VO Lab – Instructions

## Introduction

VO Lab is an iPad game (age 12+) that is designed for you to learn and practice basic navigational touch gestures for VoiceOver, Apple’s built-in screen reader on iOS devices, without any previous experience. Skills can be gradually built and settings can be adjusted to suit personal learning requirements.

In the four multi-level stages of the VO Lab app you follow the directions of the Professor in his unusual chemistry lab, where he undertakes a not quite scientific experiment, with fictional chemicals. You practice touch gestures while you move through the app. When you have mastered all of the required touch gestures, you will be put in charge of the final experiment!

The app offers a fun and supportive learning experience for all involved. Although it has been demonstrated that the app can be used independently, active guidance and support may be required to help the learner perform the touch gestures correctly and achieve the best learning outcomes. To assist with this process, dynamically updated score-data and clear, short instructions are provided throughout the app.

Note: If you have Zoom enabled in the Accessibility Settings of your iDevice, then please turn it off before starting the app.

## Stages

VO Lab consists of four multi-level stages, introducing the following navigational touch gestures:

* Finger drag
* Single finger double tap
* Single finger flick left
* Single finger flick right
* Three finger flick left
* Three finger flick right.

## Description of touch gestures

### Finger drag

Put the fingertip of one finger on the screen and then lightly drag the finger around the screen, without putting on too much pressure, and without lifting it up. Each item is identified and spoken as you touch it. Finger drag enables a user with vision impairment to scan and explore the screen, and to put an item in focus, which means that you select that item as the one that you want do something to. The goal is that through this finger drag process, you listen and explore what’s on the screen, and try to create a ‘mental map’, remembering what is located where on the screen. In principle, you can finger drag in any direction. Visually orientated people sometimes tend to recommend the use of a linear, left-to-right dragging movement, but this is not perse necessary and is very hard to do if you are blind. Note that a ‘ticking’ audio cue indicates an ‘empty cell’ or a ‘virtual wall’: you try to move to where there is nothing anymore. Tip: In Stage 1, Level 4, Double tap on Bounzene to hear which chemicals you have missed.

### Double tap

Double tap involves a quick repeat of one tap, quickly putting down and lifting up of the fingertip in the screen twice. You can also split-tap: touch one finger, then tap with a second finger. With finger drag (touch) you put an object on the screen in focus. Once something is in focus, the double tap to open can be done anywhere on the screen (there is no need to tap on the images). Tip: if you can hear your fingers on the screen, it means that the tapping is too loud and too big.

### Flick left or right with one finger

The single finger flick left or right involves placing a finger on the screen and quickly swiping it to the left or right. This flick gesture can be done anywhere on the screen and is a way to quickly move systematically through all the items on the screen. Flick left: move to previous item; Flick right: move to next item. The swipe needs to be in a horizontal line to the left or right: if you deviate too much upwards or downwards while you swipe, the gesture will not be correctly identified.

### Flick left or right with three fingers

The three finger flick left or right can be used to scroll through pages. Three finger flick right: scroll left one page; three finger flick left: scroll right one page. For a correct three finger flick left or right, three fingers need to be used, all three need to keep touching the screen while you swipe, and the swipe movement needs to be in a horizontal line to the left or right: if you deviate too much upwards or downwards while you swipe, the gesture will not be correctly identified. To change the direction of the three finger flick gesture, some people prefer to turn their wrist and hand around. It is also possible to keep the three fingers lined up vertically, or horizontally when making the flick gesture. Simply try what works best for you.

## Options Menu

To open the “Options Menu”, double tap the red button at the top left corner of the screen. Educators who are blind should refer to the in-app accessible navigation system as described below.
The Options Menu provides options to:

* Go to Main Menu
* Skip intro speech
* Replay intro speech
* Go to previous Page
* Go to next page
* Adjust settings

## In-app accessible navigation for educators who are blind

VO Lab uses built-in speech (‘self-voicing’), and simulates VoiceOver, because it is designed for learners who don’t yet have VoiceOver skills. The landing page of the app is VoiceOver accessible, and provides instructions on when to turn VoiceOver off in order to avoid mingling with the app’s built-in speech. The accessible navigation menu can then be used by educators who are blind and support the student.

The app’s accessible navigation can only be turned on and off at the Main Menu of the app, which is the landing page on which VoiceOver can be used. To repeat the VoiceOver instructions, swipe up with two fingers. After you turn off VoiceOver, flick up with one finger, to turn on the accessible navigation. When the accessible navigation is turned ON, this activates:
1. The self-voicing menus in the app. Flick right/left with one finger through the menu items, and double tap to open
2. “Hot spot” in the bottom right corner of the screen. Do a double tap in that space to go back to the Main Menu. Note that the space for tapping is about 2 cm x 2 cm wide. You can use it in all levels, excluding menu pages. Tip: go to the right bottom corner of the iPad, put the top part of the thumb of your right hand against the bottom edge. Bend/curl up your middle finger and press the left side of the bent tip against the right edge of the iPad. Then when you tap with your stretched index finger, it should land perfectly on the hot spot on the iPad.

Turn VoiceOver back on when you exit the app. Press the Home button to exit. Press the Home button twice to get to the app switcher and do a three finger flick up, to close the app. Closing the app ensures that on your return it always starts at the Main Menu.

* VO Lab plays in “Landscape Mode”.
* Please make sure that the triple click Home function on your iDevice is set (only) to turn VoiceOver on and off.
* Although the app provides self-voicing instructions as you go, it is recommended to download the short instructions for each level so that at any stage during the gameplay you can easily check what the learner needs to do.

## Educational tip

If the student has completed the app and has thoroughly learnt all the required touch gestures, it will be a great additional learning experience for him/her to return to the Main Menu, turn VoiceOver on with triple click Home, and then follow the spoken instructions as mentioned above (turn VoiceOver off, and the self-voicing accessible navigation on). The app can then be started over again, and the student can independently flick through the menu items and select Stages to play again.

## Chemicals in the lab

The chemicals described in this app are completely fictional, they don’t exist. They produce great sounds though! Their names are: (main) Hissatone, Ticktonite, Bamium, Splashonite and Popponium and (extras) Blobber, Cracklorite, Ringon and Bounzene.