

# "CODE FOR GOOD" CHALLENGE

BROUGHT TO YOU BY PITSCO EDUCATION AND ARDUINO EDUCATION

When you hear the word *code* you might think of a set of instructions or a language that a computer understands. Or, you might picture an endless series of ones and zeroes strung together on an infinite black screen. But consider the phrase *code for good*. What does this bring to mind? Arduino Education's mission is to inspire the scientists and artists of the future, to ensure the next generation of learners has the skills to tackle the challenges that impact our neighborhoods, communities, countries, and planet. This year, in the midst of a global pandemic, Arduino Education and Pitsco Education are joining forces to encourage students to create the change they want to see. Whether this is in the area of health care, sustainability, access to technology, or clean water, we want to challenge students to code for good today to create a brighter future tomorrow.

## CODE FOR GOOD CHALLENGE DESCRIPTION:

Our world's best inventions started as ideas in the minds of inventors who had the vision and drive to make them reality. The Code for Good Challenge is a competition that aims to encourage students to explore and take ownership for solving problems both big and small. Teams will select a challenge they are interested in and create a potential solution that alleviates some aspect of the problem at hand. Participants must use Arduino electronics, in conjunction with any other household items, to develop their solution. Entry is simple. Teams or individuals must create a video of their solution working along with an explanation of how it works and the problem it solves. Then, a mentor, parent, or coach will submit the team entry for review at [Pitsco.com/CodeForGood](https://Pitsco.com/CodeForGood). Be sure to tag Pitsco Education and Arduino Education in your Instagram, Facebook, Twitter, or YouTube entry using **#ArduinoCodeforGood**.

## WHAT MAKES A TEAM?

A team is made up of a supervising adult coach and one or more students ages 13-18. That's right, kids can compete solo but will need a coach who is 18+ to help with the submission process.

## EXAMPLE PROMPT :

Everyone can help avoid the spread of COVID-19 if we wash or disinfect our hands frequently, don't touch our faces, and maintain at least 2 meters (6 feet) between ourselves and other people. I/we want to combat the spread COVID-19 by building and programming an Arduino-based protective measure that ensures social distancing requirements are being followed.

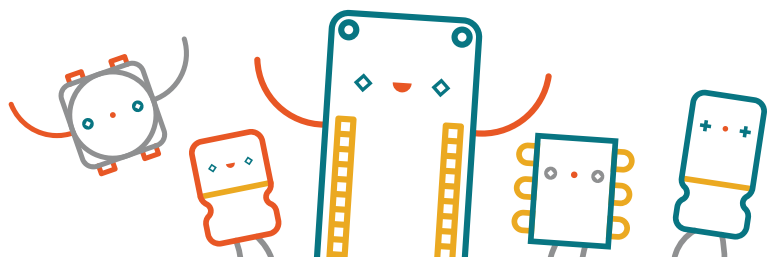
**Check out these cool projects that others created in the Arduino Project Hub!**



**ANTI-FACE-  
TOUCHING  
ALARM CAP**



**AUTOMATIC  
HAND  
SANITIZER**



## CHALLENGE OVERVIEW:

Arduino is about making. It provides the hardware and software to turn your own ideas and inventions into reality.

- First, teams will identify a problem they are interested in and invent a solution for that problem. **Let your imagination go. Be creative. Don't be afraid to dream.**
- Consider what your creation will need to do and how this will positively impact society.
- Plan out your idea and design your solution. Consider the additional materials you will need to create a prototype.
- Next, test your solution and debug your code. Are there improvements you could make to the design? Are there different materials that could be used? Could your code be more efficient? Track your changes and make enhancements accordingly.
- Create a video that shows your invention working. In the video, outline the challenge you are addressing, explain what you have made, and explain how you created it.
- Submit your entry for review. This **must** be done by the team mentor, coach, or parent. Visit [Pitsco.com/CodeForGood](https://Pitsco.com/CodeForGood) and complete the entry form. Be sure to tag Pitsco Education and Arduino Education in your Instagram, Facebook, Twitter, or YouTube entry using **#ArduinoCodeforGood**.

## Necessary Materials to Participate:

Arduino-based electronics and Arduino Software (IDE)

## Recommended Materials:

[Arduino Education Student Kit](#)

[Arduino Education Starter Kit Single](#)

## Judges and Judging Criteria:

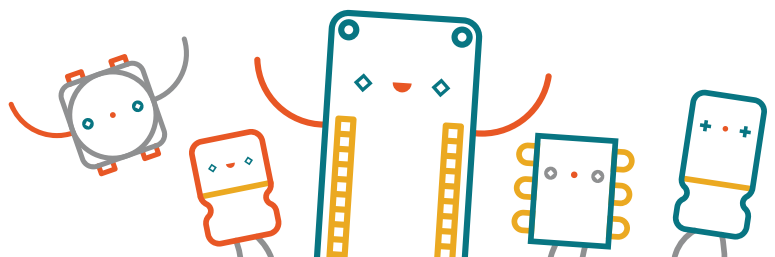
The panel of judges will consist of members from the Arduino Education and Pitsco Education teams.

## Video Criteria:

- Inclusion of Arduino electronics. All entries must contain Arduino hardware.
- Explanation of the problem being solved along with an overview of the solution provided. Why does this problem need solved, and who does it impact?
- Functionality of the solution. Does your model work as intended?
- Creativity of the solution. We want you to dare to dream.
- Impact of the solution. How many people can be positively impacted by your technology?

## Submissions and Deadlines:

- Team mentors, coaches, or parents must enter the team solution at [Pitsco.com/CodeForGood](https://Pitsco.com/CodeForGood).
- All entries are due by midnight on Saturday, October 3, 2020.
- Judging will take approximately 10 business days, and winners will be announced the week of October 20, 2020.
- Prizes will be mailed out shortly thereafter.
- Every team must have a mentor, coach, or parent age 18+. Student participants must be age 13-18.
- Teams are limited to one entry.



## Prizes:

If you are selected as a winner or runner-up, prizes will be provided to all members of the participating team or individual.

### Grand Prize Winner:

- Code For Good trophy
- Code for Good AirPods
- Arduino zipped hoodie
- Arduino beanie
- Arduino T-shirt
- Arduino notebook
- Arduino power bank
- Arduino Education Starter Kit Classroom Pack (value of \$828!) will be given to the team mentor/coach to use in his or her own classroom or to donate to a classroom in need.
- Congratulatory video from Arduino founder David Cuartielles

### First Runner-up:

- Arduino zipped hoodie
- Arduino beanie
- Arduino T-shirt
- Arduino notebook
- Arduino power bank

### Second Runner-up:

- Arduino T-shirt
- Arduino notebook
- Arduino power bank

### Third Runner-up:

- Arduino T-shirt
- Arduino notebook

All entrants will receive an "I Code for Good" sticker.

## REFERENCES AND LINKS:

- [What Is Arduino?](#)
- [Getting Started With Arduino](#)
- [Arduino Boards:](#) These boards are able to read inputs – such as a light on a sensor, a finger on a button, or a Twitter message – and turn it into an output – such as activating a motor, turning on an LED, or publishing something online.
- [Arduino Software \(IDE\):](#) You can tell your board what to do by sending a set of instructions to the microcontroller on the board. To do so, use the Arduino programming language and the Arduino Software (IDE).
- [Arduino Project Hub:](#) This website contains thousands of do-it-yourself projects that have been built with Arduino. Use the filters at the top to pick a category or topic.

