

## Teacher Guide: Hour of Code with the Tynker App

<https://www.tynker.com/hour-of-code/mobile>

**Time: 60 minutes**

**Grades: 1+**

**Difficulty: Beginner**

It's easy to host your Hour of Code on iPads or Android tablets using the free Tynker app. Students learn the basics of coding and computational thinking by completing one of our six fun puzzle sets. Then you can choose from over 100 beginner, intermediate, and advanced tutorials to assign your class based on the age, experience level, and interests of your students. These tutorials come with step-by-step instructions to create drawing, music, animation, storytelling, physics, and arcade game projects. When students are done, they can publish their projects and explore what other kids are making in our fully moderated safe community.

**Activity Requirements:** This activity requires iPads or Android tablets with the Tynker App. Students can work offline without a WiFi connection. If you plan to use Tynker offline, open the app and visit all the directories in the Workshop to download the activities to the tablet.

### Download Links



**Tynker for iPads from Apple App Store**

<https://itunes.apple.com/us/app/tynker-learn-to-code.-program/id805869467?mt=8>



**Tynker for Android-Enabled Tablets from Google Play Store**

<https://play.google.com/store/apps/details?id=com.tynker.Tynker>

**Student Prerequisites:** Students need to be at least beginner readers. Tynker is a drag-and-drop visual programming language and the blocks have words on them like "Walk" or "Jump" that students need to read. No prior coding experience is required.

### How to Prepare

- **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.
- **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.
- **Try It Out** - Play around with the Tynker app before your Hour of Code to familiarize yourself with the puzzles, workshop, and community.
- **Update Your App** - Make sure that you have the most recent version of the Tynker App downloaded. Older versions may not have all the necessary content to run this year's Hour of Code.



## Suggested Activities by Grade

	Grades K-2		Grades 3-5		Grades 6+
	<ul style="list-style-type: none"> <li>- Solve Candy Quest</li> <li>- Design a Fun Character</li> <li>- Make a Holiday Card</li> <li>- Write a Knock Knock Joke</li> </ul>		<ul style="list-style-type: none"> <li>- Complete Dragon Journey</li> <li>- Make a Piano</li> <li>- Program Space Chickens</li> <li>- Create Spin Draw</li> </ul>		<ul style="list-style-type: none"> <li>- Solve Lazer Racer</li> <li>- Build Gravity Tilt Game</li> <li>- Make Arcade Shooter Game</li> <li>- Program a Kallidoscope</li> </ul>

We've created sample lesson plans for three different age brackets, but we encourage you to customize these plans depending on your students' interests, or even let them choose their own projects to work on. If your students are new to programming, we highly recommend starting with one of our six puzzle sets before diving into the workshop.

### Grades K-2

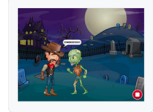
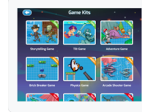
1. **Candy Quest - 20 minutes.** Solve at least 10 levels of this puzzle set to understand basic repetition with loops and conditional logic (21 levels total).
2. **Character Animation - 10 minutes.** Follow the tutorial to easily build and animate characters using Tynker's Character Creator and create a story (in the Animation directory).
3. **Greeting Card - 10 minutes.** Follow the tutorial to program an interactive greeting card with tons of options for the background, the message, and other figures in the scene (in the Storytelling directory).
4. **Joke - 20 minutes.** Follow the tutorial to write a knock-knock joke. Students can use the suggested joke, but encourage them to come up with their own! (in the Storytelling directory)

### Grades 3-5

1. **Dragon Journey Part 1: Enchanted Forest - 20 minutes.** Solve at least 10 levels of this puzzle set to understand basic repetition with loops and conditional logic (35 levels total).
2. **My Piano - 10 minutes.** Follow the tutorial to code a virtual piano, then play a tune! (in the Music directory)
3. **Space Chicken - 10 minutes.** Follow the tutorial to learn the basics of the Tynker Physics Engine and create a scene with bouncing space chickens (in the Physics directory).
4. **Spin Draw - 20 minutes.** Follow the tutorial to create a program that draws a spinning image around the screen (in the Hour of Code directory).

### Grades 6-8

1. **Lazer Racer Part 1: Shapes - 20 minutes.** Solve at least 10 levels of this puzzle set to understand basic repetition with loops and conditional logic (24 levels total). These puzzles review math concepts like shapes and angles.
2. **Gravity Tilt - 10 minutes.** Follow the tutorial to learn how to program objects to move when you tilt your screen (in the Physics directory).
3. **Ship Blasters - 20 minutes.** Follow the tutorial to learn how to program a full arcade shooter game (in the More Hacks directory).
4. **Kaleido - 10 minutes.** Follow this tutorial to learn how to make a project with a kaleidoscope drawing effect (in the More Hacks directory).



### Share Your Work! (Optional)

Students can publish their mobile projects to a [fully moderated community](#) on the Tynker app. After they create a project, they can publish it to the Tynker community. They can also visit the Tynker community to get inspired by what other kids have made, see how their projects work, and remix these projects. This requires an Internet connection.

### Puzzle Solutions

- Candy Quest: <https://www.tynker.com/app/solutions/codeys-quest-answer-keys.pdf>
- Monster High: <https://www.tynker.com/app/solutions/monster-high-answer-keys.pdf>
- Crash Course: <https://www.tynker.com/app/solutions/crash-course-answer-keys.pdf>
- Lost in Space: <https://www.tynker.com/app/solutions/lost-in-space-answer-keys.pdf>
- Dragon Journey: <https://www.tynker.com/app/solutions/dragon-journey-answer-keys.pdf>
- Lazer Racer: <https://www.tynker.com/app/solutions/lazer-racer-answer-keys.pdf>



### Hour of Code Certificate

Be sure to download a personalized certificate for your students when they complete this activity.

### Standards Mapping

CCSS ELA: RI.3.3, W.3.6, RI.4.5, RI.4.3, RI.5.10, RST.6-8.4, RST.6-8.7, RST.9-10.5, RST.11-12.3

CCSS Math: MP.3.2, MP.3.8, MD.4.5, NF.4.7

CSTA: L1:6.CT.1, L1:6.CPP.5, L1:6.CPP.6, L2:9.CT.1, L2:9.CT.3, L2:9.CT.5, L2:9.CT.12, L2:9.CPP.3, L2:9.CPP.5