Teacher Directions & Answer Key

Skewer Balloons

The first day, students watch the Science Minute video and answer the Day 1 question. You may choose to show the video any of the later days when students need a refresher (or because some students missed the first day).
Each day's activity is based on the Science and Engineering Practices listed below.

Sample answers are listed on the next page.

Link to video: stevespangler.com/ss-video/445257408

The beaker icon in the lower left corner represents the approximate grade level.

DAY 1 Practice 1: Asking Questions

DAY 2 Practice 4: Analyze and Interpret Data, or
Practice 5: Use Math and Computational Thinking

DAY 3 Practice 2: Develop Models, or
Practice 3: Plan an investigation

DAY 4 Practice 6: Construct Explanations

DAY 5 Practice 7: Engage in Argument from Evidence, or
Practice 8: Obtain, Evaluate, and Communicate Information

DAY 1

Steve is worried about this experiment going well. What do you think is most likely to go wrong? Why?

Student responses will vary but might include the balloon popping instead of the skewer going through.

DAY 2

Create a shopping list of each of the four ”ingredients” for this experiment: balloon, skewer, breath, and oil.

1. balloon
2. skewer
3. breath
4. oil

DAY 3

If Steve had to create a mini-model of this experiment, what materials could he use?

Student responses will vary but might include bubbles, toothpicks, and smaller balloons.

DAY 4

Steve wants to make a commercial for the Pop-No-More Balloon. Write a catchy two-three sentence advertisement he could use to sell his product

Student responses will vary but might include the benefits of having a balloon that doesn’t pop.

DAY 5

Amie thinks the experiment will work if the balloon isn’t blown up as much. Write a dialogue to Amie using thought bubbles that lists everything you know about Steve’s experiment. (See student version for full question.)

Student responses will vary but might include suggesting that it will work because fewer parts of the balloon are under stress.

Name _____ Date _____

Skewer Balloons

DAY 1

Steve is worried about this experiment going well. What do you think is most likely to go wrong? Why?

_____

_____

_____

_____

_____

_____

DAY 2

Create a shopping list of each of the four "ingredients" for this experiment: balloon, skewer, breath, oil.

① _____

② _____

③ _____

④ _____

DAY 3

If Steve had to create a mini-model of this experiment, what materials could he use?

DAY 4

Steve wants to make a commercial for the Pop-No-More Balloon. Write a catchy two-three sentence advertisement he could use to sell his product.

DAY 5

Amie thinks the experiment will work if the balloon isn't blown up as much. Write a dialogue to Amie using thought bubbles that lists everything you know about Steve's experiment. Do you agree or disagree with Amie? Explain your thinking.