

**Balance and Motion:
Spinners—Zoomers & Twirlers
(FOSS Teacher Guide)
2nd GRADE SCIENCE DOCENT**

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Balance and Motion FOSS Teacher Guide

- 1. Zoomers: Investigation 3 (Spinners), Part 2—pgs 117-122**
- 2. Twirlers: Investigation 3 (Spinners), Part 3—pgs 123-129**
- 3. “Zoomer” teacher sheet, pg 232**
- 4. “Twirler Wings” and “Twirly Bird” teacher sheets, pgs 233-234**

Objective/California Standards for Science:

1. Students know the position of an object can be described by locating it in relation to another object or to the background.
2. Students know the way to change how something is moving by giving it a push or pull. The size of the change is related to the strength, or the amount of force, of the push or pull.
3. Students know objects fall to the ground unless something holds them up.
4. Students will make predictions based on observed patterns and not random guessing.
5. Students will follow oral instructions for a scientific investigation.

Unit Preparation (“GETTING READY”):

1. Review pages 106-107 (“Teaching Children About Spinners”) to familiarize yourself with the teacher's goals in this lesson.
2. Read “GETTING READY” for each part BEFORE the day of the lab!!! (see pages 118-119 and 124-125)
3. All steps do not need to be included, such as step 2: Plan Assessment (pg 118 and 124) or step 7: Read *Science Resources* (pg 125). (**These are noted on the MASTER COPY.**)
4. Practice each demonstration or activity prior to the lesson so that you are familiar with everything that is going on.

Introduction (5 minutes):

1. Split the class into 2 groups.
2. Briefly explain that they will continue to learn about balance and motion—specifically spinners. Spinners are objects that rotate or spin when in motion. Each activity center has its own introduction.
3. Half will learn about **Zoomers** for 20 minutes.
4. Half will learn about **Twirlers** for 20 minutes.
5. Switch groups after 20 minutes.

BALANCE AND MOTION: SPINNERS CONTINUED

Hands-On Activity (“GUIDING THE INVESTIGATION”) (40 minutes)

**Both need adult direction and supervision.

Activity Center One: “Part 2: Zoomers” (pgs 117-122)

1. Materials needed: See page 117.
1. Do not include “For Assessment” part. (**These are noted on the MASTER COPY.**)
2. “Wrapping Up” will be covered during the conclusion

Activity Center Two: “Part 3: Twirlers” (pgs 123-129)

1. Materials needed: See page 123.
2. Science Notebook sheet no. 6 (*Things That Spin Review*) not needed for lesson.
3. “FOSS Science Resources” books not needed.
4. Do not include “For Assessment” part. (**These are noted on the MASTER COPY.**)
5. “Wrapping Up” will be covered during the conclusion

Conclusion: (“WRAPPING UP” section from each activity) (10 minutes)

1. Zoomers (page 122).
2. Twirlers (page 129).
1. There is no “Word Bank” or “Content Chart.” This information can be written on the teacher’s white board in class or gone over orally.
2. Have students demonstrate how people can be spinners. *Do they need an outside force to get started?* (Yes, their foot or arms or another person.) *Do people always need a force to get started?* (No, not if they are rolling down a hill.)