



Legends of Learning and OPTAVIA

Virtual Healthy Habits for All Science Fair

Instructions and Science Fair Rules

General Instructions

1. Please complete each step of this document in accordance with the instructions provided.
 - a. You are able to download this document and fill it out in Word, PDF, or Google Docs.
2. All participants must register their team before submitting their final submission at: https://docs.google.com/forms/d/e/1FAIpQLSe7ON46fX0aBL6bZjjsbx6JLxiHcAIdtx9_Q1uo8YCJLKvhGg/viewform?vc=0&c=0&w=1
3. All submissions are due by September 30th, 2020 at 11:59 pm PST and must be submitted by email only to events@legendsoflearning.com.
4. When submitting the final submission, email a completed version of this Document as a Google Doc, Word or PDF file, to events@legendsoflearning.com.
5. Upon our receipt of your submission, you will receive a confirmation of submission.
6. Only one submission may be submitted per student and per team.
7. Students may work with up to one (1) other fellow students on a team (for a team size of up to 2 students) for a single submission.
8. All submissions must be age-appropriate and contain no guns, profane language or other inappropriate content. If you have questions regarding what may or may not be appropriate, please consult your teacher/parent/guardian.
9. Feel free to submit pictures, drawings or videos, but they are not required.
10. Any questions regarding the completion of this form should be submitted to events@legendsoflearning.com.
11. HAVE FUN. Be Creative. We are looking for well thought out experiments.

Science Fair Instructions

Your goal is to make a hypothesis about *Healthy Eating and Hydration* or *Healthy Motion*, design a short experiment to test that hypothesis, and detail the results.

1. Pick a topic: either (1) *Healthy Eating and Hydration* or (2) *Healthy Motion*. More on these topics are below. Topic selection has no impact on your score, although the overall creativity of your hypothesis does.

Healthy Eating & Hydration

Investigate healthy eating and hydration behaviors. Learn about the different types of macronutrients (protein, carbohydrates, and fats) and micronutrients (vitamins & minerals). Understand the importance of water and proper hydration.

Healthy Motion

Learn about the physical and mental health benefits of regular exercise and daylong physical activity. Examine different types of activity: find strategies and activities that make moving your body easy and fun.

2. Make a hypothesis related to one of these topics. Example hypotheses are below.
3. Design an experiment that proves or disproves the hypothesis.
4. Run the experiment and record the results. Example experiments are below.
5. You can see examples of some hypotheses and experiments you might conduct below, but please design your own. Creativity and detail are encouraged!

Healthy Eating and Hydration Hypothesis/Experiment Examples:

-Hypothesis: Fruits have more water than vegetables.

Experiment: Test fruits and vegetables to determine water content.

-Hypothesis: Certain food has more saturated fat than unsaturated fat

Experiment: Use the paper bag test to see the fat contents of food samples and learn the difference between saturated and unsaturated fats.

-Hypothesis: Bread has more calories than cheese.

Experiment: Build a simple calorimeter to determine the caloric value of bread, cheese, and other food samples.

Healthy Motion Hypothesis/Experiment Examples:

-Hypothesis: If I practice my reaction time responding to a certain event, the time will improve.

Experiment: Build a test that tests reaction time to the same event and record results over time.

-Hypothesis: The length of a person's legs affects the height and distance they can jump or the speed at which they can run.

Experiment: Find people with varying leg lengths and see how they perform at the defined activities.

-Hypothesis: If I do as many push-ups as I can for 5 minutes every morning for 10 days, I will increase the number of push-ups I can do by 50%.

Experiment: Do pushups every day for 10 days and see if you improve how many you can do in 5 minutes.

Scoring and Winner Selection

Each submission will be scored on the following criteria out of a total of 1,000 points:

- Creativity of Hypothesis and Experiment: 0 to 350 points
- Completeness and Detail of Experiment: 0 to 350 points
- Ability to Conduct Experiment and Describe Results: 0 to 300 points

Winners will be selected based on the highest team scores.

The two (2) highest-scoring teams will each receive a \$750 gift card to Dick's Sporting Goods and a meeting with the Optavia science team to discuss their experiment. The next eight (8) runners up will receive a \$150 gift card to Dick's Sporting Goods. The gift cards can be used to purchase athletic equipment which helps encourage the healthy habit of motion!



Virtual Science Fair Document

The purpose of this challenge is for students to state a hypothesis about *Healthy Eating and Hydration* or *Healthy Motion*, design an experiment to test the hypothesis, and record the results.

Team Name:

Teacher/Parent/Guardian Name:

Teacher/Parent/Guardian Email Address:

School Name:

School District:

Grade:

Title of Game:

Name(s) of Team members involved in Submission:

1. Hypothesis

In 250 words or less, state your hypothesis regarding *Healthy Eating and Hydration* or *Healthy Motion*.

2. Experiment Design

In 750 words or less, describe the experiment that you designed to test your hypothesis. At least two pictures of the experiment are required. Feel free to include more! By submitting these photos, you agree that Legends of Learning and the competition sponsor may use such photographs for marketing purposes related to the Virtual Science Fair, but will not include any personally identifying information.

3. Equipment Needed

In 500 words or less, describe all of the equipment you will need to conduct your experiment and the role each piece played.

For example: I used a stopwatch to time the speed at which I could run a mile each day.

4. Results of the Experiment

In 750 words or less, describe the results of your experiment. Did the experiment confirm your hypothesis? If so, how? If not, why? Did you learn anything unexpected? What would you have changed about your experiment if you had to do it again?

5. Hypothesis Influences

Describe a creative influence for your hypothesis. Why did you choose your topic? In 200 words or less, please describe why you chose the influence.

6. COVID and Healthy Habits

In 250 words or less, describe one Healthy Habit that has been hard to maintain during COVID-related school closures and one new Healthy Habit you started during school closures.

