

# LESSON 15

## When air and storms move, why do they curve?

*Adaptations for:*

**STEP 1: Compare storm movement with your model (pg. 58)**

**STEP 2: Learn about the Coriolis effect (pg. 59)**

### EXPLANATION:

Reading about the Coriolis Effect in Step 2 may be challenging for students with dyslexia or vision impairments. Creating the balloon model requires small, detailed drawings (including equator, latitude lines, and arrows), fine motor control, coordination, and the ability to visually track arrows. This could be challenging for students with fine motor limitations and for students who are blind or have low vision. The video contains rapid narration and moving visuals that may be inaccessible for students who are deaf or hard of hearing, blind or have low vision, or sensory-sensitive. The activity assumes students can visually predict patterns, which would be difficult for students with low vision. Students with mobility impairments may struggle to participate in the balloon rotation activity if standing or large movement is required.

### ADAPTATIONS FOR STEP 1:

**UDL Principle:** [Multiple Means of Representation](#)

- Provide a written summary of the NASA video in simple language. Provide audio description for students who are blind or have low vision. Give a visual map of storm paths with colorblind-friendly colors. Use the adapted version of the student sheet (linked below), which includes larger fonts and options for responding to question prompts.

**UDL Principle:** [Multiple Means of Action & Expression](#)

- Instead of writing predictions, allow students to voice-record responses or use speech-to-text. Create images with multiple-choice options for predicted storm movement in the video, instead of having students draw. Provide pre-highlighted storm path maps for students with fine motor limitations.

### ADAPTATIONS FOR STEP 2:

**UDL Principle:** [Multiple Means of Representation](#)

- Create an enlarged-font version of the Step 2 student sheet. Pre-record a read-aloud audio clip of the Coriolis paragraph. Provide tactile globe models with raised equator and latitude lines for students who are blind or have low vision. Offer a video or animation of the Coriolis Effect for students who benefit from visual explanation.

**UDL Principle:** [Multiple Means of Action & Expression](#)

- Instead of drawing arrows on balloons, provide alternatives that support students with fine motor challenges or who are blind or have low vision, such as pre-marked balloons or velcro arrows on a tactile model. Other options include having students demonstrate understanding by verbally explaining or using a computer drawing program. Students in wheelchairs can participate by rotating the balloon on their lap or a desk rather than standing.

### ADAPTED MATERIALS:

[Lesson 15, Step 1 Adapted Student Sheet](#)

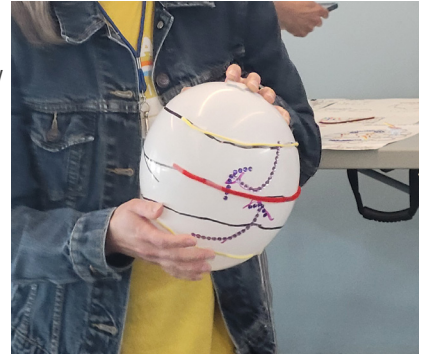
[Lesson 15, Step 2 Adapted Student Sheet](#)

### IMPLEMENTATION NOTES:

Creating tactile models (right) supports students who are blind or have low vision, and hands-on experiences are helpful to all students. UDL promotes different modalities for presenting information to help students understand the content. I now find myself planning with a different guiding question: "Who might struggle to participate in this lesson, and what can I change now to make sure they don't?" That simple shift has made my instruction more intentional and more compassionate.

### MY STUDENTS' UNIQUE NEEDS:

My focal student has severe dyslexia and a minor vision impairment. My student requires text read aloud, benefits from simplified written directions, and needs extra processing time.



Adding textured elements to the model allows all students to interact and gain a deeper understanding of the Coriolis effect.

