Science for Seniors: AR Mobile App Tutorial

Overview

Welcome to Science for Seniors, the mobile app for helping engage seniors in learning science content using a mix of Augmented Reality and performing hands on science experiments.

What is Augmented Reality?
Augmented Reality (AR) defines an interactive experience in a real-world environment where the objects that reside in the real world are enhanced by computer-generated information or additional computer-generated objects.

How is AR used in Science for Seniors?
We will be using AR to help users with 3 main things:

- Performing science experiments
- Learning science concepts
- Learning experiment related content

Content

The Content for the Science for Seniors app is organized into 3 different paths:

- The Learn Path
- The Experiment Path
- The Discover Path

The Learn Path
The Learn Path has the goal of teaching the user about some basic science concepts. Some examples of these science concepts are basic chemical reactions and density. The Learn Path provides background for the science behind the experiment that will be performed in the Experiment Path.

The Experiment Path
The Experiment Path has the goal of guiding a user through the steps of performing a simple science experiment. The science experiment will demonstrate the science concepts explained in the Learn Path.

The Discover Path
The Discover Path has the goal of teach the user about content related to the experiment performed in the Experiment Path that is not necessarily science related. The Discover Path provides a tangential learning opportunity for the user outside of the realm of science.

Using the AR

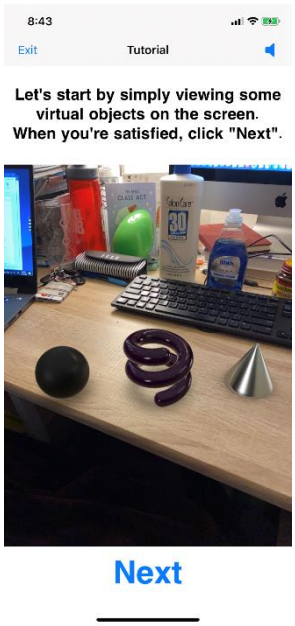
In order to get the most benefit out of this app, you'll want to get familiar with the different AR tools that are presented. To help you get acquainted, we have compiled a set of tips to get the best results with the AR and have also set up a few scenarios to walk you through so you can practice before you dive into the content.

Tips

- Work at a clear table-top of a neutral color
- Utilize a device with a reasonably sized screen
- Move your device gently around the space so the camera can better scan the environment
- Don't be afraid to rotate the device to provide the best shaped screen for the virtual scene being presented
- Don't be afraid to interact with the virtual objects on the screen. Try clicking objects to see if it triggers any actions.

With these tips in mind, go through the following scenarios presented in the app to start getting the hang of using your phone to interact with the augmented reality objects on your screen.

Scenarios



Viewing Objects

In this scenario, we will present a few animated objects on the screen for you to view and give you an idea of what to expect with the AR visuals.

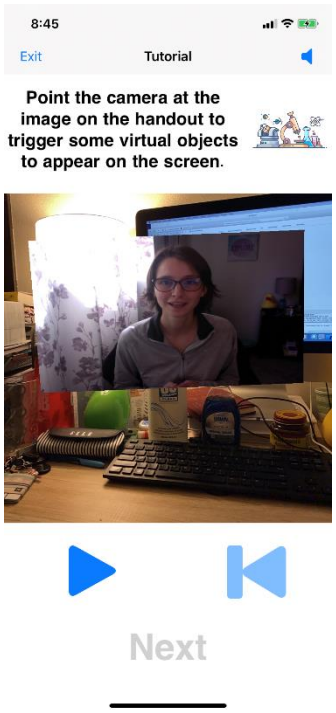
Each path of the app will involve objects like these, so this scenario is really just a starting point to get you acquainted with the app.

Interacting with Objects

In this scenario, we will present a single "label" object on the screen for you to interact with. Interacting with the virtual objects presented on the screen will trigger other objects to appear and/or other actions to occur. This scenario will help you get comfortable with interacting with the virtual objects through your device's screen.

This will be applicable for the Experiment path of the app where you must interact with certain labels and objects in order to work through and complete the experiment.

Triggering AR

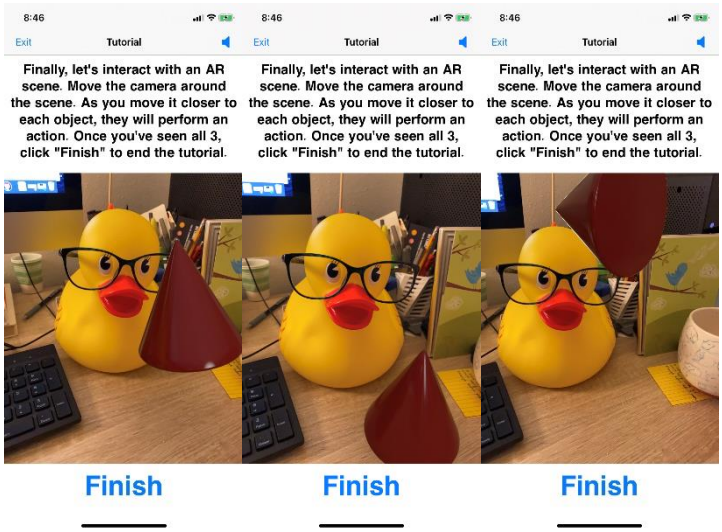


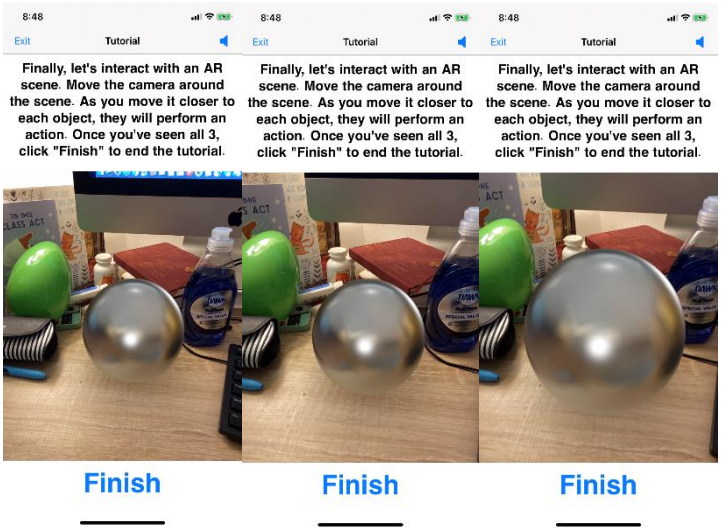
In this scenario, we will use the following image to trigger a virtual video to appear on the screen. This scenario will help get you acquainted with scanning objects and images in the real world to trigger virtual content. It will also help you get accustomed to using the playback controls for the virtual videos.

This scenario will be mostly applicable in the Discover paths of the experiences where we present videos with tangential knowledge.

Engaging in a Scene

In this scenario, an AR scene will be presented that will extend outside of the space of a traditionally sized smart phone screen and will require you to move the camera close to the objects. When you move close to the objects, they will perform actions (like flips, bounces and spins). This scenario will help you practice moving your device around to see all the possible virtual items added to the real-world environment.





This scenario will be applicable to all paths, but specifically the Learn path. The learn path will present AR scenes and animations that may involve a vast space. It will require you to move the camera around and investigate details beyond just the immediate bounds of your device's screen.

Final Thoughts

Congratulations! Now that you made it through the tutorial, you are well equipped to begin using the app at its maximum potential. Start by picking an experience, and then your desired path. Remember if you want to hone your AR skills more, you can always complete this tutorial again.