels and tires are *solid* while others are *hollow*.
- Describe a child's specific actions with words like *lift*, *roll*, *push* and *carry*.
- Notice times when children work together to move wheels or tires.
- Invite children to show and talk about their discoveries with wheels and tires.
- Listen to children's questions and help them think of ways to seek answers. "Evan's dad brought us that wheel. Would you like to help write a note to ask him where it came from?"
- Wonder with children. "What do you think this wheel is for?"

Did You Know?

Groups of authentic objects like these are sometimes known as artifact collections. They provide an opportunity for children to investigate at their own pace and in their own way.

Including Every Explorer

If your group includes a less-mobile child with a physical disability, make materials accessible by bringing them to the child. Or, ask the child if he would like to investigate materials at floor level. You can partner with families, therapists, and other specialists to learn as much as possible about the child's abilities, needs, and interests. Our goal is to involve each child as fully as possible.

This experience offers special opportunities to build and strengthen:

Cognitive Development - CD1.1, CD1.2, CD2.4, CD3.1, CD3.2

Physical Development and Health - PD1.3

Language Development - LD1.1, LD2.1, LD 3.1

Mathematical Thinking - MT2.1, MT3.1, MT4.1



Enhancing Our Play Spaces

Toddlers and two-year-olds learn best - and most - through open-ended play.

Large Body Play

Very young children need to move and engage in active play throughout each day. Therefore, our indoor and outdoor spaces invite children to climb, tumble, run, hop, push and pull big things and use their whole bodies in other ways.

Schematic Play

Children experience play urges to empty or fill containers, gather and carry materials, and interact with play objects in other schema-driven ways. Our play spaces include many open-ended materials, and each child has the freedom to use them in their own way.

Sensory Play

Children often have opportunities to scoop and pour sand or similar materials. They can also scribble with chalk, crayons, and other tools. And, they're sometimes invited to dabble with paints, squeeze clay or playdough, and crumple and tear paper. Close, responsive supervision is always provided to protect health and safety.

Constructive Play

Children are invited to use blocks and other construction materials for lining and stacking up, balancing, and building. There is at least one area in our play space that is especially suited for playing this way.

Imaginative Play

Simple, realistic props encourage children to think about, talk about, and imitate familiar roles and experiences. Children can find collections of materials that go together to enhance and expand their play. Many of these play objects are homelike and authentic.

Retreating and Relaxing

Being a toddler or two-year-old is hard work! Our play spaces include soft, comfortable places where a child can choose to relax, regroup, or recharge.

When children are interested in things that roll and spin, we might add or emphasize some of these familiar play materials.

- balls
- toy cars and trucks
- zig-zag ramps with balls or cars
- press-and-spin tops
- large wheeled toys like ride-on toys, doll strollers, and wagons
- plastic or wooden hoops
- toy trains with tracks for older toddlers and two-year-olds
- Bilibo toys for all ages; Sit-n-Spin toys for older toddlers and two-year-olds
- sand/water wheels for twos
- large nuts-and-bolts and gear toys for twos

Enhancing Our Daily Routines

Much of our day with toddlers and twos is spent in daily care routines like **meals, toileting and diapering**, and **rest**. Rather than viewing these as chores to be hurried through, we recognize that each daily routine offers many opportunities to strengthen relationships and foster learning.

Here are some ways that we support children during daily care routines.

Predictable Schedules

We invite children to become familiar with the flow of our day and the steps within each routine. We often talk about what is happening now and what will happen next.

Nurturing Relationships

We infuse daily routines with warmth and joy. We speak with and touch children gently. We make friendly eye contact and use children's names in positive ways.

Inquiry and Interest

We notice children's curiosity about the world around them. We provide time for them to look closely at things that seem interesting to them and talk with them about their experiences.

Growth and Development

We offer opportunities for children to make choices and build self-help skills. We provide unhurried time for children to practice new skills. Spills, messes, and mistakes are a natural part of the learning process and are managed calmly and gently.

When children are interested in things that roll and spin, we might notice, investigate, and talk with children about familiar things like these that may be part of our daily routines.

- wheels on strollers, buggies, or carts
- hills, ramps, and other inclined planes
- ceiling fans
- faucets that turn
- skirts that twirl
- foods that are mixed or stirred



Things That Roll and Spin in the World Around Us

Toddlers and twos are often eager to explore their world by going on short walks or going for buggy rides. There are also many fascinating things to be seen by looking out a window or through a playground fence. In addition, we can sometimes plan opportunities for children to observe something that interests them.

Adults notice what children are looking at or pointing at. We listen to children's questions and describe what children see or what is happening. We might also take photos for children to look at and talk about later.

Here are some examples of real-life occurrences that could support children's interest in things that roll and spin.

- older children playing soccer or basketball
- someone riding a bicycle, scooter, or skateboard
- laundry spinning in a front-loading washing machine
- someone mowing a lawn (observed through a window or from afar)
- someone using a hula hoop
- someone using a rolling pin
- pinwheels and wind spinners in a garden
- a hamster running on an exercise wheel
- someone assembling or repairing a ride-on toy
- someone changing a tire on a real car



Books About Things That Roll and Spin

Books are often shared informally with just a few children at a time, and children can also choose to look at books independently. Two-year-olds may even enjoy a short storytime where almost everyone comes together. If group story times occur, we invite but do not require children to join.

Share some of these books and/or your favorite books featuring neighborhood creatures.

A Ball for Daisy, by Chris Raschka, Schwartz and Wade, 2015

Amazing, by Steve Antony, Hachette Children's, 2020

Bookscapes: Fun at the Fair, by Ingela Arrhenius, Chronicle Books, 2020

Find It: Things That Go, by Highlights, Highlights Press, 2019

Go, Bikes, Go!, by Addie Boswell and Alexander Mostov, Little Bigfoot, 2019

Indestructibles: Busy City, by Maddie Frost, Workman, 2018

Love is a Truck, by Amy Novesky and Sara Gillingham, Cameron Kids, 2016

Peek and Play Rhymes: The Wheels on the Bus, by Richard Merritt, Silver Dolphin Books, 2018

Race Car Count, by Rebecca Kai Dotlich and Michael Slack, Henry Holt and Co, 2017

School Bus, by Donald Crews, Greenwillow Books, 2002

The Wheels on the Garbage Truck, by Jeffrey Burton and Alison Brown, Little Simon, 2019

The Wheels on the...Uh-Oh!, by Sue Tarsky and Alex Willmore, Albert Whitman and Co, 2018

What Do Wheels Do All Day?, by April Jones Prince, HMH bilingual board book edition, 2013

Things that roll and spin can be spotted in the illustrations of many other picture books, too. Make a habit of noticing them together.

Talking About Books

- Notice the cover: "What could this book be about?"
- Bring scenes to life: "Let's beep our truck horns. Honk! Honk!"
- Wonder together: "Where do you think they are going?"

Talking with individual children about books is an essential part of every day!

Songs, Rhymes, and Games About Things That Roll and Spin

We sing and share playful rhymes and games with individual children during indoor and outdoor playtimes. We may also use songs or rhymes during transition times between other daily events.

The Wheels on the Bus – *traditional action song*

The wheels on the bus go 'round and round, (roll arms in a circular motion)
Round and round, round and round.
The wheels on the bus go 'round and round,
All through the town.

Additional verses:

- **The wipers on the bus go swish, swish, swish.** (wave hands back and forth)
- **The door on the bus goes open and shut.** (open hands, clap shut)
- **The horn on the bus goes beep, beep, beep.** (pretend to hit horn with open hand)
- **The driver on the bus says, “Please move back.”** (gesture over shoulder with thumb)
- **The people on the bus go up and down.** (bob up and down)
- **The babies on the bus cry, “Wah, wah, wah”** (rub fists in front of eyes)
- **The parents on the bus say, “Almost home!”** (cross arms across chest to rock and hug)

Buggy Ride Song - *to the tune of Farmer in the Dell*

Sing this song as you head out on buggy rides.

We're rolling down the hall,
Rolling down the hall,
Hi-ho, away we go,
We're rolling down the hall.

Adapt the song as you go along. For example, you might be “rolling past the office,” “rolling out the door,” and so on.

Songs, Rhymes, and Games About Things That Roll and Spin (cont.)

Action Chant

Use the child's name as you clap and sing this action chant. In our example, we've used the name Jayla.

Jayla, Jayla, jump up and down.
Jayla, Jayla, turn 'round and round.
Jayla, Jayla, touch the ground.
Jayla, Jayla, sit... back... down.

Marching Round and Round

March in a circle as you chant this simple rhyme.

Young children enjoy the buildup and anticipation before gently falling down. Play with older twos by sometimes stretching this portion of the song out and other times speeding it up!

Marching, marching, marching,
We're marching 'round and round.
We march, and march, and march, and march,
And march and then fall down! (fall or sit down playfully)

After children get the hang of the game, try hopping, stomping, tip-toeing, or moving around the circle in other ways.

Choo-Choo Chant

I'm a little choo-choo train, rolling down the track. (move arms in a circular motion)
First I roll down, and then I roll back. (reverse direction of arm roll)
The crossing arm comes clanging down, (push arms forward to signal "STOP")
and my whistle blows. (bend elbow and pump fist as if pulling bell cord)
Children smile and wave at me everywhere I go! (wave vigorously)

More Traditional Songs and Rhymes to Share

Down by the Station

Take Me Out to the Ballgame

I'm a Little Piece of Tin

Teddy Bear, Teddy Bear, Turn Around

Ring Around the Rosie

Moving On

1. With your teaching partners, think about, and discuss:
 - What new experiences have our children had during this exploration? What new knowledge and skills have emerged?
 - Do the children seem ready to conclude this exploration? Have their questions been answered? Is their interest waning? If children are still excited about things that roll and spin, consider ways to continue and extend their investigation.
 - How will we share the story of children's playful learning with families and others?
2. Model gratitude by creating thank you notes for families, school members, and/or community members who supported your exploration. For example, you might invite two-year-olds to scribble and draw on cardstock to fold into cards for people who loaned wheels and tires to the group.
3. Where will you go next? Use your observations of children as you think about and plan your next exploration!

