

Lesson Plan 1 – Managed Test Drive

Topic Description

Kodu Makerspace is an eight-lesson unit intended for 50-minute time blocks in a school setting. Students will create interactive computer games in Kodu Game Lab. The intended audience is students 8 years and up. During this lesson, students will be introduced to coding and game development with a focus on character placement and properties. In the first lesson, students will explore Kodu Game Lab by playing and then examining and experimenting with the characters using the character menus in the Kodu environment.

Objectives

Students will be able to:

- Load and play a Kodu game
- Navigate the menus associated with characters
- Communicate ideas for modifying game characters and actions

Materials and Preparation Required

- Access to the Internet and Kodu Game Lab: <http://www.kodugamelab.com>
- Computing device with screen display for teacher
- Computing devices with keyboards for students
- Flashy Fishbots (completed working game): <http://aka.ms/flashyfishbots>
- Introduction to Kodu video: <http://aka.ms/intro2kodu>
- Student Guide: **Student_Guide_Kodu_Makerspace.docx**
- PowerPoint Presentation to deliver the lesson: **1_Slides_Kodu_Makerspace.pptx**
- Dry run the PowerPoint Presentation in Slide Show mode to enable animations and be familiar with any on-click animations
- Headphones for students (recommended)






Outline of the Lesson






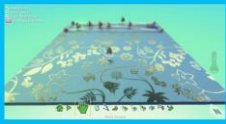

- Getting Started: Introducing Kodu Game Lab
- Kodu Game Exploration: Flashy Fishbots
- Character Analysis
- Character Revisions
- Wrap up




Student Activities

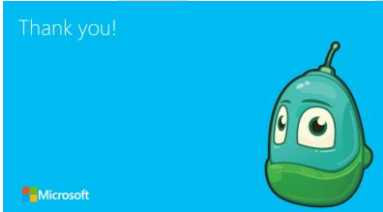
- Explore a Kodu Game
- Analyze and modify game characters
- Experiment with the Kodu character menus

Teaching/Learning Strategies

Strategy	PPT Image
<p>Getting Started: Introducing Kodu Game Lab (10 min)</p> <p>Introduce the first lesson <i>Managed Test Drive</i> by sharing the Big Questions. Display slide 2 for questions.</p> <p>Students should expect to explore the answers to these questions during the first lesson:</p> <ul style="list-style-type: none"> • What is Kodu Game Lab? • How can you use Kodu Game Lab to make fun games? • How do you navigate the Kodu menus? <p>Show the Introduction to Kodu video. Display slide 3.</p> <p>NOTE: Set this up prior to the class period on the presentation computer.</p> <ul style="list-style-type: none"> • Click on the  Kodu Game Lab icon. • Select to Options. • Scroll down to "Show video at next startup", and click the "power" icon at the left. • Restart Kodu Game Lab by exiting the program, then reopening it to see the intro video play on startup. <p>Point out and describe the Kodu Game Lab main menu. Display slide 4.</p> <ul style="list-style-type: none"> • 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. 	<p>Slide 1</p>  <p>Slide 2</p>  <p>Slide 3</p>  <p>Slide 4</p> 

Strategy	PPT Image
<p>Kodu Game Exploration: Flashy Fishbots (10 min)</p> <p>Guide students to load Flashy Fishbots. Display slide 5.</p> <p>Show the Load World main screen featuring home menu, Play Game, Move Camera, Object Tool. Display slide 6.</p> <p>After the game opens, point out the Tool Palette at the bottom of the game window featuring Home Menu, Play Game, Move Camera, and Objects Tool.</p> <p> 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.</p> <p> Play Game – Click the Play button to see the game in action.</p> <p> 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.</p> <p> 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.</p> <p>Prompt students to be observant to answer questions as they play Flashy Fishbots. Display slide 7.</p> <ul style="list-style-type: none"> • 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? 	<p>Slide 5</p> <p>Load World main screen</p> <ul style="list-style-type: none"> • Select Load World • Type Flashy Fishbots into the search box • Select Play  <p>Slide 6</p> <p>Tool Palette navigation: Flashy Fishbots</p> <ul style="list-style-type: none"> • Home menu • Play game • Move camera • Object tool  <p>Slide 7</p> <p>Kodu game exploration: Flashy Fishbots</p> <ul style="list-style-type: none"> • 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? 

Strategy	PPT Image
<p>Character Analysis (5 min)</p> <p>Guide students to brainstorm ideas for modifying the way Kodu and Fish character's look. The emphasis is on appearance, size, and position, NOT action.</p> <p>Ask students to pair with an elbow partner. Ask them to think of four ways they could change the color, size, or position of the characters in Flashy Fishbots. Display slide 8.</p> <p>Lead the students to come up with possible answers such as:</p> <p><i>Possible answers:</i></p> <ul style="list-style-type: none"> • <i>Make Kodu bigger</i> • <i>Change Kodu's color</i> • <i>Make the fish all the same color</i> • <i>Add more fish</i> • <i>Put Kodu in a different position in the world</i> <p>Demonstrate how to change the appearance of the characters:</p> <ul style="list-style-type: none"> • Move Kodu to a new position • Change the color of Kodu (click on Kodu and select a color from the color palette across the top using the arrow keys) • Add new objects (click on the object tool) • Change the color of each fish <p>NOTE: The movement of fish is programmed. They move along a defined path regardless of where they are initially placed.</p>	<p>Slide 8</p> 
<p>Character Revisions (20 min)</p> <p>Display slide 9.</p> <p>Direct students to pages 4-5 in Student Guide.</p> <p>Read the directions and follow the steps to modify the appearance of objects and characters in Flashy Fishbots.</p> <ol style="list-style-type: none"> 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 	<p>Slide 9</p>  <p>Slide 10</p> 

Strategy	PPT Image
<p>6. Move Kodu <input type="checkbox"/> Left click and drag</p> <p>7. Change the color of Kodu <input type="checkbox"/> Click on Kodu <input type="checkbox"/> Use the arrows to pick colors from the palette at the top of the screen</p> <p>8. Add new objects (rock, octopus) <input type="checkbox"/> Click on the Object Tool <input type="checkbox"/> Click anywhere in the world <input type="checkbox"/> Notice the layers of the Menu Wheel</p> <p>9. Notice the sections of the Menu Wheels that are "pointed" have more sub-choices <input type="checkbox"/> Add a rock <input type="checkbox"/> Add an octopus</p> <p>10. Change the color of each fish</p> <p>11. Change the starting position of a fish</p> <p>Monitor student work. Assist as needed.</p> <p>Direct students to page 6 in Student Guide.</p> <p>Display slide 10.</p> <p>Read Saving Changes Directions.</p> <p>Demonstrate as students follow along:</p> <ol style="list-style-type: none"> 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 <p>NOTE: the revised game is now listed among the games listed when Load World is selected.</p>	
<p>Wrap up (5 min)</p> <ul style="list-style-type: none"> • Instruct students to share their revised games with their elbow partners. • Ask students to comment on the interesting things they saw from the games their peers created. • Review Big Questions. 	<p>Slide 11</p> 

Extensions

Invite students to watch video interviews with game designers and developers:

- <http://aka.ms/RealReelzAshley>
- <http://aka.ms/RealReelzGuillermo>
- <http://aka.ms/realreelzHoop>



Tips

Students may suggest more complex revisions to this game than are listed in the lesson. The lessons are designed to scaffold their learning from easy to more difficult over the eight lessons. Adjust the complexity of the revisions you demonstrate in this lessons to reflect the age and abilities of your students, as desired.
