Barbie™ Pet Vet

Teacher Guide

Activity Facts

- Web Address: **tynker.com/hour-of-code/barbie-pet-vet**
- Coding skill level: **Beginner**
- Recommended grade level: **Grades K+ (Reading skills required)**
- Time Required: **30 Minutes**
- Number of puzzles: **17**
- Coding language: **Tynker Visual Blocks, Python, JavaScript**
- Localization: **English**

Welcome!

Welcome to the Hour of Code 2017! If you're new to Tynker, check out our Hour of Code page to see all Tynker activities.

What is Barbie™ Pet Vet?

The Barbie™ Pet Vet programming experience is designed for beginners (grades K and up). It gradually introduces young learners to basic programming concepts by casting them as veterinarians alongside Barbie. Younger kids solve Pet Vet puzzles in visual programming blocks, while older kids can switch to more advanced programming languages such as JavaScript or Python within the same Pet Vet experience.

What will my students learn?

The coding concepts covered in this activity are Sequencing, Loops, and Conditionals. The activity maps to the following standards:

- **CCSS-ELA**: RF.K.1, RF.K.4, RF.1.4.A, RF.2.4.A, RF.3.4.A, RF.4.4.A
- **CCSS-Math**: MP.1, K.CC.B.4, K.CC.B.5
- **CSTA**: 1A-AP-09, 1A-AP-10, 1A-AP-11, 1A-AP-14, 1B-AP-10
- **CS CA**: K-2.AP.10, K-2.AP.12, K-2.AP.13, 3-5.AP.10, 3-5.AP.12, 3-5.AP.13, 3-5.AP.17
- **ISTE**: 1.c, 1.d, 4.d, 5.c, 5.d

What devices do I need?

Each student needs to have a desktop computer, laptop computer, or Chromebook with an internet connection and an up-to-date browser. No downloads are required. If not enough devices are available, students can work in pairs on the same device.

How should I prepare to teach Barbie™ Pet Vet?

The best way to prepare for an Hour of Code is to know the activity. Take some time to try Barbie™ Pet Vet on your own beforehand.

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 through Barbie™ Pet Vet and print certificates for them to keep. For more information, see the Classroom Setup section of this guide.

Activity Details

This activity is designed for self-directed learning. You will not have to lead your class through Barbie™ Pet Vet. Your goal will be to help students out individually.

Tynker puzzles increase in complexity, and students may need help at certain points. The best way to help students proceed is to give them hints or clues that allow them to arrive at the answers themselves. If you give correct answers directly, your students won't learn as much as they otherwise could.

Your students will be using logical skills and computational thinking to manipulate code. Barbie™ Pet Vet incorporates the following concepts:

Sequencing: A sequence is the order in which instructions are performed. By altering the sequence of commands, your students will learn that the order of events matters.

Loops: A loop is a set of code that gets repeated a certain number of times or until a certain condition is met. As they work with loops, your students will learn to analyze patterns.
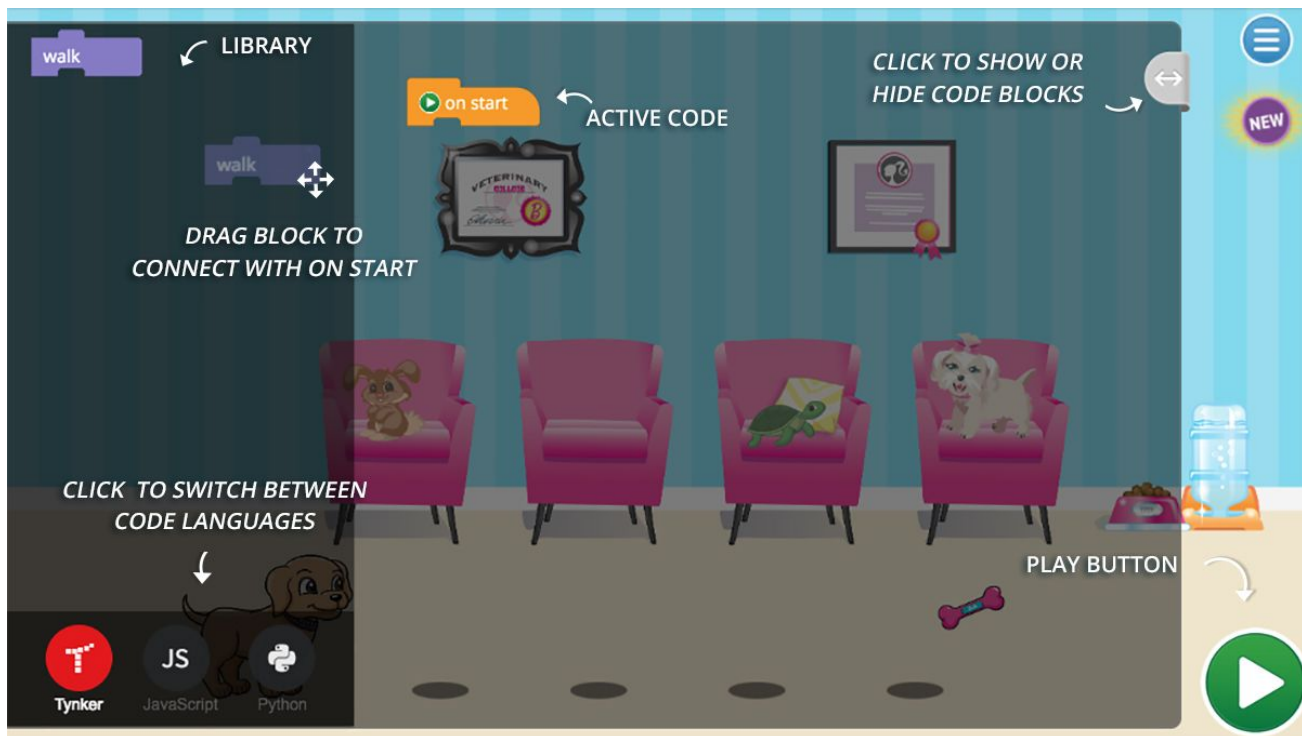
Conditionals: A condition is something that can be checked to see if it is true or false. As they use conditional statements, your students will learn to consider multiple scenarios.

How to Complete the Puzzles

Getting Started

To begin Barbie™ Pet Vet, have your students open a browser tab to this URL:
tynker.com/hour-of-code/barbie-pet-vet

The Workspace

In each puzzle, an overlay will appear containing the workspace. The darker section on the left is the library and shows which commands are available for use for this particular puzzle. In this situation, the only command available is the "walk" command. The lighter section on the right is the active code area that your students will place their working code in. In this situation, there is already an "on start" in the active code area. To add a command to the active code, simply drag the command from the library and connect it to a previous command in the active code area.

Visual Code Blocks, JavaScript, and Python

In Tynker, a command is a block representing a piece of code that your students can use to make their program. The command has three modes that can be selected at the bottom left of

the workspace: **Tynker visual blocks, JavaScript,** and **Python**. For younger students, we recommend using Tynker visual blocks, but students who want a challenge may want to use the other languages.

Running Your Code

To run the code, your students should click on the play button on the bottom right of the screen. This will remove the workspace and the events should follow the commands that your students added to the active code area.

If your students try to run code that does not match the solution, an "Oops" message will appear, along with a helpful hint.

Common Issues

- Disconnected commands
  - Make sure your students have connected all of their commands and that the commands are connected to the "on start" command. Code that is not connected to "on start" will not be executed.
- Using too few or too many commands
  - Drag more commands over if the pet does not reach the end. If your students accidentally add too many commands or a command that they do not want, then they can drag the command from the right to the left and a trash can symbol will show up. Once they release the command, the command will be removed from their code.
- Incorrect sequencing
  - For all of the puzzles, there are particular actions that have to happen at particular times. If your students are struggling, suggest that they read through the commands one by one and trace what will happen to their pet with their finger.
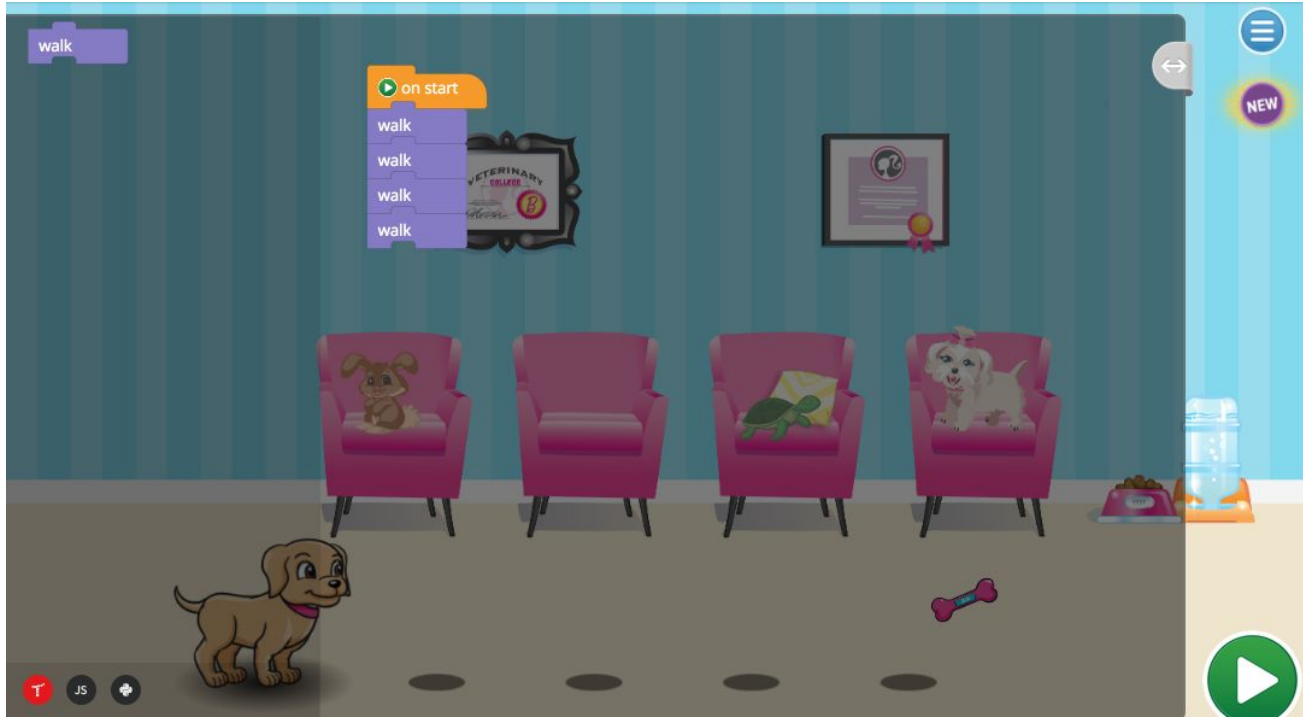
Answer Key

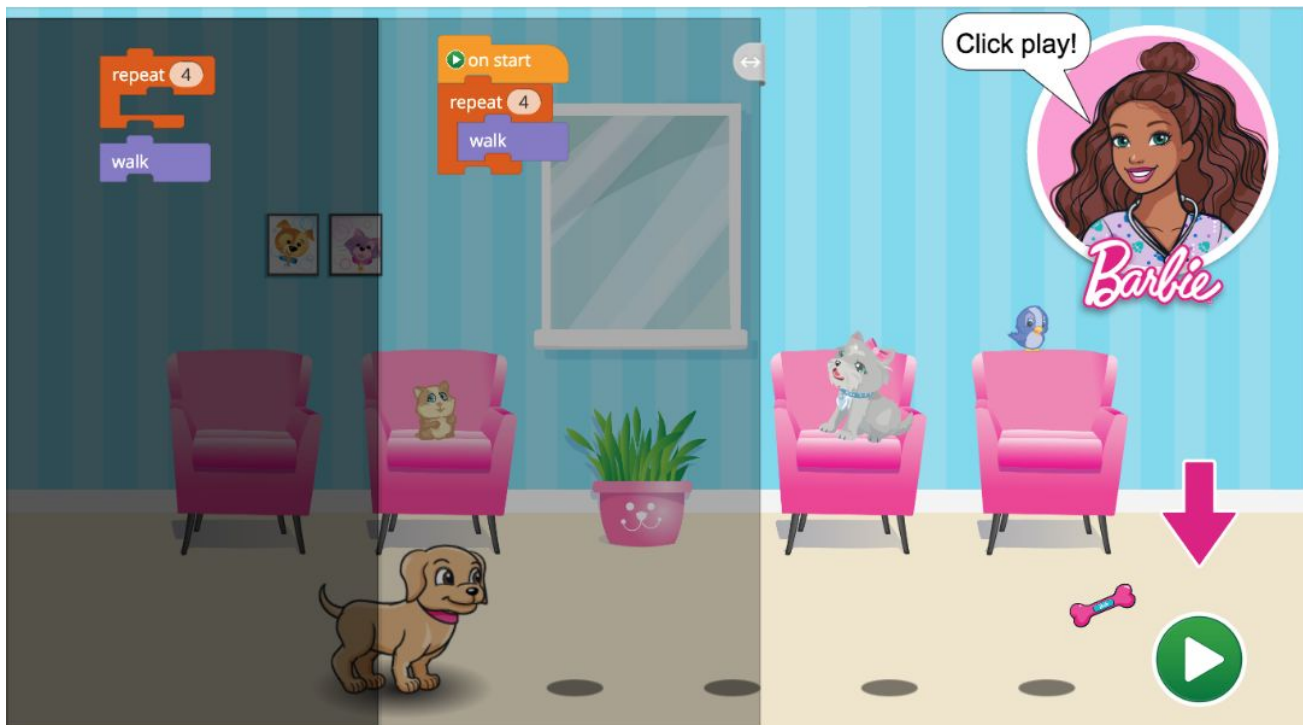### Module 1 - Character Selection
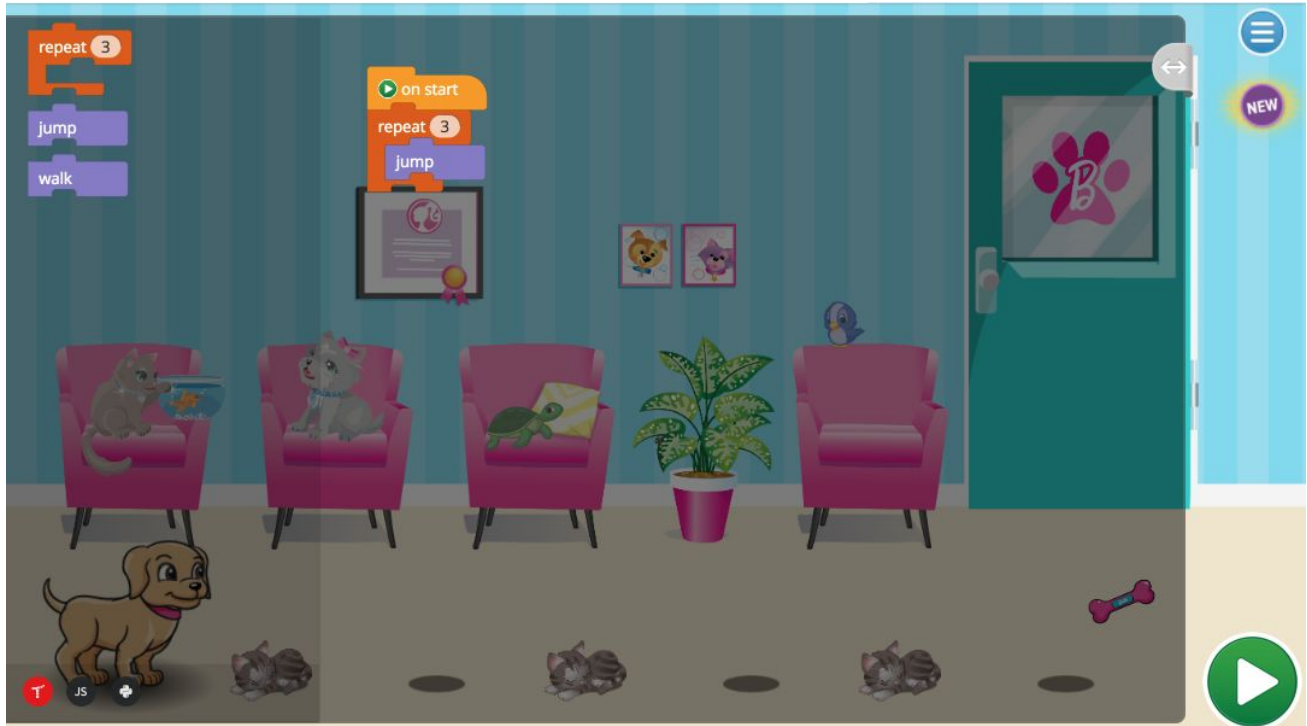

Module 3 - Puzzle
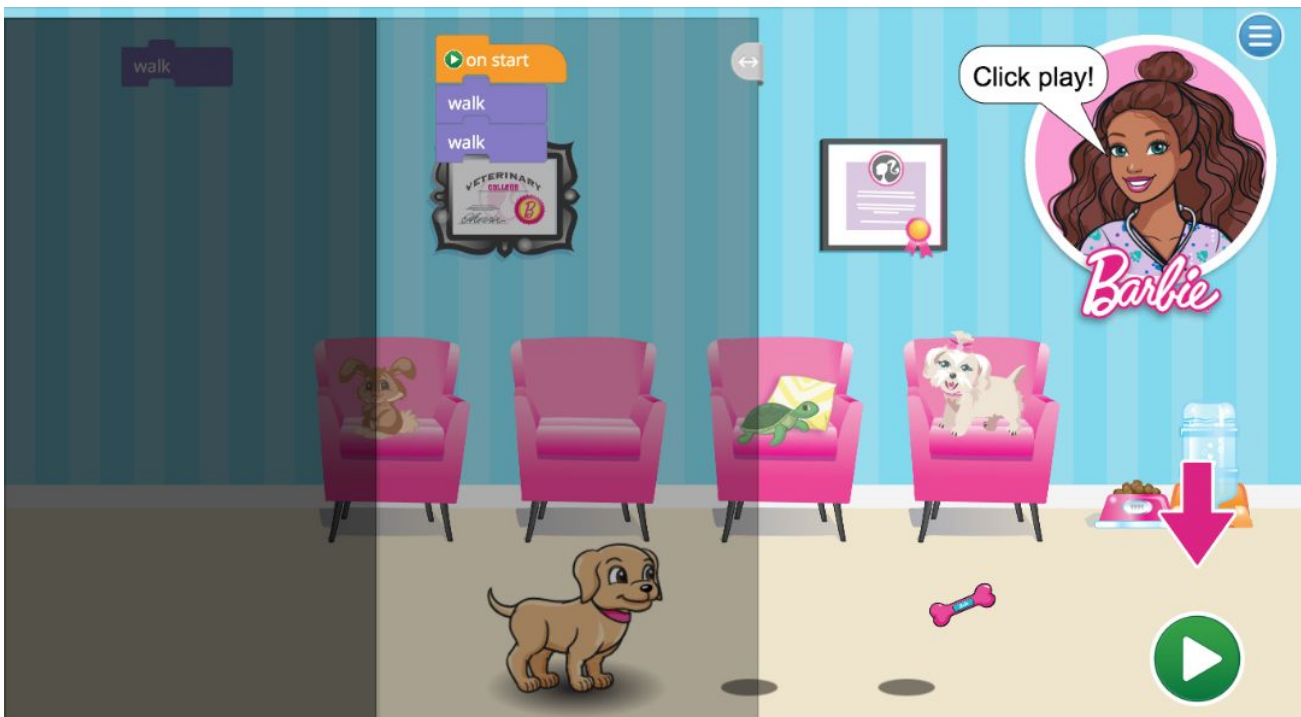
Module 4 - Puzzle

Module 5 - Puzzle
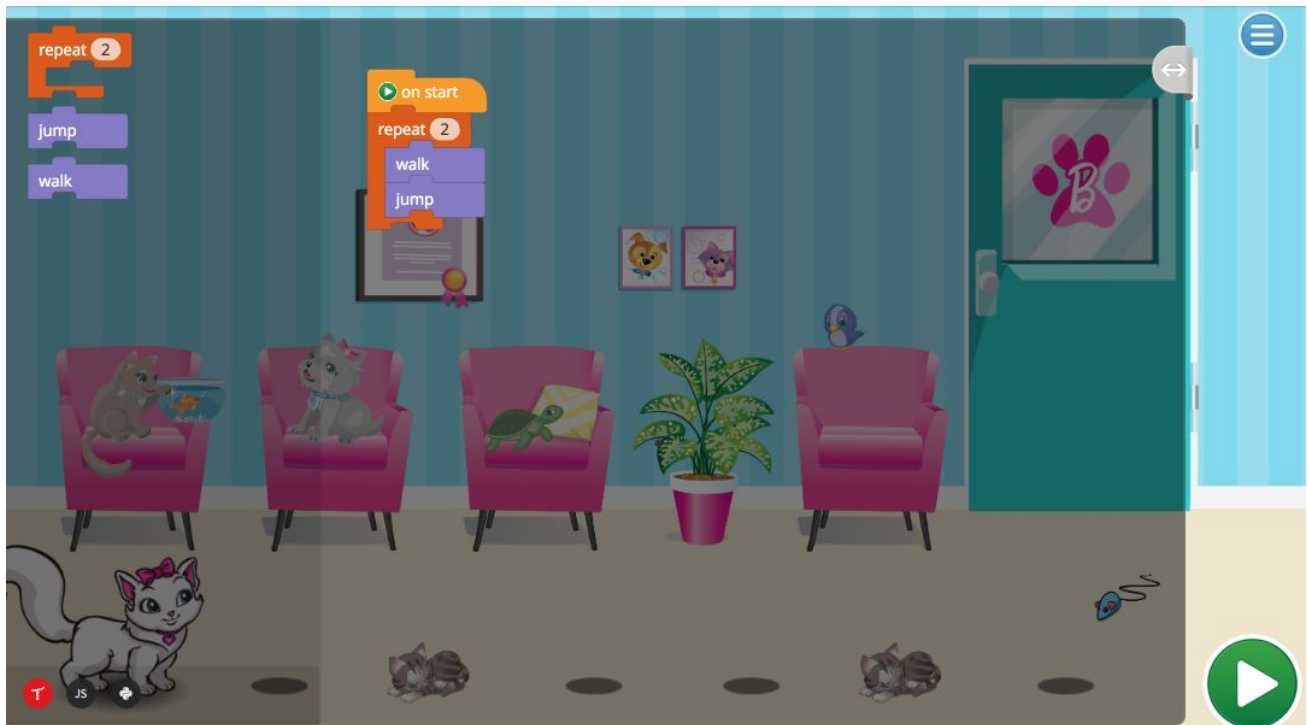
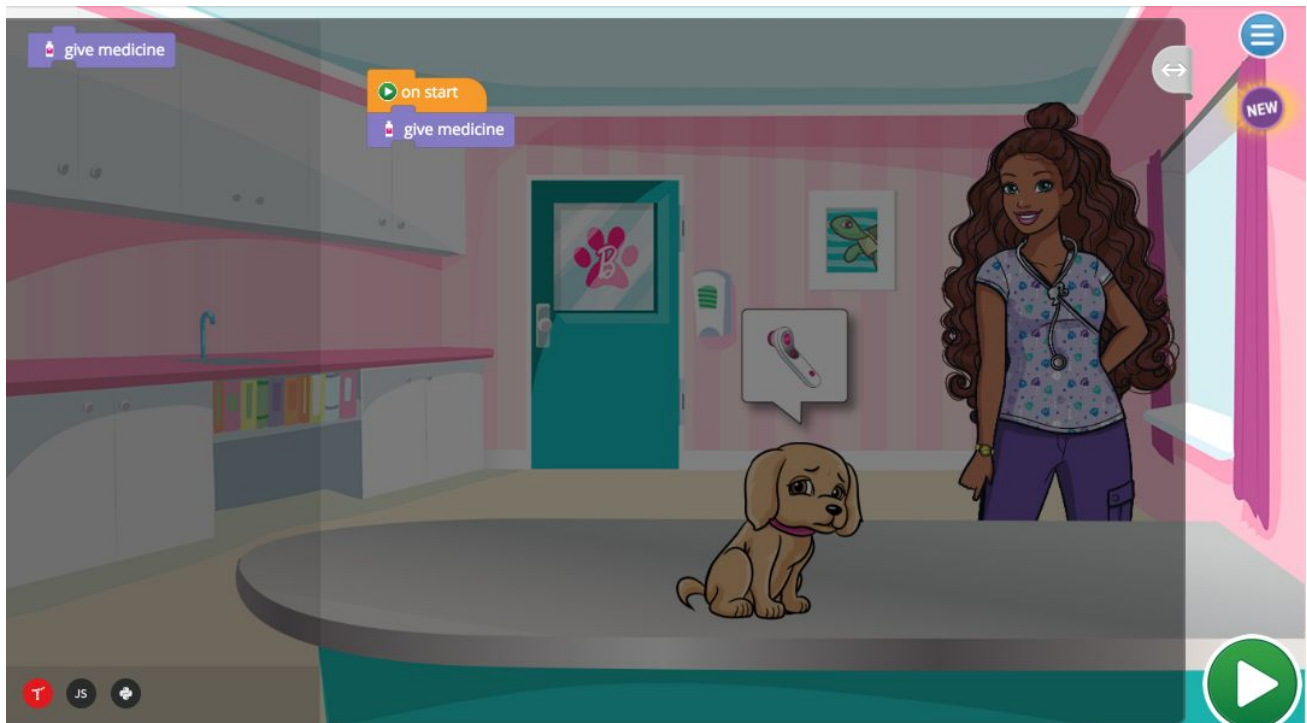## Module 6 - Puzzle
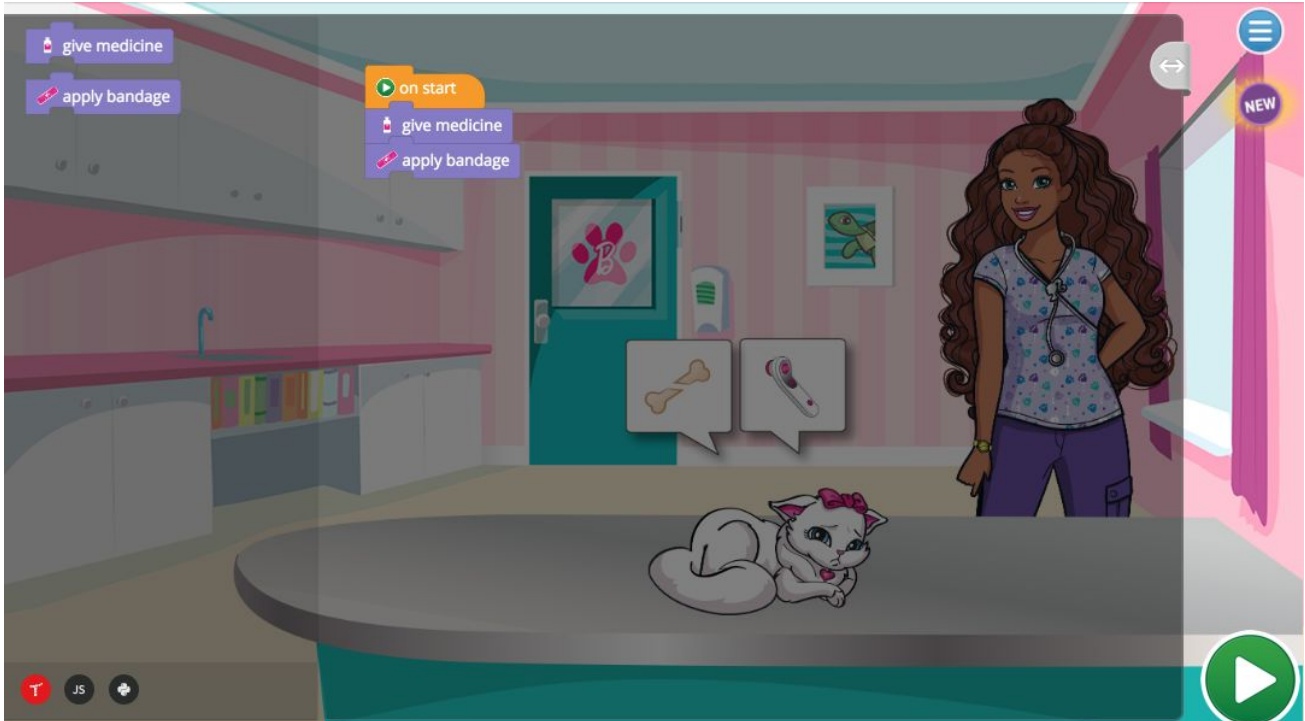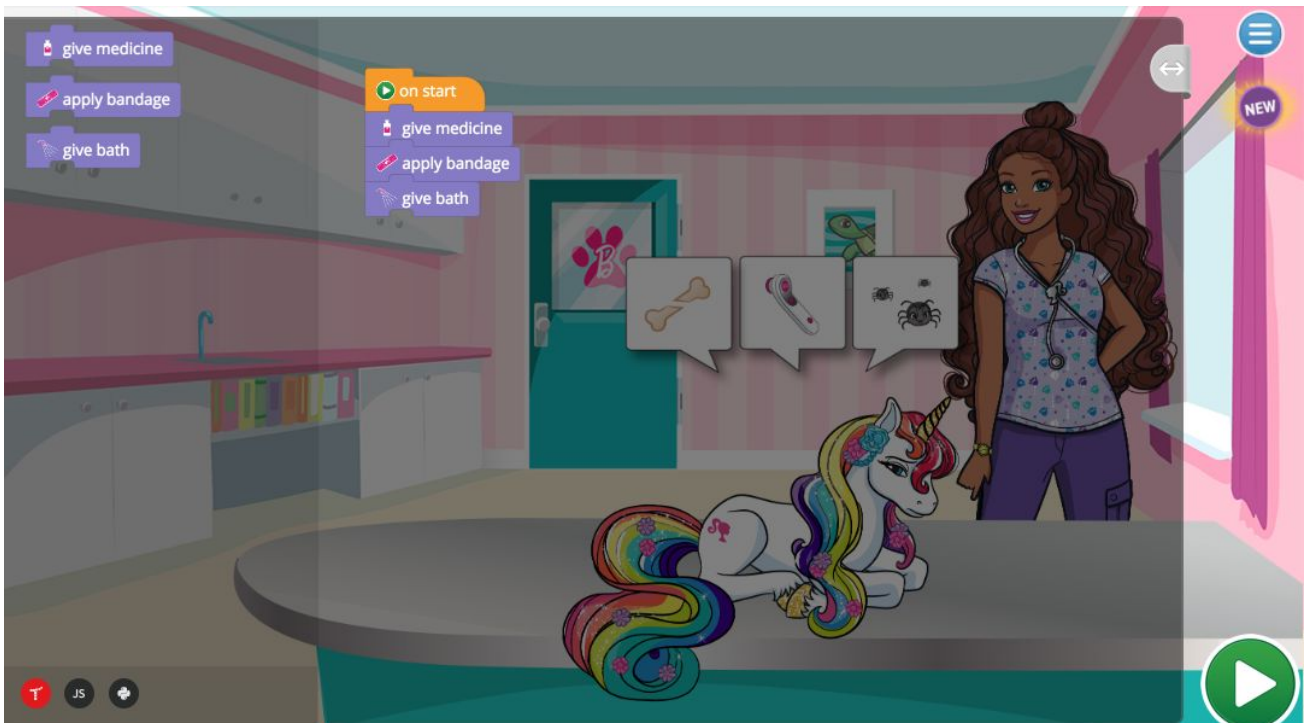

Module 7 - Puzzle

Module 8 - Puzzle

Module 10 - Puzzle

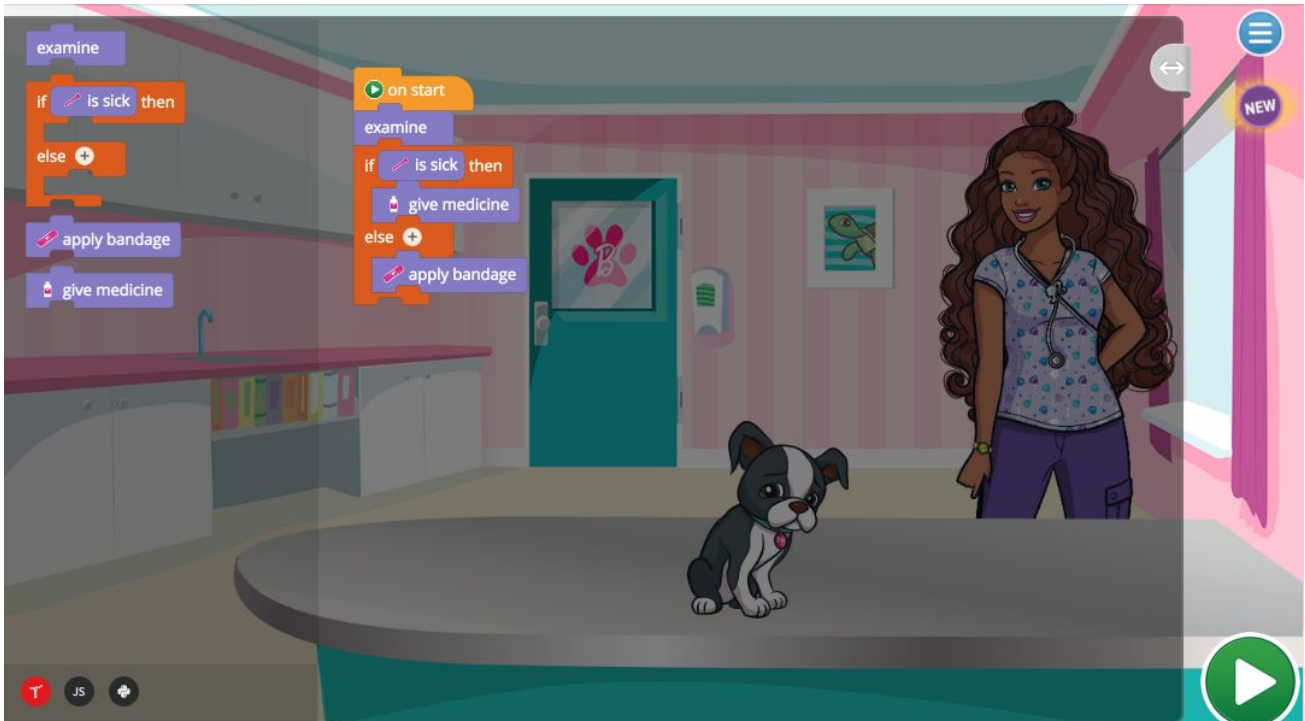**Module 12 - Puzzle**

Module 15 - Puzzle

Module 16 - Puzzle

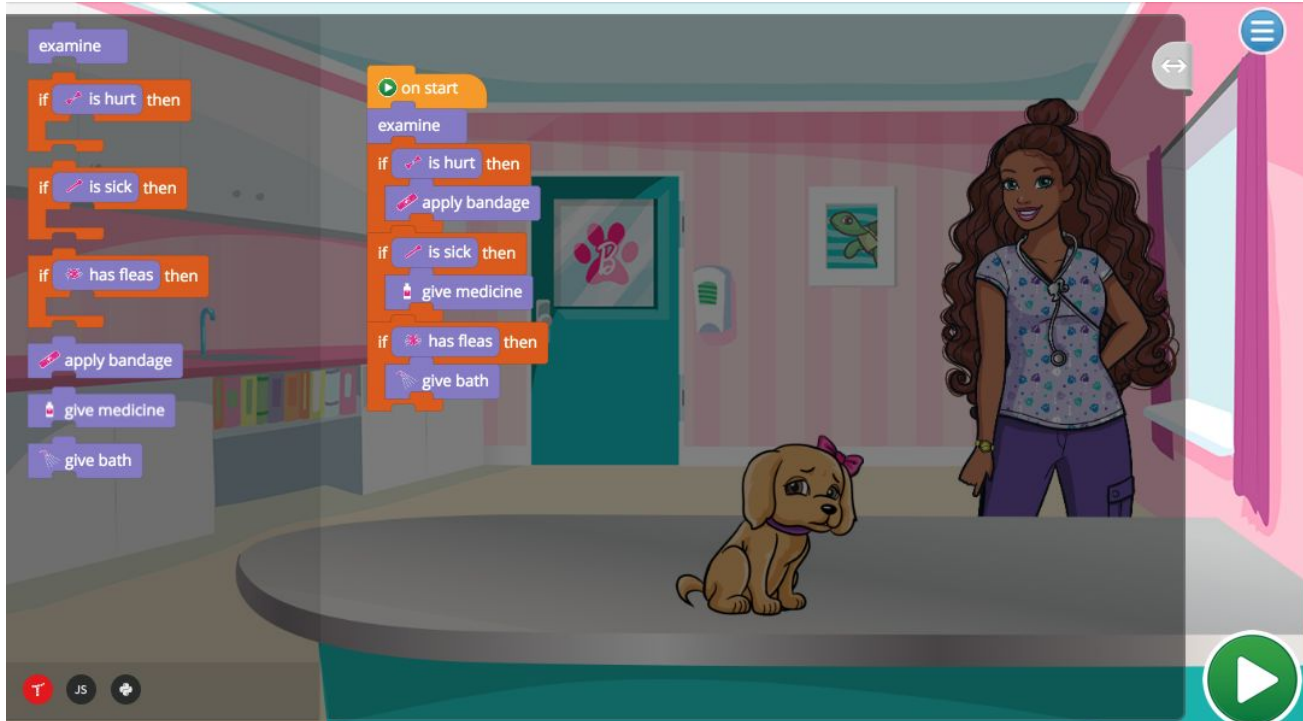

Module 17 - Puzzle

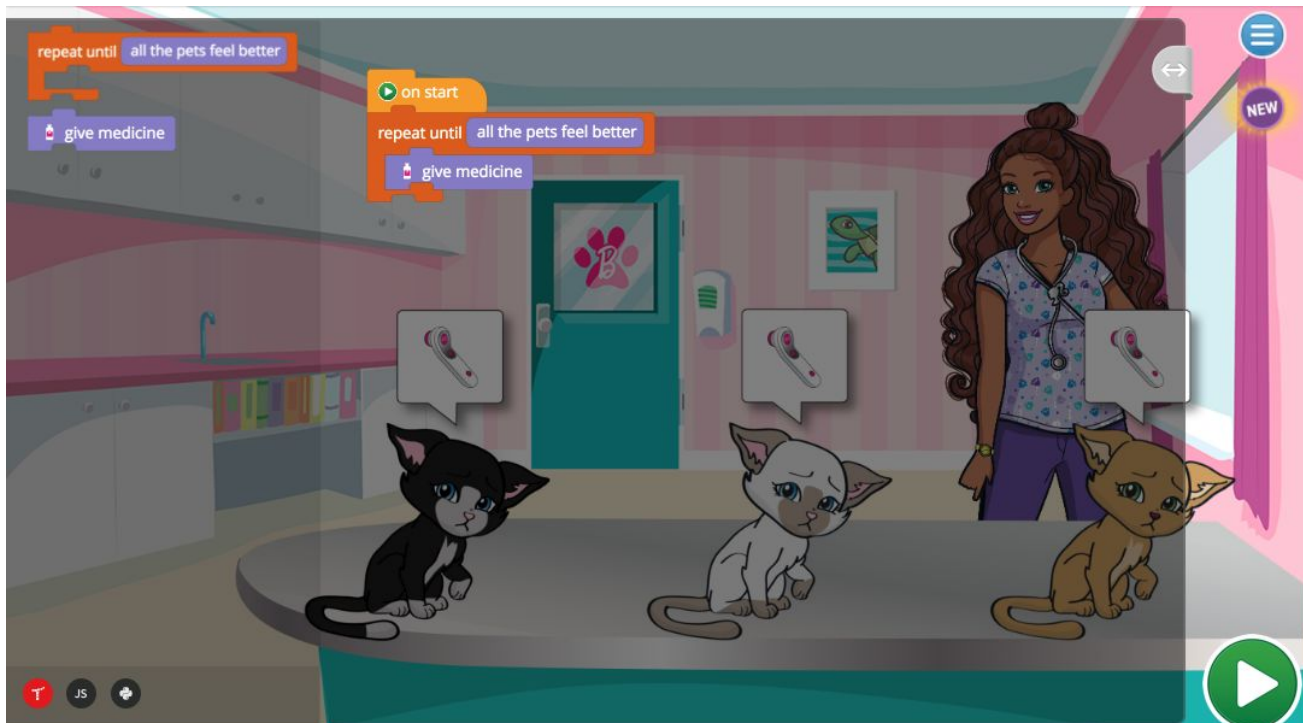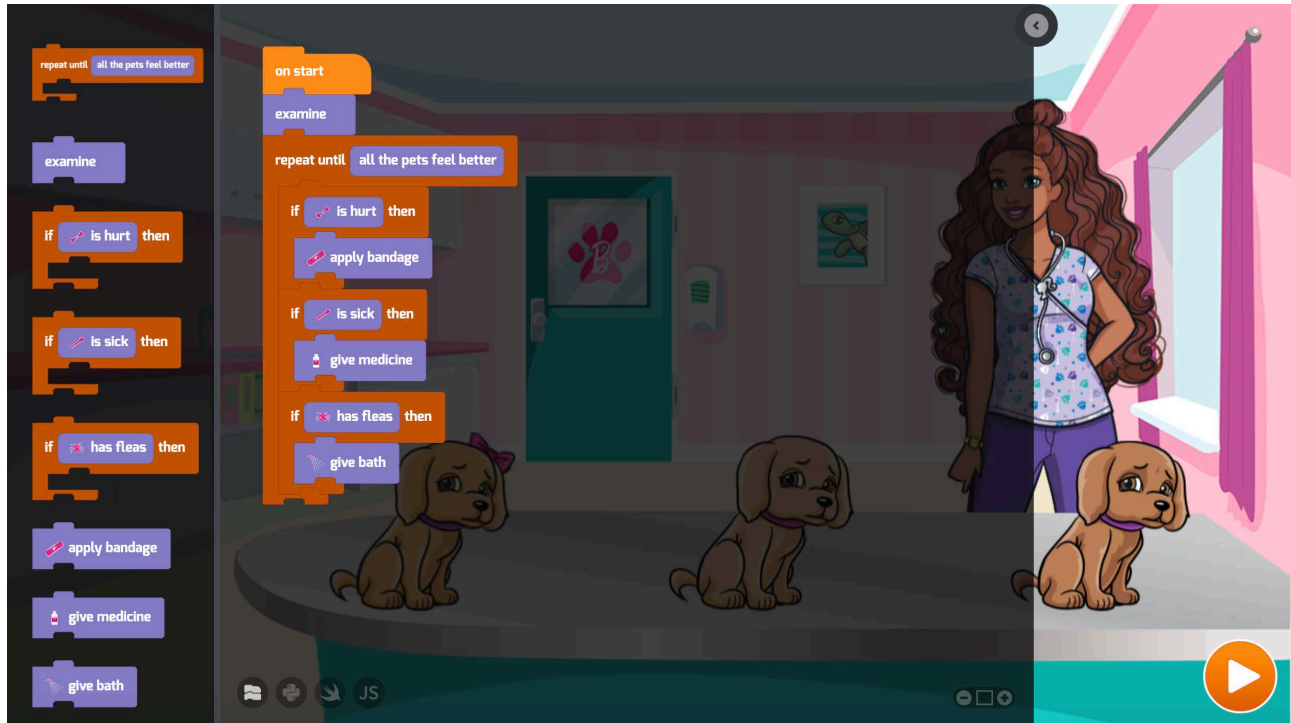## Module 19 - Puzzle

Module 21 - Puzzle

Module 22 - Puzzle

Module 24 - Puzzle

Module 25 - Puzzle

Note: Modules 2, 9, 11, 13, 14, 18, and 23 do not have answer keys because they are not puzzles.

Classroom Setup

Click here to access Tynker's Quick Start Guide for teachers. It only takes a few minutes to make a free Teacher account and a Tynker classroom for your students. If you are already set up with Google Classroom or Clever, you can use those services to automatically sync student accounts and classroom information with Tynker.

If you set your students up with a Tynker classroom, you will be able to:
- Track your students' progress through Barbie™ Pet Vet
- Print certificates of completion for your students to keep
- Save students' progress to their accounts, so that they can continue coding at home
- View teacher guides and answer keys for all Tynker Hour of Code activities
- Access a free introductory coding course for your class
- Give your students access to all of Tynker's free content

Tracking Student Progress

Once you setup your students with a Tynker classroom, you'll be able to observe their progress in Barbie™ Pet Vet using your Teacher Dashboard.
- Go to your Teacher Dashboard and select your classroom.
- Navigate to the "Gradebook" tab, then choose "Hour of Code."

Gradebook

Hour of Code   Mobile Puzzles   Everyone Can Code   Lesson Progress   Quiz Results   Concepts Mastery

- You will be able to see the amount of puzzles your students have completed for each Hour of Code activity, including Barbie™ Pet Vet. Refresh the page to update it.

Student Certificates

Every time a student completes an Hour of Code coding activity in Tynker, they earn a badge that is added to their certificate. There are 29 badges that they can earn, so they'll be really excited to complete all the activities!

While signed in to a 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.

Other Hour of Code Activities

Tynker offers many other tutorials for the Hour of Code, including two other puzzle-based adventures for beginners: Candy Quest and Puppy Adventure. These activities are your best options if you are interested in having another Hour of Code with the same group of students. For teachers who are interested in the creative side of coding, we recommend Spin Draw and Peep: Dance with Friends. Check out the main Tynker Hour of Code page to see all the tutorials!

Candy Quest
Beginner

Puppy Adventure
Beginner

Mod Minecraft
Easy Modding

Peep: Dance with Friends
Beginner
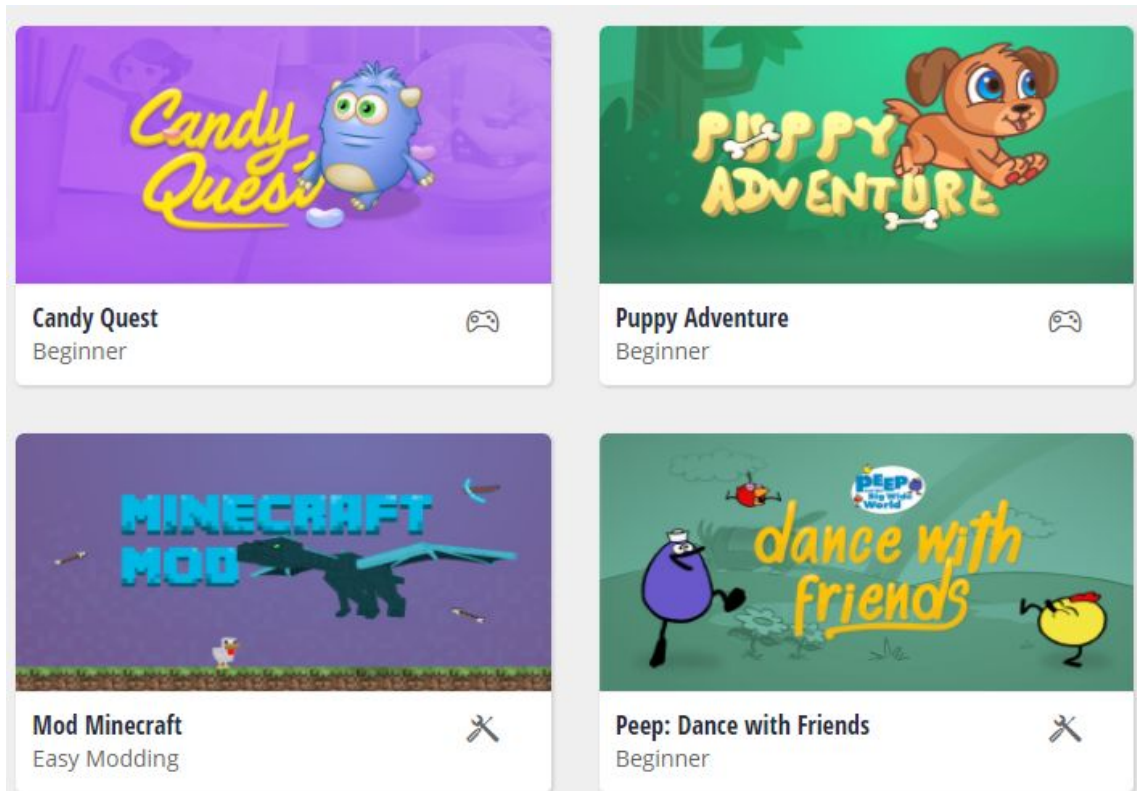
Going Beyond an Hour

Do More with Tynker

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 300 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.

Learning Pathways

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 the 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 60,000 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 the school, class and student level
- Easy classroom management with Google Classroom and Clever integration
- Professional training, free webinars and other teacher training resources