

## *Description*

This 40 – 60 minute session from ComputerXplorers is designed to help Primary school children from the age of 8 to 11+ create a sound effects app whilst introducing them to some of the key elements of app design and app creation.

ComputerXplorers (UK) and Computer Explorers (US) help children reach their full potential by using technology as a tool to engage students, enhance the educational process, and prepare them for the future.

The ComputerXplorers sessions run in a variety of settings – from after school, lunchtime and breakfast clubs to pre-schools, holiday programmes and home schools too. Specialist ICT or Computing classes during core curriculum time are also part of our service - a great way to boost children's STEM skills. We provide the instructor, the lesson plans, the software and extraordinary technology peripherals. Our programmes for children from 3 to 13 can be tailored to your own individual requirements and are always fun, educational and engaging.

# *Introduction*

We are going to create our own sound effects app. Talk to the children about sound effects.

Explain that we are going to create an app that has an introductory screen explaining how to use the app. We will then put on a 'next' button at the bottom of this screen that will take the user to a screen of icons. We will upload individual pictures and sounds to each icon and ensure that we format the app so that when we press the icon it plays a sound.

Start by demonstrating how to build the app, explaining each new element of app design as you go along according to the steps in the following guide: Creating and Naming the App; Creating the About and Icons Screens; Personalising the Icons Screen. Once you have shown the students how to create it encourage them to log on and create their own app. Where students struggle encourage them to get support from their fellow students through the use of development teams.

# Creating and Naming the App

Log onto appShed.

Create a new app by pressing the red button with the plus sign at the bottom of the phone simulator.

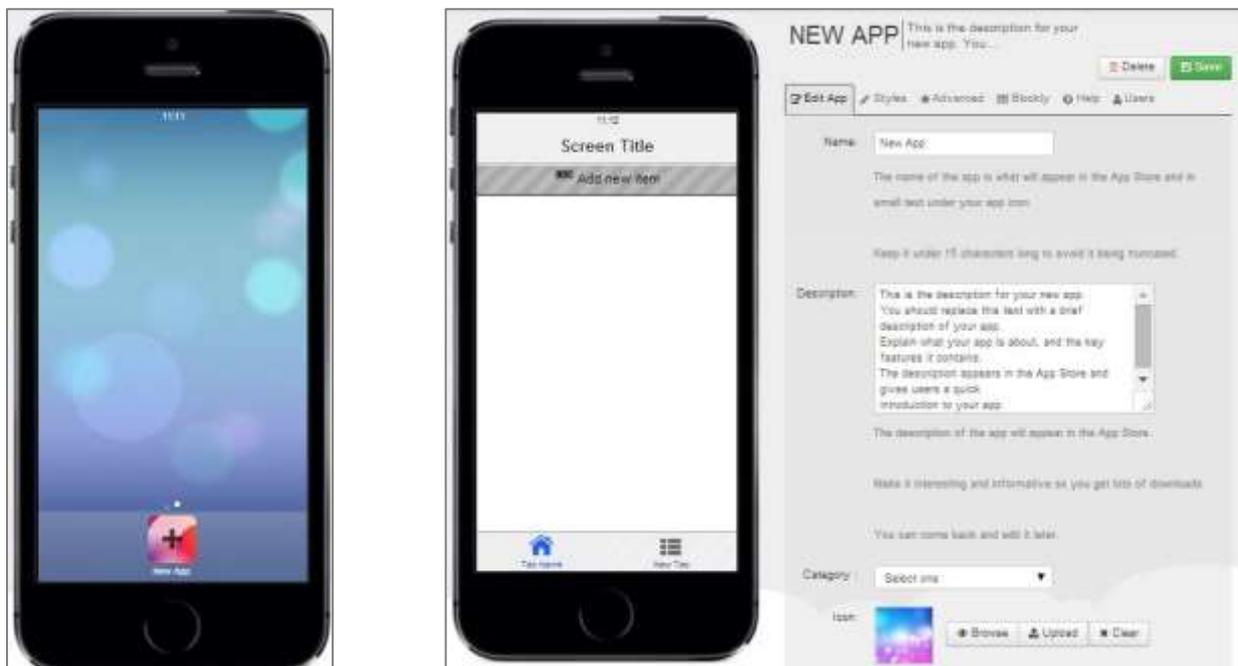
Now that we have created the app we need to edit it so that it looks how we want it to look.

First of all we need to name our app and give a description of its function, eg 'Sound Effects'. We can change the name and add an icon and description for our app under the options on the right hand side of the screen (or underneath depending on the simulator you're using).

We can then upload a picture to set the **icon** for our app. Check that children understand what an icon is: **An icon is a pictogram displayed on a screen in order to help the user navigate a system or mobile device in a similar way traffic signs are used to help a driver navigate traffic.**

Don't forget to upload a **splash screen** picture. **A Splash Screen is an image that appears whilst waiting for the app (or program) to load.**

Click Save.



## Creating the 'About' and 'Icons' Screens

For this app we're going to have a tab that explains what our app is about. Press the home button on your phone simulator to bring you to the main screen and then double click on the 'sound effects' app. You should now be presented with an empty tab and screen ready for editing.

Click once on the screen title and select 'Edit' from the menu that appears. This will allow us to change the name of our screen in the editing option to the right of your simulator (or below). For example call the screen 'About' because it will tell the user what the app is about and how they should use it. Click 'Save' to save your changes.

Next we will add some text to this screen to detail the purpose of the app and how people should use it. To do this we need to add a text item.

Click on the 'Styled Text' item under the red triangle (Standard Screen Items). 'Styled Text' lets us perform some formatting at the point of writing the text, for example it lets us change the font, make it bold, underlined, italic and it lets us use tables within our text item.

Under the 'Edit Styled Text' tab write in whatever it is you want to appear on the screen. Eg tell the users about the purpose of the app and how they use it.

Experiment with the different formatting options and see which you like the most. Click 'save' at the top of the page to save your changes.

Next we want to add a button that, when pressed, will take us to our sound effects page. To do this scroll down the screen until you get to the 'forms' section (look for the green diamond). Click once on 'Button'. This will add a button to your screen and open the editor for the button. In the 'label' field under 'Edit Button' write the title you want for your button eg 'Take me to the sounds'. Before you 'save' click on the 'Action' tab. This may be set as email by default. To change this click on 'Change Action' then select 'Icons Screen'. We want our button to take us to a screen of icons as we want one screen with a few pictures of animals and corresponding sounds. An icon screen will be the perfect layout for our sound effects. Once the action has changed click 'save' at the top of the page.

Once you click 'save' the screen should automatically switch to the icons screen. If it doesn't, just double click the 'Take me to the sounds' button and it will take you to the icons screen.



# Personalising the Icons Screen

In this screen we are going to upload a few pictures and a few sounds. We want to program our app so that when we click on a picture the corresponding sound plays. We need our pictures to be descriptive so that the user understands what sound is going to play.

We are creating a sound effects app based on animal sounds, therefore all our pictures need to reflect the animal noise it will produce. We need to start by uploading a picture. Click on 'An Icon' and select edit from the menu, the first picture we choose to upload is a pig. Under 'Edit Icon' in the 'Title' field type in the word 'Pig', then underneath in the 'icon' section select upload and navigate to a pig picture, double click and wait for this to upload.

Scroll up and click on 'Action', click on 'Change Action' and then click 'Sound' from the options available. Once this has been selected we are presented with the opportunity to upload, browse or clear a sound. We are going to use 'upload', once you have clicked this navigate to a pig sound (you will need to search for these online first) and double click. Wait for the sound to upload and then press save.

Test your sound effect by double clicking on the pig icon and check you can hear the pig sound.



*Remember that an app must be entirely self-contained. Therefore any sounds we use must be uploaded within the app.*

**Helpful Hint!** *If you add in a continuous or long sound (such as a song), there is no way to get the sound to finish prematurely – you will need to listen to the entire sound clip.*



*If children would like to preview their apps make sure they first save the element they are working on. Then click 'Share' and select 'Preview'. To get back to building their app click on 'AppBuilder' in the top toolbar.*



## *Creating Development Teams*

Get the children to form 'Development Teams'. Within this team, they should develop ideas, troubleshoot problems and test each other's apps. If they have a problem or are unsure of how to do something they should check with their development team before escalating the problem to the teacher. The group can also be used for ideas on how to improve each other's apps.

## *Creating the App*

Set the children the challenge of creating their own sound effects app, encourage them to include at least 6 different sounds – make sure the pictures correspond to the sounds so that the user understands what each icon does.

Make sure all children are aware where the picture and sounds resources are stored, or where they can expect to get them ( eg Google, shared folder etc).

Encourage the children to collaborate with their development team for ideas, problems and testing. Make sure children publish and share their apps in order to identify the QR Code/Link should they want to share them further.

## *Extension Activity*

For the children who finish early encourage them to look at the tabs, titles and headers. Can they change the font colour and/or background colour? They will do this by clicking once on the header/title/tab and selecting edit. They will then click on the Style tab to change these settings.

They may notice a strange code when they select a colour – explain to them that this is HTML colour code (This is the way that websites and web based applications read colours. The code is 6 characters long and describes to the computer how much red, green and blue is used to mix the colour. The first two characters refer to red, second two to green and final two to blue. This code is written in hexadecimal).

Note that you will not be able to change the background colour in all elements, for example you can change the background colour of the Screen Title but not of the Styled Text. Encourage the children to experiment with the different options available to them.