Kodu Makerspace

Session 1

Microsoft

Leader Guide

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Overview

Introduction to Kodu Makerspace – Learn to Make Your Own Games!

The Kodu Makerspace is a four-day camp of two hours per day. It is designed to introduce Kodu Game Lab and demonstrate how anyone can create rich and exciting games. The camp series will explore the design process and cover skills needed to create worlds and games with Kodu Game Lab. Students will work on Kodu games including Boku's Amazing Race, Flashy Fishbots and Air Delivery. Students will learn how interesting and powerful games can be created with simple building blocks and techniques. Some activities will be interactive tutorials and others camper-driven, with open-ended game design. Each session will include collaborative design and development activities. Specific skills include analyzing and revising game characters, writing code to create in-game actions, collaboratively planning and creating a Kodu game, listening to peer feedback, and iterating the design process.

- Create fun games
- Use Kodu Game Lab to design game rules, characters, environments, and points systems
- Create game action using When...Do... constructs
- Communicate design ideas
- Apply an iterative design method of create, test, analyze, and redesign.
- Test games and resolve challenges by applying Kodu Game Lab features and capabilities
- Provide and accept constructive peer feedback
- Demonstrate the ability to use critical-thinking and computer science skills

Session Highlights and Objectives

Session 1 is a two-hour camp in which students will explore Kodu Game Lab by playing and then examining the character and action sequences of two games. They will learn about the character menus in the Kodu environment and the When...Do... logic of Kodu programs.

By the end of Session 1, students will be able to:

- Load and play a Kodu game
- Navigate the menus associated with characters
- Describe the When...Do... game action
- Model the When...Do... in an unplugged activity
- Follow a tutorial to create When...Do... constructs
- Communicate ideas for modifying game characters and actions

Target Audience

The target audience for this session are students 8-11 years of age.

Length

120 minutes, including a 10-minute break.

How to Use This Guide and Conduct the Session

This Kodu Makerspace Leader Guide document will be your reference as you prepare to conduct the session and is intended to provide all the information you will need to confidently lead the session. For ease of reading, all sections within this document can be collapsed and expanded as needed. Simply place your cursor in front of any heading and click on the triangle that appears to collapse the text within the section of the document. Click the arrow again and the section re-expands. In this guide the following is provided in support of making your session as effective as possible:

- **Outline:** This guide is your resource when conducting the workshop to help you maintain the order and timing of topics to be covered.
- **Timing:** The actual amount of time required to conduct this session will vary depending on the knowledge level and learning style of the students. Use the time estimates provided in this document as a guide.
- **Script:** The Session: In Depth section offers suggested prompts and demonstations to help you give a thorough, accurate and engaging presentation.

Session Preparation

Preparation is a prerequisite for successful facilitation. Ample preparation time and full training support is essential to effectively prepare and deliver the session. Leaders need to accomplish the following activities prior to facilitating the session. Approximate time needed is four hours:

- Study the Camp Overview document. Complete the Prerequisite Leader Training and Preparation, as outlined.
- Study the entire set of session materials, including Leader Guide, Student Workbook, and the PowerPoint Presentation (view in Slideshow Mode to experience slide animation).
- Complete tutorials and watch videos for leader preparation.
- Dry run your PowerPoint presentation.
- Ensure devices are fully charged.
- Verify that earbuds are available to provide to students in Session 1.
- Download and install Kodu Game Lab from http://www.kodugamelab.com to each device.

- Download the specified resources to each device's desktop from the links provided. After the resources have been downloaded to each device's desktop, make sure to double-click each file to open it in Kodu Game Lab. This starts Kodu in the tutorial, but it is then safe to simply close the application—this will now make the tutorial visible under the "Load World" menu option. Repeat with each Kodu file downloaded to the desktop so that each is loaded into Kodu and ready for students:
    - o Flashy Fishbots http://aka.ms/flashyfishbots
    - o Fishbot Tutorial http://aka.ms/fishbotstutorial
    - o Boku's Amazing Race http://aka.ms/amazingrace
    - o Air Delivery Tutorial http://aka.ms/airdelivery
    - o Air Delivery Complete http://aka.ms/airdeliverycomplete
- Download session-specified resources to the desktop of the leader's device from the links provided:
    - o Introduction Video http://aka.ms/intro2kodu
    - o Fishbots Plus http://aka.ms/fishbotsplus
- The accompanying PowerPoint presentation contains two placeholder slides which will need to be replaced or removed. Replace the placeholder slides with the your own slides to promote relevant upcoming events. Or, you may simply remove these placeholder slides. The placeholder slides are located in the Closure section between the "Questions" slide and the final "Thank You" slide.
- Be prepared and available for questions before, during and after the session.
- Verify that the Student Workbooks are available to distribute when the session begins. Prepare to collect and store the Student Workbooks for the next session in the camp series.

Session Requirements and Set-up

Equipment

- Screen display for leader
- Device with keyboard (or laptop) for leader
- USB cable for projector
- Earbuds per student
- Laptops, PCs, or other devices for students

Software & Web Resources

- Office Suite for leader's device
- Edge browser
- Kodu (environment download): http://www.kodugamelab.com
- Flashy Fishbots (completed working game): http://aka.ms/flashyfishbots
- Fishbot Tutorial: http://aka.ms/fishbotstutorial
- Boku's Amazing Race: http://aka.ms/amazingrace
- Air Delivery Tutorial: http://aka.ms/airdelivery
- Air Delivery Complete: http://aka.ms/airdeliverycomplete

Session-specificdownloads for leaders only

- Introduction Video: http://aka.ms/intro2kodu
- Fishbots Plus: http://aka.ms/fishbotsplus

Videos for Leader Preparation

- Video 1: Navigating Kodu (1 min) https://youtu.be/gUGXnEJwl08
- Video 2: Create landscape world (3 min) https://youtu.be/BdgmWcs9QdQ
- Video 3: Add characters to world (1.5 min) https://youtu.be/vrC6DpueYpQ
- Video 4: Program Kodu characters (2 min) https://youtu.be/Glw58uLvpk4
- Video 5: Add text and speaking (2 min) https://youtu.be/h21T7jbVDsk

For leaders without prior coding knowledge, complete the following additional activities

- Complete the Hour of Code tutorials (found in the Worlds list within the Kodu program)
  - Maze Tutorial 1
  - Maze Tutorial 2
  - Maze Tutorial 3
- A Maze Tutorial Intro video and 3 additional tutorials that accompany these tutorials at http://www.kodugamelab.com/hour-of-code/

Materials

- Camp Overview
- Leader Guide
- PowerPoint Presentation for leader
- Student Workbooks - one for each student
- Name tag and pen/pencil for each student

Outline

You may use the outline below as a checklist when conducting the session. Suggested times for each section are noted for guidance.

Section 1: Introduction (15 minutes)

- Welcome (5 min)
- Camp Guidelines (5 min)
- Overview (5 min)

Section 2: Exploring Kodu Characters (40 minutes)

- Introducing Kodu Game Lab (10 min)
- Kodu Game Exploration: Flashy Fishbots (10 min)
- Character Analysis (5 min)
- Character Revisions (15 min)

Break (10 minutes)

Section 3: Examining the When…Do… Kodu Action Plan (45 minutes)

- Introducing the When…Do… Programming Construct (5 min)
- Unplugged Activity: When…Do… Can Do (5 min)
- Fishbot Tutorial (20 min)
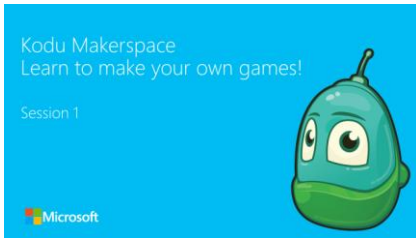- Revise Flashy Fishbots (15 min)

Section 4: Wrap Up (10 minutes)

- Closure (5 min)
- Thank You (5 min)

Session 1: In Depth

Section 1: Introduction (15 minutes)

Welcome (5 min)

Display: Slide 1: *Welcome*

Objective: Greet and welcome students

Do: As students arrive:

- Check that all registration paperwork is complete and that the students have checked in
- Provide students with earbuds to use and care for during the camp series
- Assign a device to each student
- Give each student a Student Workbook
- Provide pens/pencils

Suggested Prompt 1: Okay everyone, go ahead and take a seat. Welcome to the Kodu Makerspace Session 1. You'll have a blast using the Kodu Game Lab toolkit to explore games and design a fun game of your very own. My name is _____ and I'm glad you're here. Thank you for joining Session 1 in the Kodu Makerspace four-session camp series.

Suggested Prompt 2: How many of you have ever played a fun game on your computer and wondered whether you could create a game just as fun? Well, now you can.

Suggested Prompt 3: During the next two hours, you'll explore the Kodu Game Lab by playing and then examining the character and action sequences a game. You'll learn about the character menus in the Kodu environment and the When...Do... logic of Kodu programs. We will take a break halfway through this session.

Do: Point out the bathrooms

Suggested Prompt 4: How many of you can think of a character in a computer game you like to play? How many of you have a favorite character in a computer game you like to play?

Do: Conduct Icebreaker **Sketch Your Favorite Character**

- Direct students to **front cover**, Student Workbook
- Time 2 minutes for students to sketch a game character
- Time 2 minutes for students to show sketch to elbow buddy

Suggested Prompt 5: When I say "go", you'll have two minutes to sketch a game character onto the front cover of your Student Workbook.

Suggested Prompt 6: When time is up, pair up with an elbow buddy. An elbow buddy is a person sitting next to you who will become your partner to work with during an activity. You'll have an additional two minutes to show your character sketch and tell your elbow buddy why you chose that character.

Suggested Prompt 7: Are there any questions about this activity before we begin? Ready? Go.

Camp Guidelines (5 min)

Display: Slide 2: *Camp Guidelines*
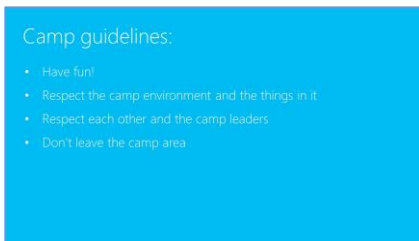
Objective: Inform students about the camp guidelines

Suggested Prompt 1: Let's get familiar with our camp guidelines. I'll read each one out loud so you'll remember what to do during camp:

1. **Have fun!** – How many of you like to have fun! You're here to learn how to make fun games and to meet new friends. Sometimes it can take some time to learn new things so be patient and most of all enjoy yourself. This isn't school. You're not being graded. So, experiment and make "mistakes" because that's how you make new discoveries.
2. **Respect our workspace** – This means to be careful with the equipment you are using, clean up after yourself here and in the bathrooms. Throw any garbage away. Tuck your seat in when you leave your seat. No running.
3. **Respect each other, and camp leaders** – This means be friendly and helpful to others. Stay in designated areas during breaks.

Display: Slide 3: *Student Workbook and device care*
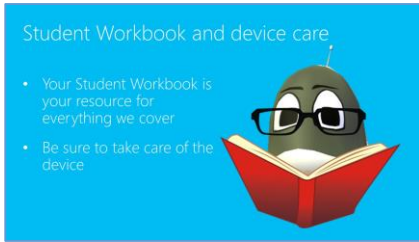
Objective: Review student resources Student Workbook and devices

Suggested Prompt 1: Your Student Workbook is your resource for everything we cover in the four sessions of the camp. Let's review what the workbook contains for each session:

- The big questions we'll answer that day
- Links for all videos and tutorials that day
- Key content, activity instructions, and activity worksheets
- Room to take notes

Suggested Prompt 2: For additional activities, I recommend using other Microsoft Imagine activities that use Kodu. Talk to me if you're interested.

Suggested Prompt 3: Be sure to write your name neatly at the top of the front cover, as I'll be collecting the workbook in-between sessions to make sure everyone has it here for the entire camp. The workbook is yours to keep after the last session.

Suggested Prompt 4: You'll have fun using the device that we've assigned to you to use during camp. Be sure to take care of this device. We will be collecting them in between sessions, and will make sure the devices are fully charged for your next session.

Suggested Prompt 5: Campers will only receive one set of earbuds during the course of your camp. It is your responsibility to keep close track of your earbuds and to bring them each day to camp.

Display: Slide 4: *Scavenger Hunt*

Objective: Outlines the Scavenger Hunt Activity checklist

Suggested Prompt 1: Time to get familiar with the camp environment. You'll have 4 minutes to explore during your Scavenger Hunt. You'll need your Student Workbook and a pencil/pen for this activity.

Do: Conduct Activity **Scavenger Hunt**

- Direct students to **page 3** in Student Workbook
- Read Scavenger Hunt **Directions** and **Activity checklist**:

  ☐ Find a computer with speaker headphones and listen to some music
  ☐ Find Microsoft Word on a computer and type a sentence about your favorite thing to do after school
  ☐ Find a tablet and open a video to watch
  ☐ Find an Xbox game that looks fun and draw a character from it into your Student Workbook
  ☐ Find a device, open OneNote, and then sign your name using the device's pen.
     Now, erase your name using the same pen.
  ☐ Ask a camp leader "what's the most popular item for 8-11 year olds?"
  ☐ Find the bathrooms
  ☐ What is the largest screen on a computer at the camp?

Suggested Prompt 2: Pair up with a new elbow buddy. Follow the Activity checklist to see how many areas of the camp you can discover in four minutes. You get to choose what you want to explore first.

Suggested Prompt 3: When I say "go", you'll have four minutes for your Scavenger Hunt. Return to your seat after four minutes and we'll talk about what you've discovered. Ready? Go.

Suggested Prompt 4: What did you discover during the Scavenger Hunt?

Do: Solicit responses from students

Suggested Prompt 5: Now that you're familiar with the camp, let's talk about the Kodu Makerspace camp series and how to the most out of it.

Overview (5 min)

Display: Slide 5: *Kodu Makerspace camp series overview*

Objective: Provide an overview of the Kodu Makerspace camp series

Suggested Prompt 1: How many of you are familiar with Kodu Game Lab? How many of you are new to Kodu?

Suggested Prompt 2: Whether you're familiar with Kodu or not, Kodu Makerspace camp is designed to introduce Kodu Game Lab and demonstrate how anyone can create rich and exciting games. In this camp you'll explore the design process and cover skills you'll need to create worlds and games with Kodu Game Lab.

Suggested Prompt 3: Together, we'll work on Kodu games like Flashy Fishbots, Boku's Amazing Race, and Air Delivery. Expect to learn how interesting and powerful games can be created with simple building blocks and techniques. You'll create fun games and use Kodu Game Lab to design game rules, characters, environments and points systems!

Display: Slide 6: *Sessions overview*

Objective: Preview the focus for all four sessions

Suggested Prompt 1: Today is just the first session. Camp consists of four sessions.

Suggested Prompt 2: Today, Session 1, we're going to look at how to play a Kodu game, navigate menus, describe When...Do... action, follow a tutorial and communicate ideas.

Suggested Prompt 3: In Session 2, we're going to apply the When...Do... , create a game design, communicate ideas and get feedback.

Suggested Prompt 4: In Session 3, we're going to take a look at our revision ideas, create a game plan, communicate the plan and gather feedback.

Suggested Prompt 5: By Session 4, you'll be able to finalize your game and share with your parents in an end of camp showcase!

Do:

- The slide shows the focus area for Session 1 first. Briefly review.
- Click Enter to show the focus for Session 2. Briefly review.
- Click Enter to show the focus for Session 3. Briefly review.
- Click Enter to show the focus for Session 4. Briefly review.

Display: Slide 7: *Questions we'll answer today*

Objective: Discuss questions that will be answered today

Suggested Prompt 1: By the end of this Session 1, you'll have the answers to these questions, and more:

- What is Kodu Game Lab?
- How can you use Kodu Game Lab to make fun games?
- How do you navigate the Kodu menus?
- What is the When...Do... game action?
- How can you modify game characters and actions?

Display: Slide 8: *How we'll answer the questions*

Objective: Discuss Session 1 learning objectives

Suggested Prompt 1: In Session 1, we will explore Kodu Game Lab by playing and then examining the character and action sequences of a game and a tutorial to build a game. You will learn about the character menus in the Kodu environment and the When...Do... logic of Kodu programs.

Suggested Prompt 2: You'll be able to:

- Load and play a Kodu game
- Navigate the menus associated with characters
- Describe the When...Do... game action
- Model the When...Do... in an unplugged activity
- Follow a tutorial to create When...Do... constructs

- Communicate ideas for modifying game characters and actions

Suggested Prompt 3: Thank you to all the parents who stayed with us for the introduction. Please return back here to the camp area for our wrap up (let the parents know what time to return).

Suggested Prompt 4: If you're ready to learn about the character menus in the Kodu environment and the When…Do… logic of Kodu programs, just say the words "I'm ready" (students respond "I'm ready").

Section 2: Exploring Kodu Characters (40 minutes)

Introducing Kodu Game Lab (10 min)

Display: Slide 9: *Introducing Kodu Game Lab*

Objective: View video to introduce Kodu Game Lab

Suggested Prompt 1: Kodu is not so much a game, but a set of tools to make games. It's a toolkit for you to learn basic programming skills. It makes creating games so much fun.

Do: Toggle to Kodu Game Lab

1. Click on the [icon] Kodu Game Lab **icon**
2. Select to **Options**
3. Scroll down to "Show video at next startup", and click the "power" icon at the left
4. Restart Kodu Game Lab by exiting the program, then reopening it to see the intro video play on startup.

   Note: If necessary, the Introductory Video is also located here: http://aka.ms/intro2kodu

Suggested Prompt 2: Next we're going to watch a short video that describes Kodu. This is the program you'll be using to create your Kodu games.

Suggested Prompt 3: Let's take a look at Kodu!

Display: Slide 10: *Kodu Game Lab main menu*
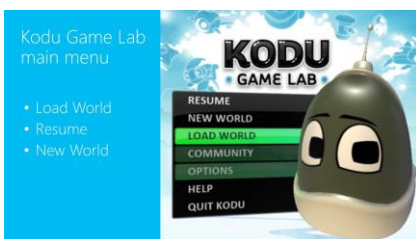
Objective: Discuss Kodu Game Lab main menu, select Load World

Suggested Prompt 1: You'll just watch, as I'll show you what we'll see when we open Kodu Game Lab.

Suggested Prompt 2: After we click on the Kodu Game Lab icon on your device screen, the Kodu main menu will appear in the center of your screen. It will look like this. The main menu includes a list of options to create games in Kodu Game Lab. You'll learn more about the main menu as we progress through camp. For now, let's focus on three of the options on the list:

- **Load World**– Select this option anytime you want to retrieve a previously saved game or view a tutorial. If you want to play a game, select Load World.
- **Resume** – You may want to think of this as the point where Kodu last shut down. If you were the last person designing a game, select Resume to continue where you left off.
- **New World** – Choose this option to start building a new game. If you want to start with a blank game, select New World to begin to create your game.

Suggested Prompt 3: We will choose Load World whenever we want to find a game or view a tutorial.

Display: Slide 11: *Load World main screen*

Objective: Show Load World main screen featuring search bar, selected game and Play button

Suggested Prompt 1: After we select Load World, it is easy to search for a game. Just type the name of the game into the search box.

Suggested Prompt 2: In this case, we want to find the game Flashy Fishbots. So we'll type in the words Flashy Fishbots. Then we're going to select Play.

Display: Slide 12: *Tool Palette navigation: Flashy Fishbots*

Objective: Show the Tool Palette featuring Home Menu, Play Game, Move Camera, and Objects Tool

Suggested Prompt 1: After we select Play, the game will open. A Tool Palette appears along the bottom of the screen. This is the control panel for Kodu game making. You'll learn more about Tool Palette options as we progress through camp. For now, let's look at four of the options in the Tool Palette:

- **Home Menu** – The Home Menu button will take you back to the main menu where you can choose to load a different world or quit Kodu.

- **Play Game** – Click the Play button to see the game in action.

- **Move Camera** – Click on the Move Camera button to change the angle of the camera (view). Right click + scroll, "tips" or "turns" the view. Left click+ scroll, "zooms" the view.

- **Object Tool** – This Object Tool is really cool. Click the Object Tool to add new objects to your game or to change an existing object such as a Kodu character.

Display: Slide 13: *Step-by-Step: Flashy Fishbots*

Objective: Step-by-step demo as students follow along to open the Flashy Fishbots game

Suggested Prompt 1: Now it's time for you to use your device to open Kodu Game Lab and follow along to find the Flashy Fishbots game. We're going to start it together.
Do: Toggle to Kodu Game Lab and pace through the directions as students follow along, stopping at each step to make sure the students are on pace with you.

Demo: Step-by-step as the students follow along

- Click on the Kodu Game Lab **icon** on your device screen
- Select **Load World**
- Click in the search box and type **Flashy Fishbots**
- Read the information about the game that appears on the bottom of the screen.

Suggested Prompt 2: How many of you can see the Play option? Before you select Play, we first need to learn the directions to play Flashy Fishbots.

Kodu Game Exploration: Flashy Fishbots (10 min)

Display: Slide 14: Kodu Game Exploration: Flashy Fishbots

Objective: Review the activity checklist for Kodu Game Exploration: Flashy Fishbots

Suggested Prompt 1: Now that you have Flashy Fishbots open, let's explore the game. In this activity, you will have time to play and explore Flashy Fishbots. Flashy Fishbots is a very simple game. You can experiment with a mouse. The goal is to change the fish with magic paint balls.

Suggested Prompt 2: As you play the game, pay attention to what happens in the game. These are the questions I want you to find answers for while you're playing Flashy Fishbots. After the game, we'll discuss what you learned.

Suggested Prompt 3: When I say "go", you'll have eight minutes to explore the Flashy Fishbots game and answer the following questions:

- ✓ What happens when you click anywhere on the world?
- ✓ What happens when you click on a fish?
- ✓ What happens when you click several times very quickly on a fish?
- ✓ How can you "spray paint" using the mouse?
- ✓ Does it make a difference if you spray in front of the fish or behind the fish?

Suggested Prompt 4: I'm going to come around to help anyone that needs it. Please raise your hand or call me if you get stuck or need help.

Do:

- Remind students that everyone plays at a different speed
- Request that everyone wear headphones or earbuds during the activity
- Understand students will have various levels of coordination with the device and game and in answering the questions in the workbook.
- Give students a one-minute warning but assure them that it's okay if they didn't finish the questions.

Suggested Prompt 5: It's time to explore Flashy Fishbots. Select Play on your screen and follow the directions to play Flashy Fishbots. Ready? Go.

Character Analysis (5 min)

Display: Slide 15: *Let's brainstorm character appearance*

Objective: Brainstorm to explore ideas for modifying the way your Kodu and Fish character's look.

Suggested Prompt 1: How many of you had fun exploring Flashy Fishbots? How many of you noticed the Kodu and the Fish are the main characters? How many of you thought you might like to slightly change the look of the characters a bit?

Suggested Prompt 2: Now, it's time to brainstorm. Let's begin to think about how we would like to change the appearance of a character by changing the character's color, it's size or position.

Suggested Prompt 3: We're not going to change what the characters will do...that will be part of a future lesson.

Suggested Prompt 4: When I say "go", find a new elbow buddy. Then, you'll have 3 minutes to brainstorm how you would change the appearance of the Kodu and Fish just by changing the character's color, size or position. Ready? Go.

Do: Conduct exercise **Brainstorm**

- Time 3 minutes to complete the exercise

Suggested Prompt 5: Who would like to share an idea about how you would modify the Kodu or Fish just by changing the character's color, size or position?

Do:
- Lead the students to come up with ideas such as:
  - Make Kodu bigger
  - Change Kodu's color
  - Make the fish all the same color
  - Add more fish
  - Put Kodu in a different position in the world

Suggested Prompt 6: Thank you for sharing your ideas to modify the character's appearance. Now that you know what you could do, Let's talk about how we can do more with our character. Who wants to play around with what their character looks like?

Character Revisions (15 min)

Display: Slide 16: *Let's Make Changes to Characters*
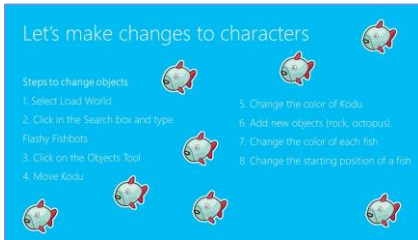
Objective: Opportunity for students to modify the appearance of characters

Suggested Prompt 1: I'll demonstrate how easy it is to change the properties of an object. The movement of fish is programmed. They move along a defined path regardless of where they are initially placed.

Do: Toggle to Flashy Fishbots

Demo:

- Move Kodu
- Change the color of Kodu (click on Kodu and use the arrow keys to move through the menu color palette across the top)
- Add new objects (click on the object tool)
- Change the color of each fish

Do: Toggle to Kodu Game Lab and pace through the directions as students follow along, stopping at each step to make sure the students are on pace with you.

Suggested Prompt 2: Now it's your turn. I'll show you how and you can follow along, as we slightly change the appearance of game objects. You're also going to have a chance to add new objects. The steps we'll follow are in your Student Workbook as well as up here on the screen. We will be doing these steps together, one step at a time.

Do: Conduct Activity **Flashy Fishbots**

- Direct students to **pages 5-6** in Student Workbook
- Read Flashy Fishbots **Directions** and **Activity checklist**
- Follow the steps to modify the appearance of objects and characters in Flashy Fishbots:

1. Select **Load World**
2. Click in the search box and type **Flashy Fishbots**
3. Read the information about the game that appears on the bottom of the screen
4. Select **Play**
5. Click on the **Objects Tool**
6. Move **Kodu**
   - Left click and drag
7. Change the color of **Kodu**
   - Click on Kodu
   - Use the arrows to pick colors from the palette at the top of the screen

8. Add new objects (rock, octopus)
   - Click on the **Object Tool**
   - Click anywhere in the world
   - Notice the layers of the **Menu Wheel**

9. Notice the sections of the Menu Wheels that are "pointed" have more sub-choices
   - Add a rock
   - Add an octopus
10. Change the color of each fish
11. Change the starting position of a fish

Display: Slide 17: *Saving Changes to Kodu*

Objective: Opportunity for students to save their changes

Suggested Prompt 1: Now it's time for you to use your device and follow along to save changes to your revised game characters. We're going to start it together.

Suggested Prompt 2: I'll demonstrate how to save changes as you follow along.

Do: Conduct Activity **Saving Changes**

- Direct students to **page 7** in Student Workbook
- Read Saving Changes **Directions** and **Activity checklist**

Demo: Demonstrate as students follow along

1. Click the **Home Menu** button
2. Select **Save My World**
3. Add 1 to the version number
4. Change the name of the game in the top row, as desired
5. Add your initials to the end of the game's name
6. Revise the Description, as desired
7. Click **Save**

Suggested Prompt 3: Your revised game is now listed among the games listed when you select Load World.

Display: Slide 18: *Break Time*
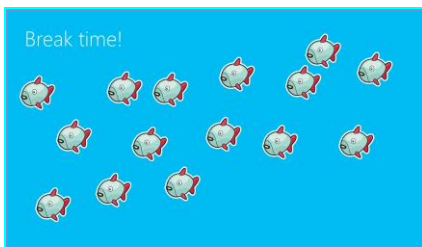
Objective: Break Time guidelines

Suggested Prompt 1: We're going to take a 10 minute break now to stretch or use the bathroom. Please remember to:

- Push your stools or chairs in and throw any garbage away.
- Know where to go during the break.
- Be respectful of the equipment.
- Be respectful to other participants by being courteous and friendly.

Suggested Prompt 2: I'll give you a two-minute warning when break is almost over.

Do: Remind students where bathrooms are and respond to any questions as needed

Section 3: Examining the When…Do…Action Plan (45 minutes)

Introducing the When…Do… Programming Construct (5 min)

Display: Slide 19: *When…Do… programming construct*

Objective: Discuss the When…Do… programing construct with example

Suggested Prompt 1: In Kodu, programmers line up colorful icons to tell objects and characters how to behave. It's cool because you're programming the behavior of an object.

Suggested Prompt 2: Let's take a look at an example. Let's say you want **anything** that Kodu **bumps** to get **bigger**. You pick icons from the navigation menu then line them up to form a kind of visual sentence. The sentence would say "When Kodu bumps into anything, it gets bigger."

Suggested Prompt 3: Now let's say it as in the When…Do… programming construct. The sentence would say "When anything bumped…Do bigger."

Suggested Prompt 4: I'm curious to hear about the character behaviors you noticed while playing Flashy Fishbots:

- How did the Kodu character act in the game?
- What actions and changes did you notice in the fish?
- What made the fish act in certain ways?

Suggested Prompt 5: What other When…Do… actions happened in the game?

Display: Slide 20: *When…Do… programming construct; Question 1*
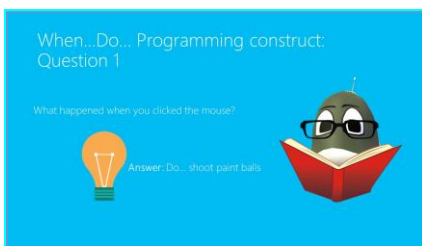
Objective: Response to the When…Do… Question 1

Suggested Prompt 1: Think about your Flashy Fishbots characters. I'm going to show you three different When... Do... actions for Flashy Fishbots. Your job is to fill in the blank. I'm going to ask a question, and you're going to shout out the action that happened in the game.

Do:

- Solicit responses from students
- Click through the slide to reveal correct answer and praise students for correct answers
- Redirect students when necessary, by providing correct **answers**

Suggested Prompt 2: What happened when you clicked the mouse?

      Correct Response: **Do... shoot paint balls**

Display: Slide 21: *When...Do... programming construct; Question 2*

Objective: Response to the When...Do... Question 2

Suggested Prompt 1: What happened when the fish got hit?

      Correct Response: **Do... change color**

Display: Slide 22: *When...Do... programming construct Question 3*

Objective: Response to the When...Do... Question 3

Suggested Prompt 1: What happened when the fish collide?

      Correct Response: **Do....change direction**

Unplugged Activity: When...Do... Can Do (5 min)

Display: Slide 23: *When Do... Can Do...Activity*

Objective: Unplugged Activity

Suggested Prompt 1: We're going to play a game called **When...Do... Can Do**. It's called that because When you hear something, you can do something.

Suggested Prompt 2: Here's how the game works. On the screen you see three When...Do... actions. Do your best to memorize each. Then, I'm going to call out the **When...** and your job is to act out the **Do...** Try to memorize each When...Do... action before we start the activity.

- When... I say "rock", Do... "clap your hands"
- When... I say "Kodu", Do... "wave your arms in the air"
- When... I say "Star", Do... "say the word Awesome"

Do: Conduct Activity **When...Do... Can Do**

- Say the words "rock", "Kodu" and "Star" in random order to cause a reaction from the students
- Increase the tempo as students catch on.
- Watch students to see if students act out accordingly:

  - "rock", "clap your hands"
  - "Kodu", "wave your arms in the air"
  - "Star", "say the word Awesome"

Suggested Prompt 3: How many of you found this activity easy? How many of you found it challenging?

Suggested Prompt 4: Let's face it. It's hard to think and do at the same time. Do you think your computer would find it difficult? Do you think your computer would have made any mistakes?

Suggested Prompt 5: The computer doesn't have to think. It's programmed. You can rely on your computer to repeat the action when you program your characters using the When...Do... action. Thank you for playing this game. You just demonstrated how action can create a reaction.

Kodu Tutorial: Fishbot Tutorial (20 min)

Display: Slide 24: *Tutorial versus Game*

Objective: Define the difference between a tutorial and a game

Suggested Prompt 1: How many of you know there is a difference between a game and a tutorial? Well, there is a difference.

Suggested Prompt 2: Flashy Fishbots is a game. Sample games are mini-games that you can play just for fun. All of them can be edited so after you've played one you can open it up, see how it works and change it. Some games are unfinished to give you a start to your idea. You can make more complex games if you want, with a little effort and time.

Suggested Prompt 3: Fishbot Tutorial is a tutorial. Tutorials are designed to teach you something about programming Kodu. Tutorials give you steps but it's possible to make a mistake. It can become difficult to "undo" more than one error. If you make a mistake, the best thing to do is to close the tutorial and start over by selecting Load World from the main menu.

Display: Slide 25: *Fishbot Tutorial*

Objective: Provide an opportunity for students to create Flashy Fishbots by following the Fishbot Tutorial

Suggested Prompt 1: Now we are going to create a Flashy Fishbots game by following the Fishbot Tutorial. In order to do that, we'll need to read the instructions on the device screen and follow instructions carefully.

Suggested Prompt 2: We're going to work with a partner for this activity. Teams of two will work on one device. We're going to take turns in our roles. One partner will start out as the Map Reader and the other partner will start out as the Driver.

Do: Explain the **Map Reader** and **Driver** roles
- The **Map Reader** is the partner who reads the instructions on the screen
- The **Driver** is the partner who writes the code described in the instructions

Suggested Prompt 3: When I say "go", you'll have 15 seconds to pick a partner. Decide who will start out as the Map Reader and who will start out as the Driver. Ready? Go.

Do:
- Be sure to pair any younger student who may have less reading ability with an older student

Suggested Prompt 4: First, I'm going to model how you'll be following the tutorial instructions when it's your turn to work together with your partner.

Do: Toggle to Fishbot Tutorial

Demo:
- Open the Fishbot Tutorial.
- Demonstrate, with the help of a "helper student," how to follow a tutorial.
- Point out where the directions are located and stress that reading and understanding the directions are critical to creating a successful game.
- Read aloud the first direction. Have a helper student be the Map Reader to complete the step on the leader's display.
- Read aloud the second direction. Have a helper student be the Map Reader to complete the second step on the leader's display.

Suggested Prompt 5: Are you ready to model what you just observed between me and our "helper student"? Are you ready to play the Fishbot Tutorial? Here are the guidelines:

- Each team will play on the same computer for this activity
- One partner reads the directions while the other completes the task
- Everyone plays at different speeds
- Partners will switch roles every two minutes so that each partner gets a chance at each role

Do: Instruct students to open Fishbot Tutorial

- Click on the Kodu Game Lab **icon** on your device screen
- Select **Load World**
- Click in the search box and type **Fishbot Tutorial**

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Suggested Prompt 6: Let's practice. When I say "go" the Map Reader and the Driver will have one minute to practice in your role. If you are a Map Reader, please raise your hand. If you are a Driver, please raise your hand. Thank you.

Suggested Prompt 7: After completing one minute, please stop and stand. Are there any questions about this practice exercise? Ready? Go.

Do:
- When everyone is standing, ask if there are any questions
- Now instruct them to continue in their roles until you call a stop and ask them to switch roles
- Time two minutes, then call a stop for students to switch roles

Suggested Prompt 8: I'm going to come around to help anyone that needs it. Please raise your hand if you get stuck or need help.

Revise Flashy Fishbots Action (15 min)

Display: Slide 26: *Revise Flashy Fishbots Action*

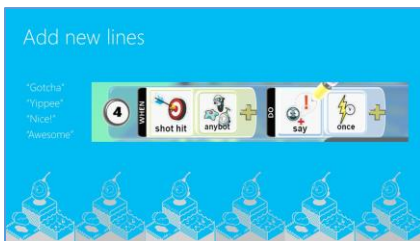**Objective:** Provide an opportunity for students to revise Flashy Fishbots Action

Suggested Prompt 1: Time to make changes in Flashy Fishbots! Now that you have completed the tutorial, think about how you could change the action of the characters in the Flashy Fishbots program.

Demo these steps:

1. Return to **Kodu** Main menu
2. Select **Load World**
3. Load the original **Flashy Fishbots** game
4. Select the **Objects** tool.
5. Right click on the **Kodu** and choose **Program**
6. Point out all of the When...Do... lines they created in the tutorial.

Suggested Prompt 2: How many of you noticed there were 3 lines of code you created in the Fishbot Tutorial? Next you're going to add new lines as When...Do... actions.

Display: Slide 27: *Add a New Line*

Objective: Provide an opportunity for students to add a new line of code

Do: Toggle to Flashy Fishbots and pace through the directions as students follow along, stopping at each step to make sure the students are on pace with you.
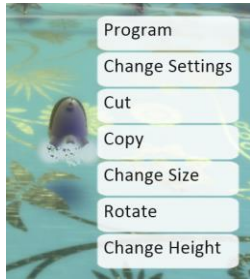
Suggested Prompt 1: You could do more things to your Flashy Fish.

Do: Conduct Activity **Add A New Line**

- Direct students to **page 8** in Student Workbook
- Read Add A New Line **Directions** and **Activity checklist**

Suggested Prompt 2: Let's add a new line of code.

- Instruct students to right click on the Kodu and select Program

- Instruct students to add line 4, a new line of code to Flashy Fishbots
- Instruct students to run the program to see what happens

Suggested Prompt 3: You can add an expression to be spoken. Now, add a word your character can say. Choose one of the following words to add:

- Gotcha
- Yippee
- Nice!
- Awesome

Suggested Prompt 4: You can cause any red bot to disappear when hit.

- Instruct students to add line 5, this will cause any red bot to disappear when hit
- Instruct students to run the program to see what happens

Suggested Prompt 5: You can save your revised tutorial so that it can be listed among the games and tutorials listed when you select Load World. You can find the directions for saving revisions on page 6 in your Student Workbook.

Suggested Prompt 6: Experiment by adding more lines or changing one of the 2 lines you just added. Remember to run your game after every completed line change!

Section 4: Wrap Up (10 minutes)

Closure (5 min)

Display: Slide 28: *Review*

Objective: Review Session 1

Suggested Prompt 1: To wrap up, I'd like to hear what you thought about Session 1.

- What did you learn about working with Kodu Game Lab?
- What did you like about the Flashy Fishbots?
- What did you like about the When...Do... action plan?
- How would you like to change the characters in Flashy Fishbots?
- How would you like to change the action in Flashy Fishbots?
- What else can you do to keep building your skills in these areas?

Do: Although all questions are on the slide, ask each question one at a time and solicit responses to each question before moving on to the next one.

Suggested Prompt 2: Here are a couple of other reminders before the next session:

- You can re-do any of today's tutorials on your own devices. Just use the links and instructions from your Student Workbook.
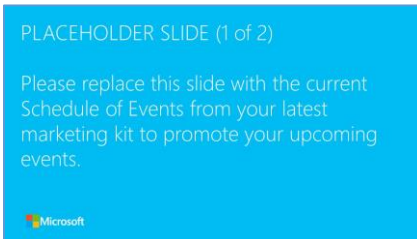
Display: Slide 29: *Questions*

Objective: Opportunity for students and parents to ask questions

Suggested Prompt 1: What questions do you have about today's session?

Thank You (5 min)

Display: Slide 30: *Schedule of Events Placeholder Slide*

Objective: Please replace this slide with the current Schedule of Events to promote any upcoming events.

Suggested Prompt 1: Let's quickly review some upcoming events we have scheduled that may be of interest. You might like to make sure you have a spot registered.
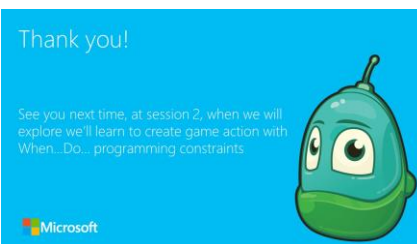
Display: Slide 31: *Additional Marketing Placeholder Slide*

Objective: Please replace this slide with slides from your latest Marketing Kit to promote upcoming sessions or events. Choose ones that are most appropriate for this audience.

Suggested Prompt 1: *Personalize this prompt to align with selected marketing material.*

Display: Slide 32: *Thank you*

Objective: Wrap up and thank students and parents for attending.

Suggested Prompt 1: It's been my pleasure to work with you all today. Thank you for attending. I look forward to seeing you in Session 2, where we'll learn to create game action with When…Do… in a tutorial to create a more complex game. Please turn in your Student Workbooks and your device so we make sure you have them for the next session. I promise to keep them safe and return them to you at the beginning of Session 2. You'll get to keep your Workbook at the last session, so be sure to come to all the sessions.

Suggested Prompt 2: As a reminder, bring your earbuds back with you for each day of camp.

Do:

- Keep the collected Student Workbooks in a safe place to access for Session 2
- Follow usual procedures to clean up the workshop area

Suggested Prompt 3: See you next time!