Move It! Rolling Balls

Remember: In order to effectively build science understanding, *young children need opportunities for sustained engagement with materials and conversations that focus on the same set of ideas over weeks, months, and years* (National Research Council, 2007). This means you should plan to do the same programs with different materials and books over and over again…or a series of programs focused on the same STEM content and experiences.

In this program: Children will explore how balls move by experimenting with balls of different sizes, weights and textures. They will also explore Force and Motion *concepts* while using STEM inquiry practices: they will raise questions; explore materials; engage in simple investigations; observe, describe and compare; share and discuss ideas; and represent their ideas with drawings and/or models.

What's needed: A collection of balls of different sizes, weights and textures, art supplies for drawings

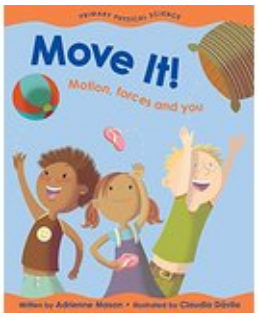
Books for storytime and explorations:
Move It! by Adrienne Mason. Read/discuss the ideas and talk about the pictures on pages 12, 13, 16 and 17.
Favorite books about balls

First: Conduct your usual story time, just like you normally would. After reading the book all the way through, go back and do a picture walk though the book, talking about the forces (pushes and pulls) that made the ball(s) move, note where/how balls slowed down or stopped.

Exploration: Have children sit in a circle on the floor. Place the ball collection in the middle of the circle. Encourage children to touch and move the balls. Talk about the texture and size of the balls. Encourage children to try different methods for moving the balls.

Prompts/questions you can ask:
How are the balls the same? How are they different?
What makes the balls move? Can they move by themselves? Talk about *pushing* and *pulling*.
How many different ways can we make a ball move?
How can we find out which ball is the best roller? The best bouncer?
What happens when we roll or bounce a ball on different surfaces?

Try it out/challenges:
Is the best bouncer the best roller?
What do you think makes a ball a good roller? How can we find out?



STEM Discovery Center: Set up a passive program area. Display a small collection of balls with laminated prompts/questions/challenges taken directly from this activity.

Community resources: Invite a local athlete, Physical Education teacher and/or student to teach children a new ball game. Invite a local artist or teacher to demonstrate art projects, drawing or constructing balls with children.

Promotion opportunities: Build a library display of photos and children's projects, post on social media, library website. Make a Documentation Panel of your series of Move It! programs.