

Core Skills Analysis

Science

- Zech learned that spinning tops demonstrate the concept of motion, specifically rotational motion.
- Zech observed how different spinning tops might spin at different speeds or durations, introducing the concept of variables affecting motion.
- The activity introduced Zech to cause and effect as he could see how the force applied influences how long or fast the top spins.
- Through hands-on manipulation, Zech explored balance and stability as important factors that affect how a top spins without falling.

Tips

Encourage Zech to experiment with tops made from various materials or shapes to observe how these changes influence spin duration and speed. Introduce simple vocabulary like 'rotation,' 'spin,' 'balance,' and 'force' during the play to build his scientific language. Take the opportunity to combine this activity with outdoor play by creating larger spinning objects, like DIY hula hoops or spinning wheels, to demonstrate the same motion concepts at different scales. Use storytime to connect these concepts illustrating how motion appears in everyday life, such as in playground merry-go-rounds or wheels on vehicles.

Book Recommendations

- [Motion: Push and Pull, Fast and Slow](#) by Diane L. Burns: Explores basic concepts of motion with simple examples and vibrant pictures tailored for young children.
- [The Top That Got Lost](#) by Steven Kroll: A fun story about a spinning top that helps children understand the joy and science behind spinning objects.
- [What Makes a Wheel Roll?](#) by Mark Weakland: Introduces the principles of wheels and spinning through engaging pictures and easy explanations.

Learning Standards

- CCSS.ELA-Literacy.SL.K.4 - Describe familiar people, places, things, and events, and, with prompting and support, provide additional detail.
- NGSS K-PS2-1 - Plan and conduct an investigation to compare the effects of different strengths or directions of pushes and pulls on the motion of an object.
- NGSS K-PS2-2 - Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.

Try This Next

- Create a worksheet where Zech can draw and label parts of his spinning top and describe how it moves.
- Conduct a simple experiment to test how different surfaces (carpet, tile, wood) affect the spinning duration of the tops.