



## Community Challenge

### Introduction

The Super Health, Super You Community Challenge is an exciting way for students to apply their classroom learning to tackle a health-related issue in their community. Enter and your school could win \$10,000 toward implementing an innovative health solution!

You and your students can choose to focus on one of two challenge strands: Nutrition and Gardens or Physical Activity. This guide provides two categories of classroom activities you can use to plan and complete your challenge entry in a way that complements your existing standards-aligned curriculum. The first category, Nutrition and Garden Challenge, focuses on Science connections. The second category, Fitness Challenge, focuses on Math connections. Both activities can be tailored to fit the needs of students in grades Kindergarten through 5.

The Super Health, Super You Community Challenge provides exciting opportunities to make multidisciplinary connections in your instruction. This guide provides additional subject matter suggestions to help you identify curriculum correlations to what you are currently teaching in your classroom. We encourage you to take advantage of these connections to help students apply their learning to solve a real-world problem!



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### Science Spotlight

## Nutrition and Garden Challenge Classroom Activity

### Overview

In this activity, students begin planning their Nutrition and Garden entry for the Super Health, Super You Community Challenge. The activity connects grade level appropriate, standards-aligned instruction to an entry in which students plan a classroom (or school) garden. However, you and your students are encouraged to be creative and make your entry your own! In the options below, students in grades K–2 identify the parts of plants, learn about the plant life cycle, and discover the needs of plants to live and grow. Students in grades 3–5 build on those concepts to investigate the flow of energy from the sun to plants to humans and connect that understanding to the body’s need for nutrients from food.

### Grade Band:

K–5

### Activity Duration:

Varies

### Essential Questions:

- Do all plants have the same parts?
- What do plants need to live and grow?
- What kinds of plants will grow where I live?
- How do plants and humans get energy from the sun?
- Why do humans need plants?

### Objectives:

Students will:

- Apply science skills to create an entry for the Super Health, Super You Community Challenge
- Identify the parts of plants



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- Explain the needs of plants to live and grow
- Research vegetables that grow in their region
- Illustrate the energy cycle from the sun to plants to humans
- Explain how plants provide nutrients to humans

### Materials:

- Computer with internet access
- Computer projector
- Chart paper
- Markers, crayons, colored pencils
- Rulers
- Paper
- Pencils
- Seed catalogs or online access to home improvement stores
- Optional: Clippings from local newspapers or video segments from local news related to community health issues (particularly around nutrition)
- Optional: Diagram of plant/plant parts

### Procedure: Nutrition and Garden Challenge Activities

Use the following instructional activities (or tailor them to meet the needs of your students) to introduce the Super Health, Super You Community Challenge. Select options from the list to help you and your students develop your entry for the Nutrition and Garden Challenge.

#### Option 1 (K–5) [30 minutes]:

- Ask students to share what they know about the importance of healthy foods to their health. Ask them to identify healthy plants they eat as part of their regular diet.



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- Ask students to think of reasons people might not eat healthy foods, particularly vegetables and fruits. *Possible answers may include lack of access, lack of awareness about the benefits, and lack of interest/preference.*
  - For K–2 students, share a local issue related to healthy food access, awareness, or interest. Consider having video clips from the news or newspaper articles to share to help them understand the issue.
  - For 3–5 students, extend the conversation by asking them if they are aware of any issues related to food access, awareness, or interest in their community. *Possible answers may include lack of grocery stores nearby, expense of healthier foods, people do not know how to cook healthy foods, people are not interested in healthy foods.*
- Introduce the Super Health, Super You Community Challenge. Explain that the challenge asks them to come up with a way to address the community issue they identified. If their entry is selected, they can win funding to implement their idea! And they can use information they are already learning (or have learned) to help them create their entry.
- Engage students in a conversation about how planting and maintaining a class (or school or community) garden might solve one or more of the community issues they identified.
  - Have students discuss the following questions (provide support as needed depending on the age/grade level of your students):
    - What community issue related to health or healthy foods do we want to help solve?
    - What do we hope to achieve by planting a garden? How is our garden helping the community? What is our goal?
- Explain to students that they will be planning a garden, but first they need to make a few decisions:
  - Type of garden they will plan and materials they will need
    - Check out this great resource from the Super Health, Super You website: [DIY Gardening Guide: Plan, Grow, and Harvest Fresh Produce for Healthier Eating!](#) This DIY Gardening Guide walks students and teachers



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through planning and growing a garden. Students will be introduced to the benefits of gardening, learn about photosynthesis, gain an understanding of what plants need to grow, and identify connections between eating whole foods and health. It also identifies different kinds of gardens. For example, students may choose to create a garden on the school grounds, container gardens in the school, or window gardens in the classroom.

- Plants they will include
  - Use the [U.S. Hardiness Zone Finder](#) website to identify whether or not their selections are appropriate for their region.
- Total cost of implementing plan

### Option 2 (K-5) [15 minutes]:

- Engage students in a lesson about the parts of plants.
  - K-2: Roots, stem, leaves
  - 3-5: Roots, stem, leaves, flower buds, shoots
  - Option: Provide a picture of a plant and have students label the parts.
  - Students in grades 3-5 may already know this content. If so, move on to the next activity.
    - Optional resource: [DK find out!: Parts of a plant](#)

### Option 3 (K-5) [20 minutes]:

- Teach students about the needs of plants to live and grow.
  - K-2: Sunlight, water, air, soil (nutrients)
  - 3-5: Sunlight, water, air (carbon dioxide), soil nutrients (nitrogen, phosphorus, potassium), space, time, and appropriate climate



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- Option: Have students draw a picture of a plant growing in soil and then draw arrows and write labels to show how the plant gets everything it needs to live and grow.
- Engage students in a lesson about the life cycle of plants.
  - K–2: Seed, plant grows, plant flowers, plant produces fruit, plant releases seeds, plant dies
  - 3–5: Seed germinates, seedling grows, plant grows taller/larger, plant grows flowers, flowers are germinated by pollinators, fruit develops, fruits produce seeds, plant dies
  - Option: Have students illustrate or act out the life cycle of plants.
    - Optional resource:  
[National Geographic Kids: The Life Cycle of Flowering Plants.](#)

### Option 4 (3–5) [20 minutes]:

- Conduct a lesson on photosynthesis to help students understand how plants use energy from the sun to create their own food. Humans then eat those plants. Help students make connections between the energy flow from the sun to plants to humans and the body's need for nutrients from food.
  - Check out these fun activities from the Super Health, Super You website to help students learn about "eating the rainbow": [Fresh Foods Fuel Fitness](#) and [Healthy Food Festival!](#)
  - Optional resources: [Britannica: Photosynthesis](#); [Photosynthesis Education](#); [USDA MyPlate Tip Sheets](#); [Britannica: Food and Nutrition](#)



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### Create Your Entry!

Now that students have selected plants, understand the life cycle and needs of plants, and discovered how energy flows from the sun through plants to their bodies, work with them to create their entry for the Super Health, Super You Community Challenge. They have the opportunity to win \$10,000 to fund their project and make a real difference in their community!

***See the challenge information at the end of this document (and the Super Health, Super You website) for detailed information on how to create the entry.***

### National Standards

Next Generation Science Standards

#### Grades K–2

- **LS1.A: Structure and Function**

All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow.

- **LS3.B: Variation of Traits**

Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways.

- **LS4.D: Biodiversity and Humans**

There are many different kinds of living things in any area, and they exist in different places on land and in water.

#### Grades 3–5

- **PS3.D: Energy in Chemical Processes and Everyday Life**

The energy released [from] food was once energy from the sun that was captured by plants in the chemical process that forms plant matter (from air and water).

- **LS1.C: Organization for Matter and Energy Flow in Organisms**

Food provides animals with the materials they need for body repair and growth and the energy they need to maintain body warmth and for motion. (secondary)



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### Math Spotlight: Fitness Challenge Classroom Activity

#### Overview

In this activity, students begin planning their Physical Activity entry for the Super Health, Super You Community Challenge. The activity connects grade level appropriate, standards-aligned instruction to an entry in which students plan a fitness course for their school grounds. However, you and your students are encouraged to be creative and make your entry your own! In the activities below, students in grades K-2 gain practice in geometry as they identify the ideal shape for a running track and map out a fitness course inside the track. With the teacher's support, they gather data about how long it takes them to run the fitness course and track their times on a table or line plot. Students in grades 3-5 build on those skills by increasing and decreasing the difficulty of their fitness track using what they know about angles. They apply skills in operations by calculating the expected price of their project and share all of the information they've gathered in their challenge entry.

#### Grade Band:

K-5

#### Activity Duration:

Varies

#### Essential Questions:

- How can we use mathematics to improve our physical fitness?
- What is the best shape for running tracks? Why?
- How can we use mathematics to create a budget?
- How can we use what we know about math to increase or decrease the difficulty of an activity?



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### Objectives:

Students will:

- Apply mathematics skills to create an entry for the Super Health, Super You Community Challenge
- Investigate the best shape and length for a running track
- Measure the amount of time it takes to perform a task
- Collect and organize data on a table
- Graph data on a line plot
- Solve addition and subtraction story problems
- Calculate area and perimeter
- Solve problems involving fractions
- Use mathematical data and solutions to adjust and improve their plans

### Materials:

- Computer with internet access
- Computer projector
- Markers, crayons, colored pencils
- Rulers
- Paper
- Pencils
- Graph paper
- Chart paper



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### Optional Materials:

- Wooden plank, 6+ feet long
- Chairs of different heights
- Cones
- Rope
- Masking tape
- Stopwatch
- Other materials to create practice running track and fitness course

### Resources for the Teacher:

These resources are provided to help you prepare for the activities below and to give you ideas to share with students. If you plan to share any of these websites with students, please review and vet them in advance.

- [How to Build an Epic Ninja-Style Obstacle Course in Your Backyard](#)
- [How to Make a Great Living Room Obstacle Course](#)
- [25 Easiest Low-Prep Obstacle Courses for Kids](#)
- [Youth Fitness: Cone Obstacle Course](#)
- [How to Design an American Ninja Warrior Course Like a Pro](#)
- [Pinterest: A great site for inspiration and ideas](#)

### Procedure:

#### Physical Activity

Use the following instructional activities (or tailor them to meet the needs of your students) to introduce the Super Health, Super You Community Challenge. Select activities from the list to help you and your students develop your entry for the Physical Activity Challenge.



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### Option 1 (K–5) [30 minutes]:

- Ask students to share what they know about physical fitness. Use questions such as the following to prompt students' thinking:
  - Why do you think we have Physical Education in school?
  - Why is it important for us to be physically active?
  - What are some ways to be physically active? (Prompt students to think of a range of activities, such as running, tennis, baseball, basketball, weight lifting, dance, gymnastics, or walking.)
- Ask students to think of reasons people might not maintain physical fitness or stay active. *Possible answers may include lack of time, lack of interest or awareness, lack of access to a gym or a place to work out/play.*
  - For K–2 students, share a local issue related to health and physical fitness. Consider having video clips from the news or newspaper articles to share to help them understand the issue.
  - For 3–5 students, extend the conversation by asking them if they are aware of any issues related to health or physical fitness. *Possible answers may include lack of parks/gyms/tracks and so on, lack of awareness about the benefits of physical fitness, people are too busy to work out, local gyms are too expensive for most people.*
- Introduce the Super Health, Super You Community Challenge. Explain that the challenge asks them to come up with a way to address the community issue they identified. If their entry is selected, they can win funding to implement their idea! And they can use information they are already learning (or have learned) to help them create their entry.
- Explain that a gym is not necessarily needed to maintain physical fitness.
  - Ask, "Have any of you seen the shows where people try to make it through a challenging course using their physical strength and balance?" Allow students to respond.
  - Say, "Imagine if we could make our own track. We could solve some of the problems we talked about."



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- Engage students in a conversation about how they could create a fitness course to make physical activity fun and accessible for people in their community. Ask students to think about where they might put their fitness course and whether they could make use of any existing features (e.g., hills, sandpit, grassy field).
- Explain to students that their entry for the Super Health, Super You Community Challenge will be a running track and fitness course design. To prepare for the challenge, they will need to make decisions about the length of the track and course, what kinds of activities to include, what materials they will need, and a proposed budget.

### Option 2 (K–5) [30 minutes]

- Engage students in an activity in which they determine the best shape for their track.
  - Ask students to share their initial thinking. Point out that runners want to be able to run quickly and make smooth turns without slowing down too much or getting hurt.
  - Take students outside or into the school gymnasium to try out shapes for their track.
    - Option: Use cones, masking tape, or sticks and string to lay out four courses: a square, a triangle, a circle, and an ellipse.
  - Have students test the tracks, then discuss which shape made it the easiest to run quickly and turn smoothly. Students should identify either the circle or the ellipse, since neither shape has sharp corners/turns.

### Option 3 (K–5) [30 minutes]

- Conduct activity to help students identify obstacles/challenges they want to include in their fitness course. To facilitate the planning, have students brainstorm activities that involve climbing, throwing, jumping, crawling, quick-stepping, balancing, and lifting.



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### Option 4 (K–5) [Varies]

- Engage students in a lesson that requires them to connect the math skills and concepts they have learned or are currently learning to their fitness course. Suggestions are below:
  - K–5: Measure how long the running track should be to make it challenging but achievable. Plot out a practice track and help students time each other as they run around the track. Have students track the times on a table (K–2) or a line plot (3–5). Adjust the track length as needed.
  - K–5: Create addition and subtraction story problems for students to solve involving their fitness course. Include questions related to the data they collected for their running track.
    - For advanced students, have them create their own story problems and share them with other students.
  - K–2: Have students draw their fitness course on graph paper and discuss the space needed for their course.
  - 3–5: Have students calculate the area and perimeter needed for each component of their fitness course, as well as their overall fitness course, to determine how much space they will need for their project. Adjust sizes as needed.
  - 3–5: Have students test and adjust the difficulty of their climbing component by trying different angles to see which angles are easiest and which are hardest.
    - Option: Have students lean a wooden plank (6 feet or longer) on chairs of various heights. Be sure students support each other and perform the tasks safely.
  - 3–5: Challenge students with fractions concepts related to their fitness course.
    - Option: Challenge students to create a fitness course with 8 components. Half of the components must involve climbing,  $\frac{1}{8}$  must involve jumping,  $\frac{1}{8}$  must involve throwing, and  $\frac{2}{8}$  must involve crawling.



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### Activity 5 (K–5) [30 minutes]

- Help students calculate the total cost of the running track and fitness course using the materials they would like to use.
  - K–2: Provide a sample list of costs and help students use manipulatives to add the numbers together.
  - 3–5: Help students identify sample costs on home improvement websites. Students can work in groups to calculate the expected cost of each component of the fitness course.

### Create Your Entry!

Now that students have planned their running track and fitness course, determined the size of each component, and selected materials for construction, work with them to create an entry for the Super Health, Super You Community Challenge. You have the opportunity to win \$10,000 to fund your project and make a real difference in your school and community! Please ensure all entries are for projects that merit the \$10,000 prize.

***See the challenge information at the end of this document (and the Super Health, Super You website) for detailed information on how to create the entry.***

## Common Core Mathematics Standards

### Grades K-2

- **CCSS.Math.Content.1.OA.A.1**  
Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.1
- **CCSS.Math.Content.1.MD.A.2**  
Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.



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- **CCSS.Math.Content.1.MD.C.4**

Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

### Grades 3–5

- **CCSS.Math.Content.4.NF.B.3.a**

Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.

- **CCSS.Math.Content.4.NF.B.3.b**

Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model.

- **CCSS.Math.Content.4.MD.A.2**

Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.

- **CCSS.Math.Content.4.MD.A.3**

Apply the area and perimeter formulas for rectangles in real world and mathematical problems.

- **CCSS.Math.Content.4.MD.B.4**

Make a line plot to display a data set of measurements in fractions of a unit ( $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{8}$ ). Solve problems involving addition and subtraction of fractions by using information presented in line plots.



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### Additional Suggested Content Connections

There are many ways to make the Super Health, Super You Community Challenge part of your daily instruction. In fact, the challenge can help your students apply their learning in a real-world context that can make a difference in your school and community! Below are just a few suggestions for ways to integrate the challenge in to your academic content. Be creative and have fun!

#### Science:

- Soil science
- Consumers and producers
- Environment and conservation

#### Math:

- Calculating shape, perimeter, and area
- Calculating needs for water, soil, seeds, and fertilizer
- Establishing and maintaining a schedule for planting, weeding, watering, cultivating
- Fractions (dividing garden or fitness course into equal parts)

#### Health:

- Nutrition
- Fitness
- Self-care
- Goal setting and monitoring
- Responsible decision-making
- Encouraging others

#### ELA:

- Reading how-to articles, websites, and books
- Garden journal

# Super Health Super You

A Novo Nordisk School Program



## Community Challenge

- Fitness journal
- Publishing results
- Creating and delivering presentations

### Social Studies:

- Planting zones (maps, keys)
- Family recipes; cultural connections to foods
- Mapping community for fitness challenge
- Connecting to local organizations for assistance/support

### 21st Century Skills:

- Collaboration
- Problem-solving
- Communication
- Creativity
- Self-evaluation
- Progress monitoring and course correction



## Community Challenge

### Next Step: Submit Your Entry!

#### WHO CAN ENTER?

A mentor (teacher, school administrator, or school support staff) can submit an entry on behalf of a team of 2 or more students in grades K-5.

#### HOW TO ENTER—4 SIMPLE STEPS!

**STEP 1:** Download the **Super Health, Super You Challenge Guide** to see all of the ways this challenge relates to the curriculum you're already teaching in the classroom! Get inspired by the Nutrition & Gardens activity options OR the Physical Activity options and think about how your students could use this information to tackle a health-related issue in your community.

**STEP 2:** Once you have an idea for your challenge entry, open a user account by registering for the challenge. After you register, you will be able to log in and follow the steps to submit your team's entry.

**STEP 3:** Provide details for your challenge entry which includes:

- Answer 4–5 questions to tell us a bit more about your entry (short answer):
  - Further describe the **problem** your team seeks to solve at the school
  - Identify and describe the **solution** for which your team needs funding
  - Elaborate upon how the solution will be **implemented**, who will **benefit** from it, and **why your team should receive** the funding
  - Make a pledge and commit to making a healthy change in your students' lives and/or your school community and what exactly that change would be (OPTIONAL)
- Provide a **proposed budget** for your team's implementation strategy (sample budget [here](#))
- Optional: Submit creative, supporting documentation (**e.g. photos, drawings, or other creative materials**) helping to make your team's case—**no videos, please!**



## Community Challenge

**STEP 4:** [Submit](#) your team's entry by November 8, 2019 at 5pm ET. Don't forget to review our Contest Rules before submitting, as any failure to comply with the rules will result in disqualification.

You can login and edit your entry as long as you hit the SAVE button at the bottom of the challenge entry form. Note: once you click SUBMIT, your entry is final and **cannot be edited**.

You could win a \$10k grant to positively affect your community! Three winners will be selected from the categories listed below. A grand prize winner will also be selected from these three winners and will receive an in-school assembly in December. Please share the [Challenge Rules](#) with your principal and school administration in advance in the event your school is selected to receive the grant.

**Entries will be accepted through November 8, 2019 at 5PM ET.**