

Pet Game Teacher Guide



Summary

- Web address: tynker.com/hour-of-code/pet-game
- Coding skill level: **Beginner**
- Recommended grade level: **Grades K-5**
- Time required: **40 minutes**
- Number of modules: **1 module**
- Coding Language: **Block-based**

Teacher Guide Outline

Welcome

- How to Prepare

Activity

- Activity Overview
- Getting Started (10 minutes)
- DIY Module (30 minutes)
- Extended Activities

Going Beyond an Hour

- Do More With Tynker
- Tynker for Schools

Help

Welcome!

Attention animal lovers! In this lesson, beginner-level coders will follow a step-by-step tutorial to code a game about a cat chasing a laser from a laser pointer. Additionally, students can create their own original pet-based game that features their favorite pet. By the end of this Hour of Code lesson, students will have combined creativity, imagination, and coding concepts (e.g., sequencing, conditional loops, simple motion) to create a fun, pet-themed project. No prior coding experience needed!

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., Pet Game), 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 Pet Game, have your students open a browser tab to this URL:

tynker.com/hour-of-code/pet-game

Overview

Objectives

Students will...

- Apply coding concepts such as sequencing, conditional loops, and simple motion
- Use code blocks to create a pet-themed game

Materials

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

Vocabulary

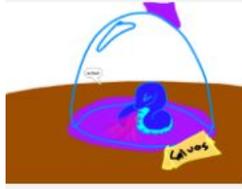
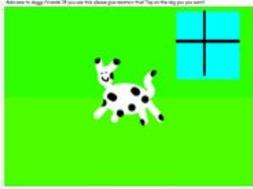
- **Code:** The language that tells a computer what to do
- **Sequence:** The order in which steps or events happen
- **Command:** A specific action or instruction that tells the computer to do something
- **Condition:** A logical expression that evaluates to true or false
- **Loop:** An action that repeats one or more commands over and over
- **Conditional loop:** A loop that performs an action if a certain condition is met

Standards

- **CCSS-ELA:** RI.K.1, RI.K.10, RF.K.4, SL.K.1, RF.1.4.A, RI.1.10, SL.1.1, RF.2.4.A, RI.2.5, SL.2.1, RI.3.7, RF.3.4.A, SL.3.1, RF.4.4.A, RF.1.4.A, SL.4.1, RF.5.4.A, SL.5.1
- **CCSS-Math:** MP.1, K.CC.A.2, K.CC.A.3, K.CC.B.4
- **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
- **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, 5.d, 6.b, 7.c

Getting Started (10 minutes)

1. Tell students that they are going to code a pet game today on Tynker.
2. Use your projector to display Pet Game: tynker.com/hour-of-code/pet-game.
3. Go to “Step 2/6” of the tutorial and show students the pet game examples:



4. Optional: Read the Pet Game tutorial out loud to your students.

DIY Module (30 minutes)

This lesson has one DIY (do-it-yourself) module. Facilitate as students complete the Create a Pet Game module on their own:

1. **Create a Pet Game (DIY)**
 - In this DIY, students will create a game about a cat that chases a laser from a laser pointer.
 - Tell students to follow the step-by-step instructions and drag blocks from the tutorial tab to the center coding area.
 - Is the cat Actor moving too fast or too slow? Encourage students to experiment with different numbers inside the "wait" block. Give a hint: A bigger number inside a wait block makes the cat go slower, and a smaller number makes the cat go faster. What happens when students change the number inside the “move” block to “5”?
 - If students want to expand on their project...
 - Direct their attention to “Step 6/6” of the tutorial. This step includes additional project ideas such as adding toy Actors for the cat to play with, programming the cat to pounce on a ball of yarn, and changing the cat into a different pet.
 - If students want to create their own pet-based game...
 - Encourage them to experiment with their code by combining new code blocks to parts of their code from the tutorial OR slightly modify part of their code from the tutorial.
 - Tell students to use the provided Actors, code blocks, and backgrounds from the Media Library. Here’s a link to Tynker videos that will show you how to add a scene, add an Actor, and draw an Actor: <https://www.tynker.com/support/videos>. Will your students create a game about a dog, bird, or fish?

Extended Activities

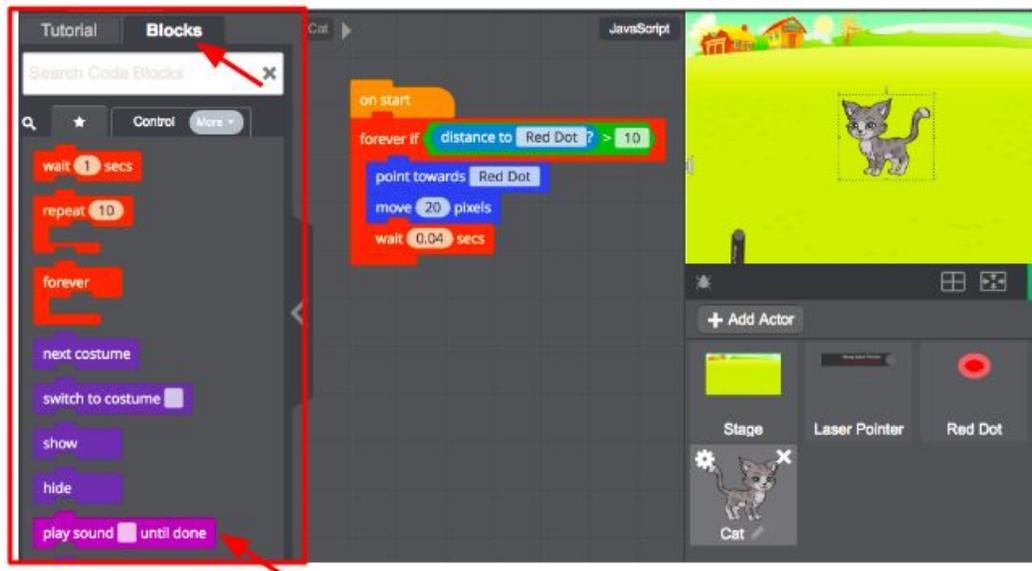
Discussion

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?
- Encourage students to describe some of the pet-themed games they coded: Did anyone create a pet-themed game about a dog? What are some other animals your students used?
- What is code? (The language that tells a computer what to do)
- What is a command? (A specific action or instruction that tells the computer to do something) What are some of the commands your students used today? (point towards, move, wait)

Add Sound

Show students how to add sound...



1. Click the "Blocks" tab
2. Scroll down until you see the "play sound" block
3. Drag one "play sound" block onto the coding area
4. Click on the blank area of the "play sound" block
5. Click "add sound"
6. Search for different sounds from the music library
7. Click "play" to sample it
8. Click on the sound icon (above the words "play") to select it

If you need help, here's a link to the Tynker support videos:

<https://www.tynker.com/support/videos>

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 additional pet adventures such as Barbie™ Pet Vet, Puppy Adventure, and Bird Mayhem. Tynker also provides [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 Pet Game.

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., Pet Game), 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:
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How do I open Pet Game?

Have your students open a browser tab to this URL: tynker.com/hour-of-code/pet-game

Who is this activity for?

Pet Game is intended for students in grades K-5 with no coding experience.

How do my students play Pet Game?

Students will begin by completing a step-by-step tutorial to create a game about a cat that chases a laser from a laser pointer; from there, students can expand on their project by adding toy Actors for the cat to play with, programming the cat to pounce on a ball of yarn, or changing the cat into a different pet. Students can also use the provided Actors, code blocks, and backgrounds to create a different pet-based game that features their favorite pet.

What will my students learn?

Students will combine creativity, imagination, and coding concepts (e.g., sequencing, conditional loops, simple motion) to create a fun, pet-themed project. Students can also expand on their project while experimenting with new and different code blocks. In this process, students will develop debugging and logical reasoning skills.

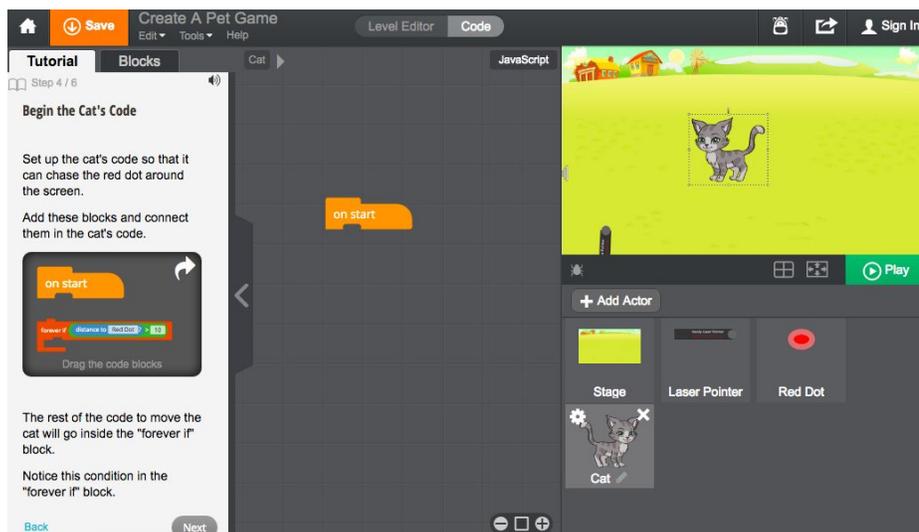
What devices do I need?

- **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.

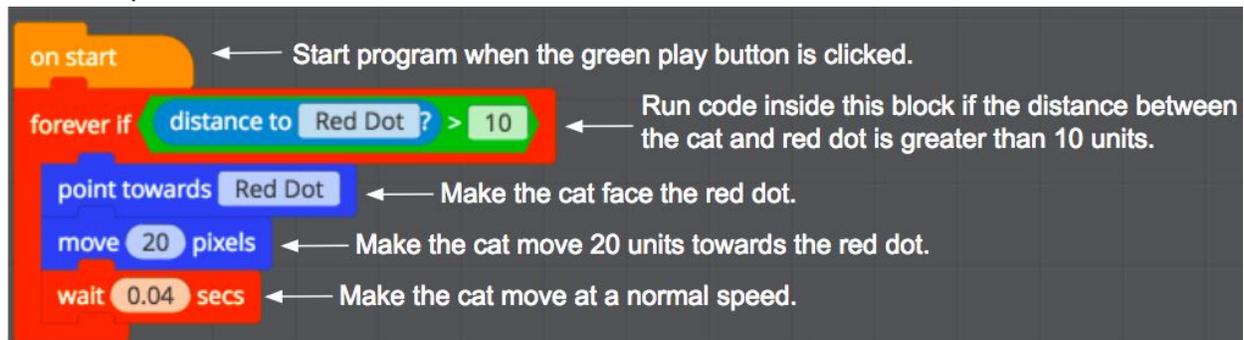
How do my students code their Actors?



The Pet Game DIY module includes a workspace for students to code their pet game. The section on the left is a tutorial tab that provides step-by-step directions to code a cat Actor, describes what is happening for each step, and provides the necessary code blocks. Tell students to follow the step-by-step instructions and drag blocks from the tutorial tab to the center coding area.

What do the code blocks do?

Below is pseudocode for the cat Actor:



The image shows a sequence of Scratch code blocks on a dark grey background. From top to bottom: an orange 'on start' block; a red 'forever if' loop block containing a green 'distance to Red Dot ? > 10' block; a blue 'point towards Red Dot' block; a blue 'move 20 pixels' block; and a red 'wait 0.04 secs' block. Arrows point from text explanations to each block.

```
on start ← Start program when the green play button is clicked.
forever if (distance to Red Dot ? > 10) ← Run code inside this block if the distance between the cat and red dot is greater than 10 units.
  point towards Red Dot ← Make the cat face the red dot.
  move 20 pixels ← Make the cat move 20 units towards the red dot.
  wait 0.04 secs ← Make the cat move at a normal speed.
```

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 can I contact the Tynker support team?

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

