# Change the World Teacher Guide



What would you do if you could change the world?

## Summary

- Web address: **tynker.com/hour-of-code/change-the-world**
- Coding skill level: **Intermediate**
- Recommended grade level: **Grades K-5**
- Time required: **45 minutes**
- Number of modules: **1 module**
- Coding Language: **Block-based**

## Teacher Guide Outline

**Welcome!**
- How to Prepare

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- Overview
- Getting Started (15 minutes)
- DIY Module (30 minutes)
- Extended Activities

**Going Beyond an Hour**
- Do More With Tynker
- Tynker for Schools

**Help**

# Welcome!

Welcome to Hour of Code! If your students had the power to change the world, what would they do? Would they save endangered animal species? Would they build science labs that anyone can use so we can work together to solve problems? Or would they try to put an end to bullying? In this lesson, students will create their own project that answers the question, "How are you going to change the world?" By the end of this lesson, students will have combined creativity, originality, and coding concepts to create a project about how they hope to positively impact the world.

## How to Prepare

This activity is designed for self-directed learning. Your role will be to help students individually and facilitate as students complete the coding activities on their own. The best way to prepare is to:

1. **Familiarize yourself with the material.** After selecting your Hour of Code lesson (e.g., Change the World), read through the teacher guide and complete the activity before assigning it to students. This will allow you to troubleshoot anything in advance and plan for potential questions from your students.
2. **Get students excited about coding.** Inspire students and get them excited for the Hour of Code event. Here is a link to resources such as inspirational videos and posters from the Hour of Code website: https://hourofcode.com/us/promote/resources#videos
3. **OPTIONAL: Sign Up for a teacher account.** Although an account is NOT required, creating a free teacher account will allow you to access teacher guides, answer keys, and tons of additional resources. You'll also be able to create free accounts for your students, monitor their progress, and see their projects.
4. **OPTIONAL: Create student accounts.** From your teacher account, you can easily create free student accounts for all your students. This will allow them to save their projects and progress, so they can continue coding when they get home! Again, this is not necessary to complete an Hour of Code.
5. **OPTIONAL: Print certificates to hand out.** While signed in to your Tynker teacher account, you can print certificates by clicking on a classroom from your teacher dashboard, clicking the "Gradebook" tab, going to "Hour of Code," and clicking the "Print All Certificates" button. This will only print certificates for student accounts assigned to the selected classroom.

# Activity

To begin Change the World, have your students open a browser tab to this URL:
**tynker.com/hour-of-code/change-the-world**

## Overview

### Objectives
Students will...
- Apply coding concepts to code a project
- Use code blocks to create a project about positively impacting the world

### Materials
- **For web:** Computers, laptops, or Chromebooks (1 per student)
- **For mobile:** iPads or Android tablets (1 per student)

### Vocabulary
- **Code:** The language that tells a computer what to do
- **Sequence:** The order in which steps or events happen
- **Command:** A specific action or instruction that tells the computer to do something

### Standards
- **CCSS-ELA:** RI.K.10, SL.K.1, RI.1.10, SL.1.1, SL.2.1, RI.3.5, SL.3.1, RF.4.4.A, SL.4.1, RF.5.4.A, SL.5.1
- **CCSS-Math:** MP.1
- **CSTA:** 1A-AP-09, 1A-AP-10, 1A-AP-11, 1A-AP-14 ,1A-AP-15, 1B-AP-10, 1B-AP-12, 1B-AP-15, 1B-AP-17
- **CS CA:** K-2.AP.10, K-2.AP.11, K-2.AP.12, 3-5.AP.10, 3-5.AP.11, 3-5.AP.12, 3-5.AP.17
- **ISTE:** 1.c, 1.d, 4.d, 5.c, 5.d, 6.b, 7.c

## Getting Started (15 minutes)

1. Tell students that they are going to code a project on Tynker about how they hope to positively impact the world.
2. Encourage students to discuss what issues matter to them: Is it the environment? Saving animals? Education? Helping people? Putting an end to bullying?
3. Use your projector and click the links below the pictures to display some examples of projects made by the Tynker Community:
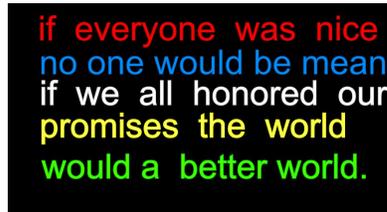


"Save the World!"        "Save the World to Make it Better"        "Change The World"
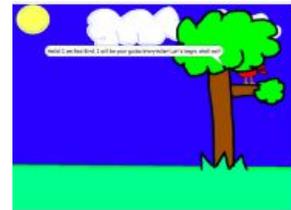
## DIY Module (30 minutes)

This lesson has one DIY (do-it-yourself) module. Facilitate as students complete the Change the World module on their own:

1. **Change the World (DIY)**
- In this DIY, students will NOT have step-by-step directions. They will create their own project from a blank template.
- Encourage students to outline their ideas before using the code blocks. We suggest your students…
  > **1. Decide on an issue**. Is it saving endangered species? Pollution?
  > **2. Brainstorm project ideas.** Will the Actors talk? Are your students going to create a presentation that changes backgrounds?
  > **3. Decide which Actors and backgrounds to use.**
  > **4. Get coding!**
- Do intermediate coders need help using the code blocks? Here's a link to Tynker videos that demonstrate how to add a scene, add an Actor, add sound, and draw an Actor: https://www.tynker.com/support/videos.

## Extended Activities

### Show and Tell!

1. Encourage students to share their Tynker projects with the rest of the class.
2. Use your projector to display their project.

### Discussion

Reflect on today's coding adventure by leading a discussion with your students:
- What was their favorite part about today's Hour of Code activity? Why?

- Who can list some of the code blocks they used and describe how they applied it to their project?
- Why is it important to care about how we treat ourselves and how we treat other people? What does it mean to practice kindness to ourselves and others?
- Who can list human actions that negatively impact the environment? Why should we care about the environment?

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# Going Beyond an Hour

If your students enjoyed an Hour of Code, they're sure to enjoy the rest of what Tynker has to offer! Tynker offers a complete premium solution for schools to teach Computer Science. Over 400 hours of lessons are available to take K-8 students from block coding to advanced text coding. We offer tons of resources for teachers, including comprehensive guides, free webinars, and a forum to connect with other educators.

### More Hour of Code Activities
Tynker offers many other tutorials for the Hour of Code, including STEM Hour of Code lessons that you can integrate into the subjects you already teach. Check out the main Tynker Hour of Code page to see all the tutorials!

## Do More with Tynker

With Tynker, kids don't just acquire programming skills--they can explore the world of possibilities that coding opens up. Tynker has several interest-driven learning paths that make coding fun, both inside and outside the classroom:

- **Coding and Game Design:** Your students can use Tynker Workshop, a powerful tool for crafting original programs to make games, stories, animations, and other projects. They can even share their work with other kids in the Tynker Community.
- **Drones and Robotics:** Tynker integrates with connected toys, including Parrot drones and Lego WeDo robotics kits, so kids can see their code come to life.
- **Minecraft:** Tynker integrates with Minecraft so your students can learn coding through a game they love. Tynker offers skin and texture editing, as well as a custom Mod Workshop that lets kids try their original code in Minecraft.

## Tynker for Schools

Used in over 80,000 schools, our award-winning platform has flexible plans to meet your classroom, school, or district needs. All solutions include:

- Grade-specific courses that teach visual coding, JavaScript, Python, robotics and drones
- A library of NGSS and Common Core compliant STEM courses that are great for project-based learning
- Automatic assessment and mastery charts for whole schools and individual classes and students

- Easy classroom management with Google Classroom and Clever integration
- Professional training, free webinars and other teacher training resources

**Need help getting Tynker started at your school?** Contact us to learn more about teaching programming at your school with Tynker!

# Help

Need help? Below you'll find answers to frequently asked questions about Hour of Code and using Change the World.

## What is Hour of Code?

The Hour of Code is a global learning event in which schools and other organizations set aside an hour to teach coding. No prior coding experience from you or your students is needed! The event is held every December during Computer Science Education Week. You can also organize an Hour of Code year-round. The goal of the Hour of Code is to expand access to computer science education for people of all backgrounds. Learning computer science helps students develop logic and creativity, and prepares them for the changing demands of the 21st century. Tynker has been a leading provider of lessons for the Hour of Code since the event began in 2013. Since then, over 100 million students from 180 countries have finished an Hour of Code.

## How do I prepare for Hour of Code?

1. **Familiarize yourself with the material.** After selecting your Hour of Code lesson (e.g., Change the World), read through the teacher guide and complete the activity before assigning it to students. This will allow you to troubleshoot anything in advance and plan for potential questions from your students.
2. **Get students excited about coding.** Inspire students and get them excited for the Hour of Code event. Here is a link to resources such as inspirational videos and posters from the Hour of Code website: https://hourofcode.com/us/promote/resources#videos
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clicking the "Print All Certificates" button. This will only print certificates for student accounts assigned to the selected classroom.

## How do I open Change the World?

Have your students open a browser tab to this URL:
tynker.com/hour-of-code/change-the-world

## Who is this activity for?

Change the World is intended for students in grades K-5 with some coding experience.

## What will my students learn?

Students will combine creativity, originality, and coding concepts to create a project about how they hope to positively impact the world. Students will also participate in discussions about ethics and morals (e.g., the importance of practicing kindness to ourselves and others, why it is important to care about our environmental impact, the impact our actions have on others). In this process, students will discuss character-building topics, develop debugging skills, and use logical reasoning skills.

## What devices do I need?

- **For web:** Computers, laptops, or Chromebooks (1 per student) with an internet connection and an up-to-date browser
- **For mobile:** iPads or Android tablets (1 per student) with an internet connection
- If not enough devices are available, students can work in pairs on the same device

## Do I need to create a Tynker Account for my students?

No, you do not need to create a Tynker account for your students.

## How can Tynker help me manage my Hour of Code?

Tynker has several free features for registered teachers that will help you manage your Hour of Code. If you set your students up with a Tynker classroom, you will be able to track their progress and print Hour of Code completion certificates for them to keep.

# How do my students code Actors?
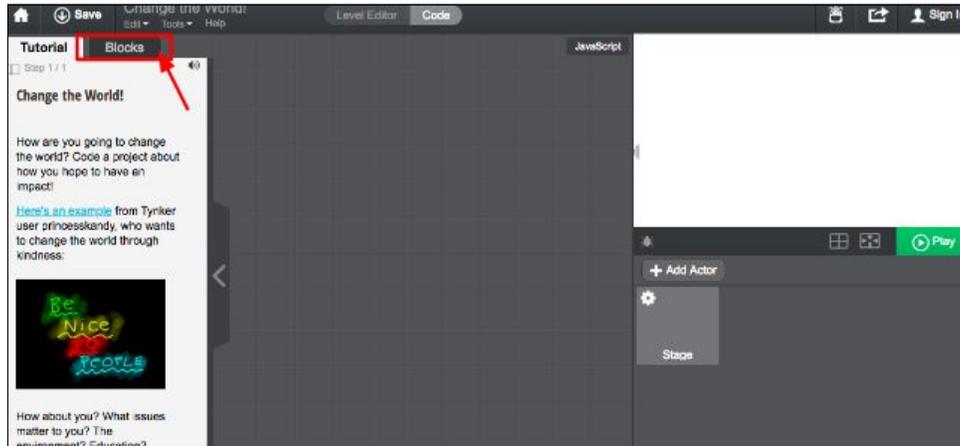


The Change the World DIY module includes a workspace for students to code their project. The section on the left is a tutorial tab that provides directions to code a project about how students hope to positively impact the world. The blocks tab includes all the coding blocks. Students will need to drag blocks from the blocks tab and place it on the center coding area to code Actors and the Stage.

**Note:** Students will need to first add Actors and a background to the Stage before they start using the code blocks.

# How can I contact the Tynker support team?

If you have any issues or questions, send us an email at support@tynker.com