Lesson Overview

In this lesson, teams test the design and “builds” they have produced. The entire class serves as the audience as each team tests its apparatus.

Connecting to the Next Generation Science Standards

On Day 9, students demonstrate understanding of the performance expectations and three dimensions developed throughout the entire unit. These lessons serve as a performance assessment in which all of the performance expectations and dimensions are addressed in the final presentation. Revisit the performance expectations, disciplinary core ideas, science and engineering practices, and crosscutting concepts referenced in this module’s front matter. In addition, students dive more deeply into the engineering design performance expectations interwoven throughout the module.

Basic Teacher Preparation

Refer to the Soft Landing Student Handbook ahead of time so you can address any questions students might have. All documents for this lesson can be found on pages 3–7, 19, and 20 in the Soft Landing Student Handbook. The documents used in this lesson are:

- Student Reflections and New Questions (page 3)
- Soft Landing Design Problem (pages 4–6)
- KLEWS Chart (page 7)
- Presentation Rubric (pages 19 and 20)

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<td>Review suggested teacher preparation resources</td>
<td>Refer to the Suggested Teacher Resources at the end of this lesson</td>
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Materials List

No new purchased or outside materials are necessary for this lesson.
Day 9: Let’s Drop that Egg!

**Introduction (10 minutes)**

Refer students to the feedback they received. Provide 10 minutes for teams to make final revisions to their apparatus. If teams have already completed their revisions, allow them to use this time to practice their presentations.

**Team Presentations and Tests (35 minutes)**

Tell students they are going to present their work today. Each team should have 6 minutes to give their presentations. Their time should be structured as follows:

- 1 minute to introduce the team
- 3 minutes to introduce their apparatus (1 minute for each apparatus)
- 2 minutes to test the apparatus

Use the Soft Landing Design Problem Scoring Guide on pages 5 and 6 in the Soft Landing Student Handbook to evaluate students or have students evaluate each other.

Consider using the Presentation Rubric on pages 19 and 20 in the Soft Landing Student Handbook and Appendix D.

**Student Reflection (5 minutes)**

Refer students to the growing KLEWS Chart, and ask them to add to any of the columns.

Students write in their science notebooks or on Day 9 of the Student Reflections and New Questions. Possible questions to address include:

- What was challenging about today?
- What changes would you make if you had the chance to do everything again?

**Assessment**

Student presentations and tests should serve as the assessment of student learning.

Ensure that the Soft Landing Scoring Guide is on display. Use the scoring guide to evaluate student design solutions. Students may evaluate their own design solutions or design solutions from other groups.
Also, consider using the Presentation Rubric on pages 19 and 20 in the Soft Landing Student Handbook and Appendix D. Have students self-rate their designs prior to the teacher evaluation. Using outside volunteers to score the projects makes the process more authentic. Whether the egg broke should have less weight than the justifications with evidence for design choices. Reference Appendix B for suggestions for meeting the needs of all learners.

Community Connections

A showcase celebration might be a rewarding extension. Invite engineers, designers, and entrepreneurs to visit your classroom to create an authentic audience experience.

Suggested Teacher Resources

<table>
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