

## Session 5

### Coding Concept: Design Process in App Lab

#### Objectives:

SWBAT identify a problem that could be solved with an app, and brainstorm app solutions.

SWBAT prototype and wireframe their ideas.

SWBAT use App Lab design mode to replicate their prototype, and code mode to code their app to run.

#### Supplies

Worksheets

- Brainstorm
- Paper Prototype
- Wireframe

Flyers for the App Authors Showcase

Pencils

#### Icebreaker/Introductions

Explain that we'll be doing something a little different today... Instead of doing coding lessons and free app-coding time, we'll be working through the design process of creating an app.

#### (30 min) Identify a Problem/Brainstorm

- Explain that the best apps solve problems
  - Examples: Google Maps solves the problem of getting lost, Social Media Apps help you stay connected to your friends
- Explain the limitations of App Lab - unfortunately, students will not be able to create the next big video game, but they can create a quiz, a choose-your-own-adventure app, or anything else that can be created with buttons and screens.
- Show slides of previous apps created in App Lab to give kids some ideas of what works well
- Hand out Brainstorming worksheets and have students fill out the front to identify a problem, then use the back of the worksheet to create a mind map, draw ideas, or do any form of brainstorming

#### (1 hr) Paper Prototyping

- Hand out Paper Prototyping Screens worksheets, and have students design the buttons and images of their app
  - Encourage students to start by fully designing only four screens, and if they complete four screens then they can design more
- Once students have completed Paper Prototyping Screens worksheets, hand out Wireframing worksheets, and have students wireframe their app

- Encourage students to draw out what each button will do, and how a user will get from one screen to the next

### **(1 hr 30 min) App Lab**

(45 min) Intro to App Lab design mode

- Walk students through design mode, showing how to add buttons, images, and screens to their app
- Show how to add free-to-use images from Google Advanced Image Search
- Students spend time recreating their paper prototype by adding buttons, screens, and images

(45 min) Intro to App Lab code mode

- Now that students have their app designed, it's time to code it! Show students how to use code mode, explaining that the code blocks look a little different than students are used to from their lessons
- Show students how to code their buttons, change to the next screen, add sounds, etc.
- Students spend time coding their apps

### **Before you go...**

Remind students that the Showcase is coming up in two weeks!

Hand out Showcase flyers and encourage students to invite their friends and family