Technology Skills Curriculum

Lesson 7: App Development - Intro to App Lab

pwc

Agenda

Let's get started

1. Getting started: Login to online lesson

2. Main activity: Work through App Lab levels to make your app

3. Wrap up: Watch Data and Medicine - Video, and careers reflection

Objectives

- Introduce you to the App Lab programming environment as a powerful tool for building and sharing apps.
- Be able to create and control buttons, text, images, sounds, and screens in JavaScript using either blocks or text.
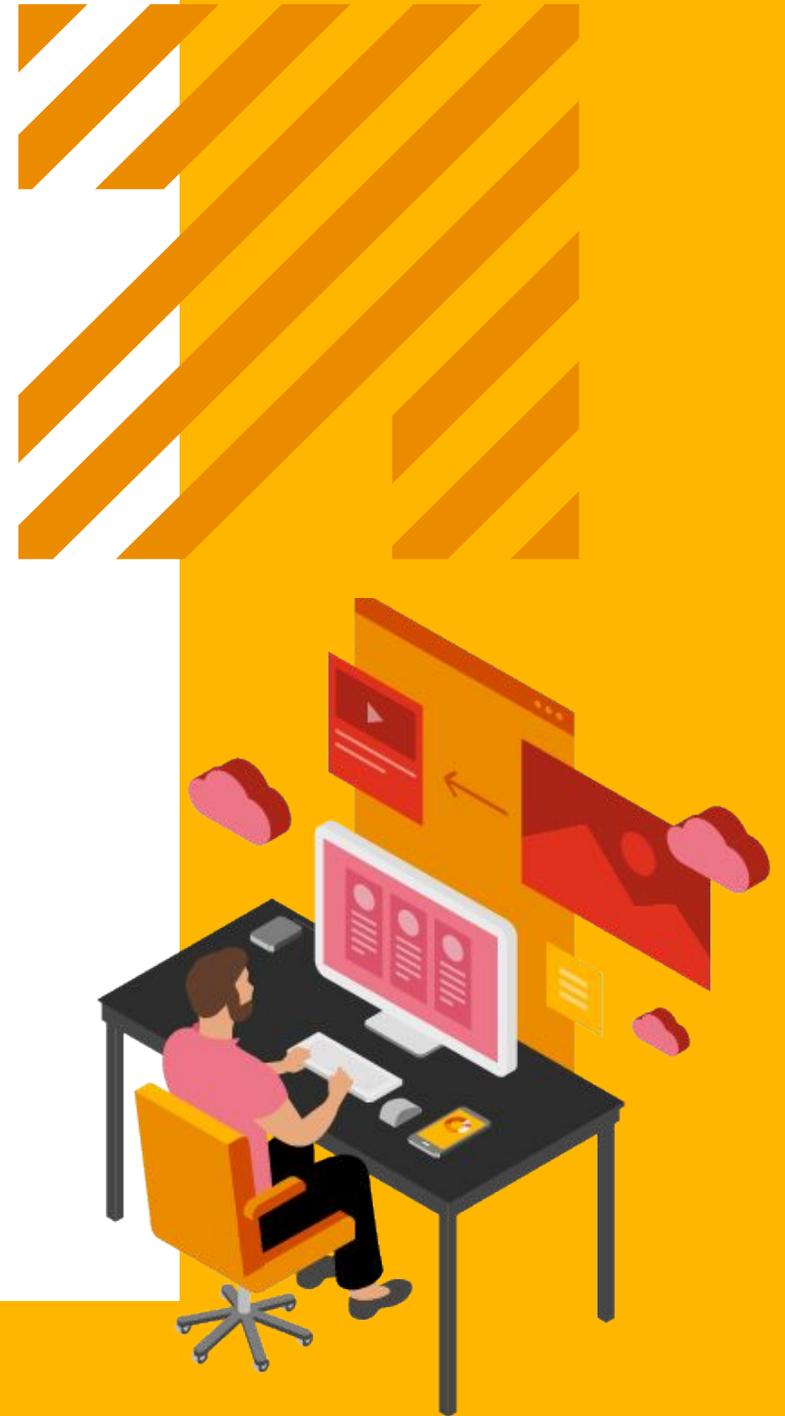
01

Getting Started:

Login to online lesson

Access the App Lab session

1. Navigate to www.code.org/pwc and select Lesson #7 – App Development: Intro to App Lab.
2. From there, click the link Intro to App Lab Hour of Code Tutorial.

Once you have logged in click here

Next choose one from the lists below:

PwC's Access Your Potential curriculum

At PwC, we believe that all students have the potential to be tomorrow's leaders and tech-driven workforce. Access Your Potential is our commitment to help close the opportunity gap by equipping young people, especially those from disadvantaged communities, with the financial, technology and career-selection skills they need to change the trajectory of their lives. As part of our commitment, we're excited to launch our Access Your Potential middle school technology and careers curriculum.

Lesson Name	Progress
1. Personal Innovations	1 2
2. What is a Computer?	1 2
3. Problem Solving with Big Data	1 2 3
4. Programming - Hour of Code	1
5. Creating Webpages	1
6. User Interfaces	1
7. Intro to App Lab (13+)	1

App Development - Intro to App Lab

This tutorial is designed to quickly introduce the App Lab programming environment as a powerful tool for building and sharing apps. The tutorial teaches students to create and control buttons, text, images, sounds, and screens in JavaScript using either blocks or text. At the end of the tutorial students are given time to either extend a project they started building into a "Choose Your Own Adventure", "Greeting Card", or "Personality Quiz" app. They can also continue on to build more projects featured on the code.org/applab page.

Important: This tutorial is designed for students 13 years or older only

- Intro to App Lab Hour of Code Tutorial

02

# Work through App Lab levels to make your app

Hints and Tips For All Levels on App Lab

- **Collaborate with your neighbour** if you're stuck.

- **Read the Instructions:** The instructions provide helpful tips on how to complete the level. Before completing a level, make sure you look closely at the target image and read all the text there.

- **Stuck?** Each level includes a GIF showing exactly how to complete the level. If you only want to use the GIF as a hint, close the GIF once you've seen the first part.

- **Move On and Come Back:** Sometimes you will benefit more from coming back to a tricky level. Except for the "Design Mode" sequence, all levels are independent of one another, though they do rely to some degree on previously introduced concepts.

Hints and Tips: Levels 1-4

These levels are all about learning to use the set Property() block. The dropdowns in this block make it easy to know exactly what it is capable of changing. That said, there's a couple tips that can help:

- **When to use Double Quotes:** The set Property() block automatically changes the final dropdown when you select what properties you want to change, including whether they use double quotes. When in doubt, you should first change the first two dropdowns, then use the last one as a model for what values work there. The most common error is failing to use double quotes around a colour name.

- **Hover to Read IDs:** By hovering over an element in your app you can read its ID. This will help you when you're trying to change multiple elements on their screen.
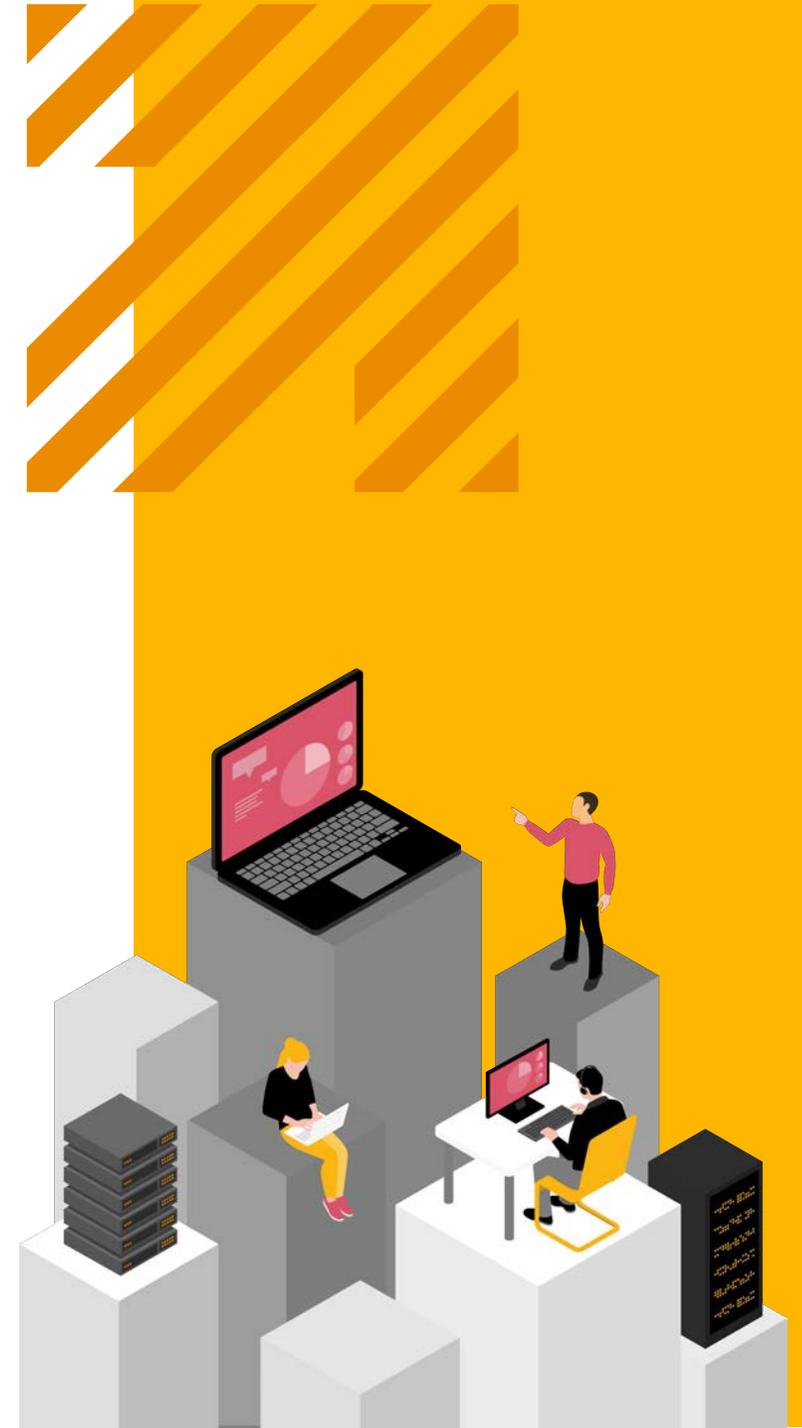
Hints and Tips: Levels 5-7

This sequence introduces the on Event() block. Here's some helpful tips if you are getting stuck.

- **On Events Don't Go Inside One Another.**

- **Check Your IDs:** You need to change the "id" property in on Event() so that it detects events with the correct element.

- **You Can Use Multiple Blocks in an on Event() :** If you want multiple things to happen when you click the same button, just add more blocks to the same on Event(). You should never have a program that has two on Event() blocks for the combination of element (e.g. "button1") and event type (e.g. "click")
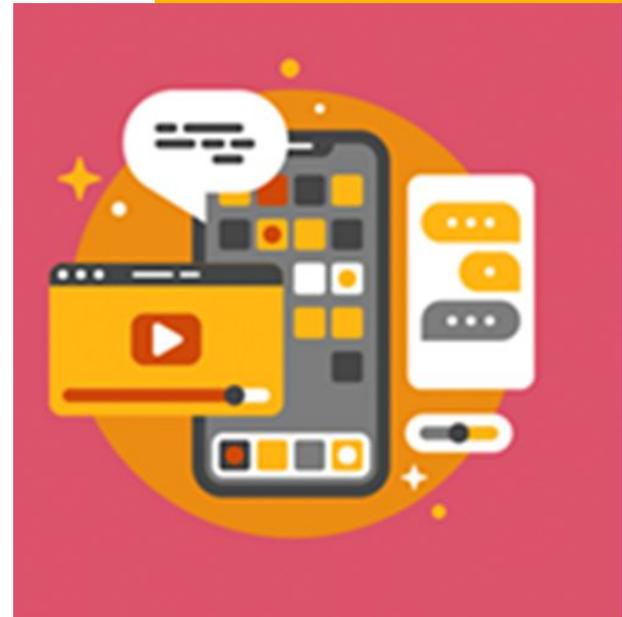
Hints and Tips: Levels 8-9

This level is a little more involved than the previous ones, so you may need to either rewatch the video beforehand or read instructions carefully to complete all the steps.

- **Images Use setProprety():** To add an image to a screen element you can use the "image" property. There is no new block.

- **Link to Images:** You can copy the URL of images they find directly into the set Property() block in order to add them to their apps. There's no need to download them to your computers and upload them to App Lab if you don't wish to
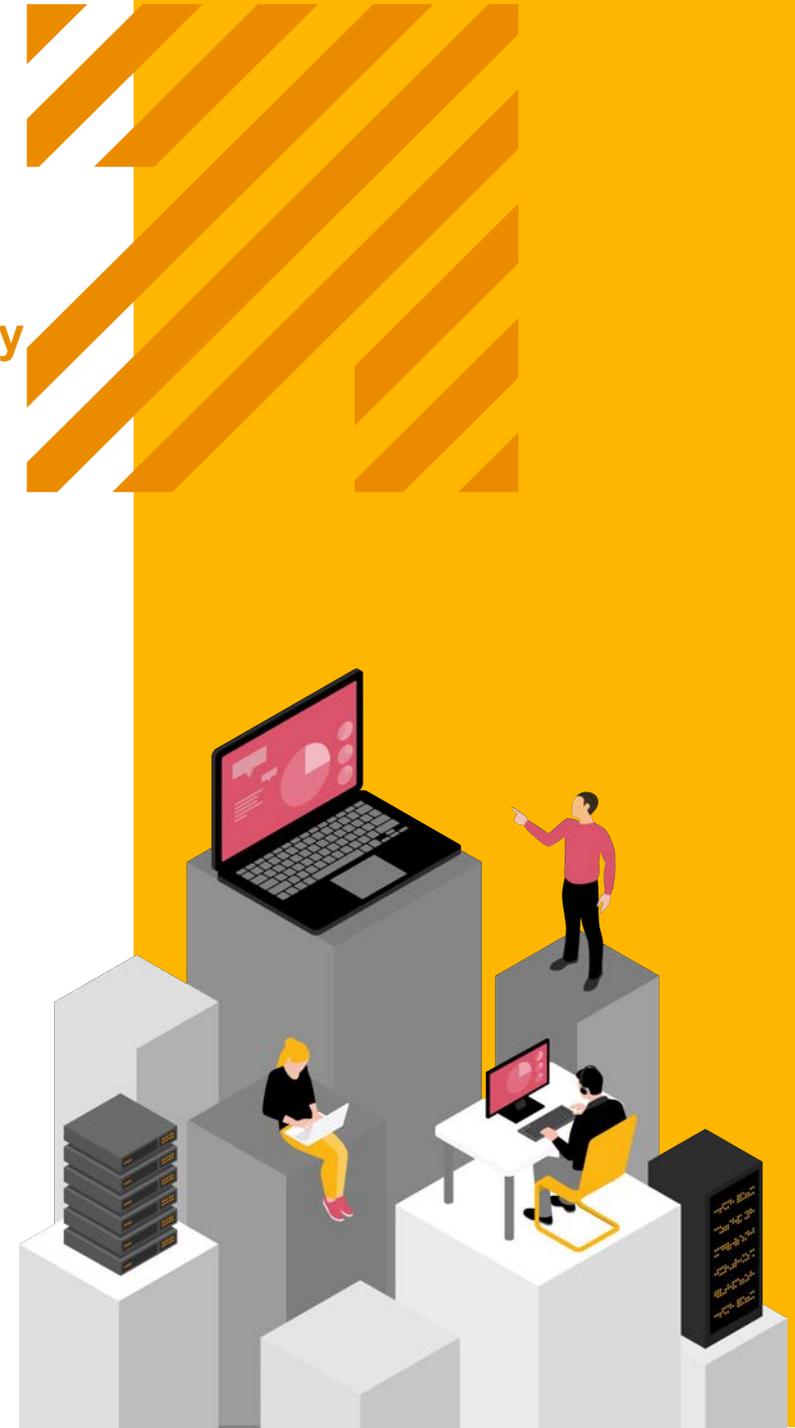
Hints and Tips: Levels 10-13

- In the last sequence you are working on the same project for three bubbles in a row. You are now learning to add screen elements yourself which means that the total number of things you can do in App Lab has grown a lot!

- Spend some time exploring at this point as they try out all the new tools.

- **Using Good IDs:** An important part of programming in App Lab is giving your elements good IDs. Up to this section you have had your IDs created for you, so you haven't had a chance to practice this skill.

Hints and Tips: Levels 14-15

This section is very open-ended. Choose Your Own Adventure, or one of their own creation.

- **Try the Samples**: You are provided 3 sample apps that should help you brainstorm your own ideas.

- **Share your ideas with your neighbour.**

- **Be Creative:** What will your story be about?

03

Watch Data and Medicine - Video, and careers reflection

Wrap up and reflection:

Task: Watch Data and Medicine - Video.

Reflection questions:

- How is data being used in medicine?

- What jobs are you interested in?

- What are your favorite tech gadgets or apps, and how do you think they are built?
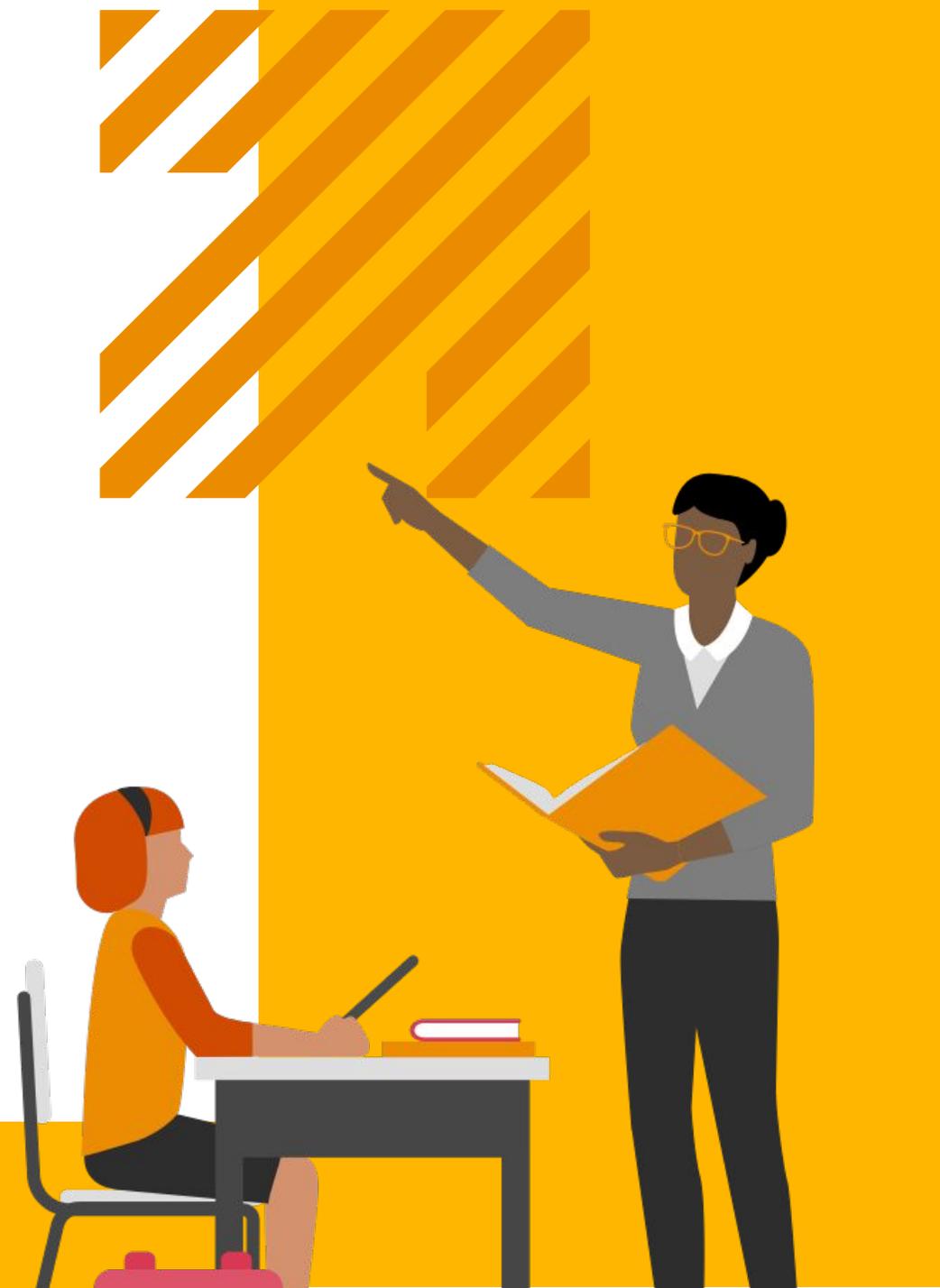
What employability skills have you developed in this session?

Leadership	Business minded	Technical capabilities	Global acumen	Relationships
• Teamwork • Problem solving • Decision making	• Quality in everything you do • Improvement • Thinking commercially	• Your knowledge of potential jobs you could apply for • What have you done you are proud of • Ability to learn	• Seeking new perspectives • Sharing ideas • Coping with change • Open minded	• Communication skills • Building relationships • Working with others

Thank you

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