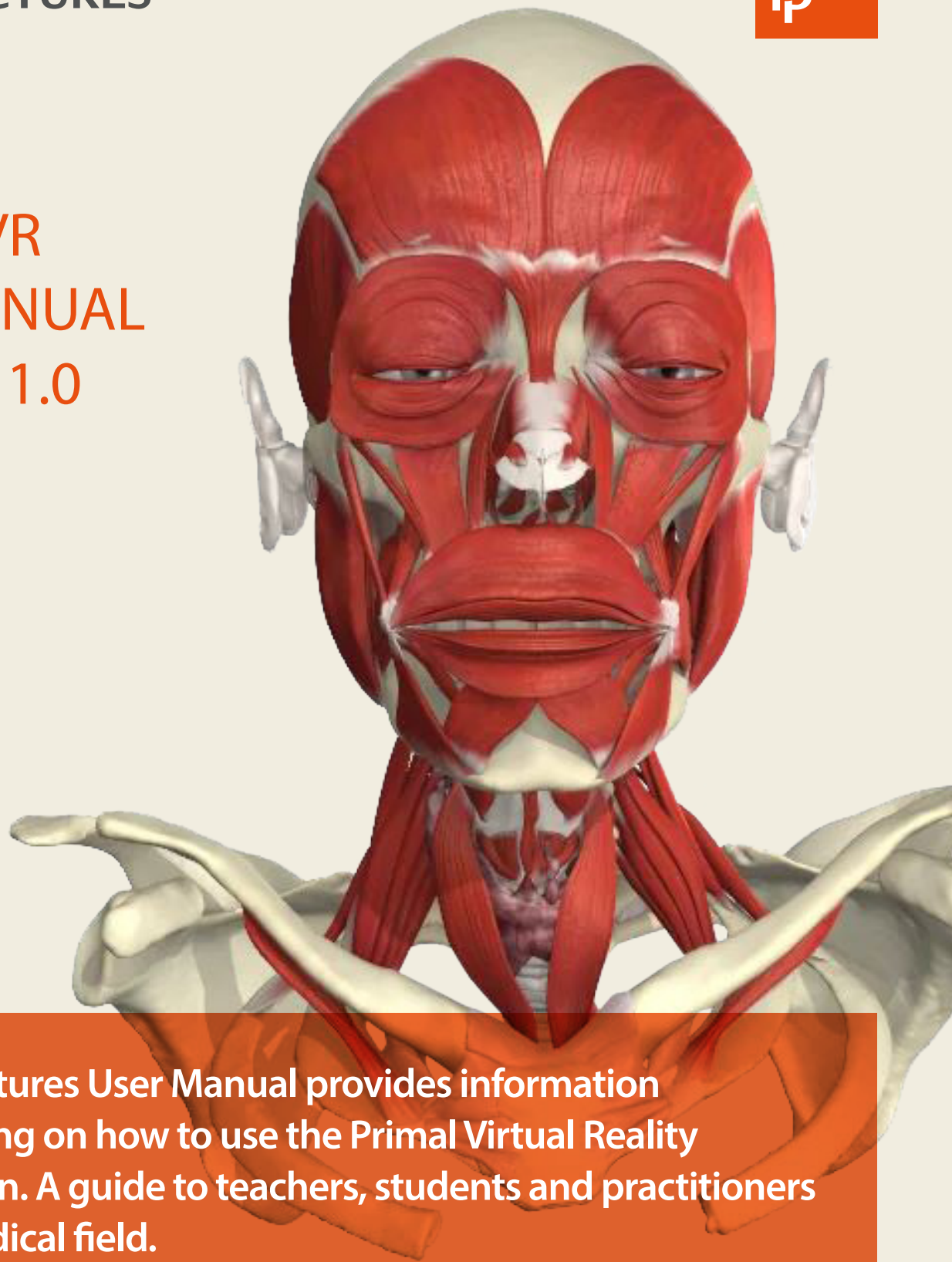# PRIMAL PICTURES

Pp

PRIMAL VR
USER MANUAL
VERSION 1.0

April 2020

Primal Pictures User Manual provides information and training on how to use the Primal Virtual Reality application. A guide to teachers, students and practitioners in the medical field.

Preface

Table Of Contents

Installation & Set Up

Overview

About Primal VR

Primal VR is a virtual reality educational tool that allows students to educate themselves with anatomical scenes in an immersive world.

Students have the autonomy to control the complete experience by setting up the control interface exactly as they wish to learn.

This is created by utilizing a complete six degrees of freedom environment. Allowing the users to examine and toggle viewing states at any size, location or position.

Students obtain an educational advantage through immersive learning by using Primal VR.

Installing the app
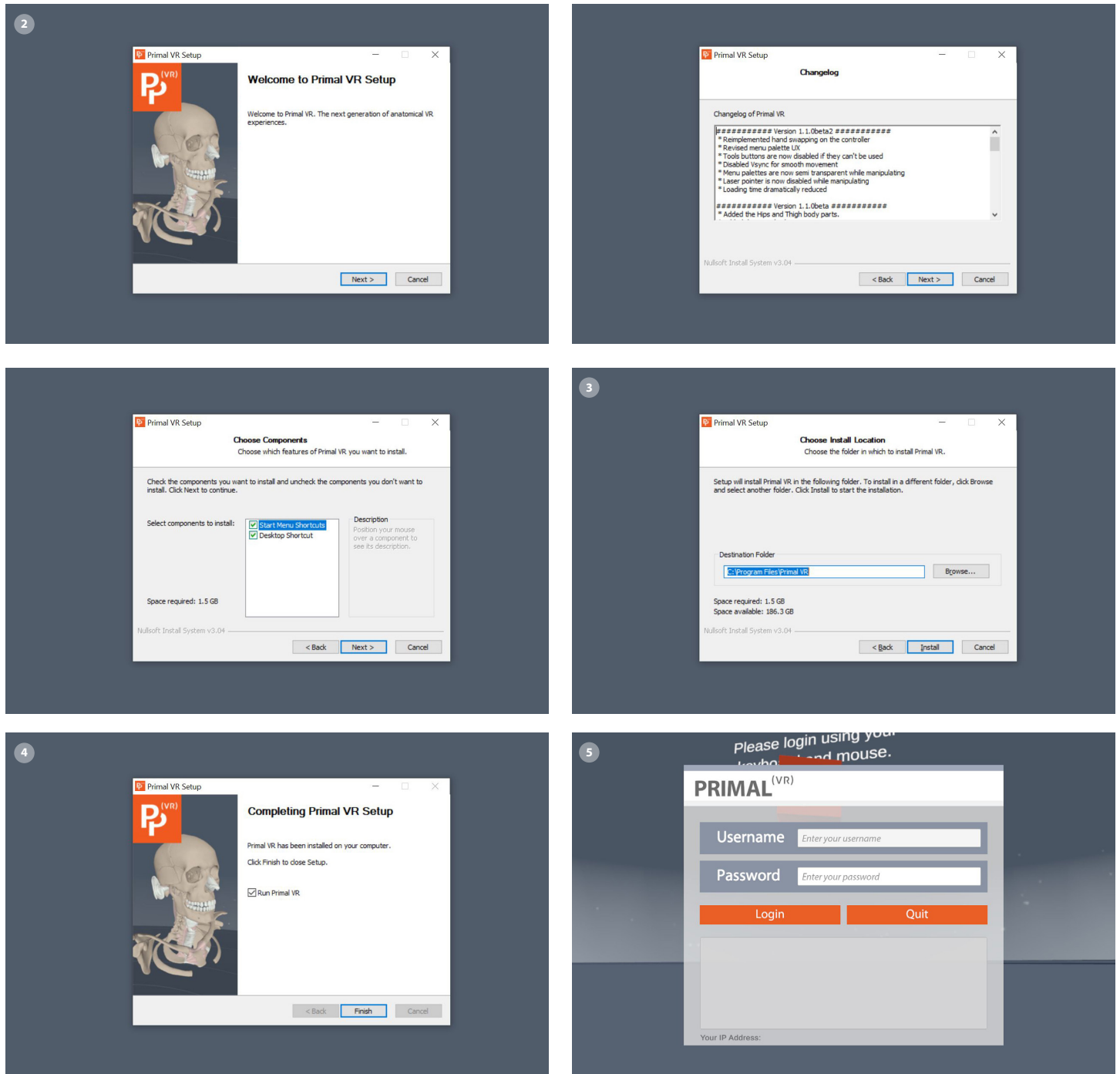
Installation overview

Primal VR application installation process is very similar to a normal desktop app install process. Primal VR is a PC Windows application only. Currently not available for Mac.

1	Download the installer to your PC desktop
2	Follow the Primal VR installation prompts at each stage
3	Choose a location to save the Primal VR application and wait for the installation to finish
4	To complete the installation, select 'Run Primal VR' check box and press Finish
5	Type in your Username and Password and press Login to start the Primal VR application

App glossary
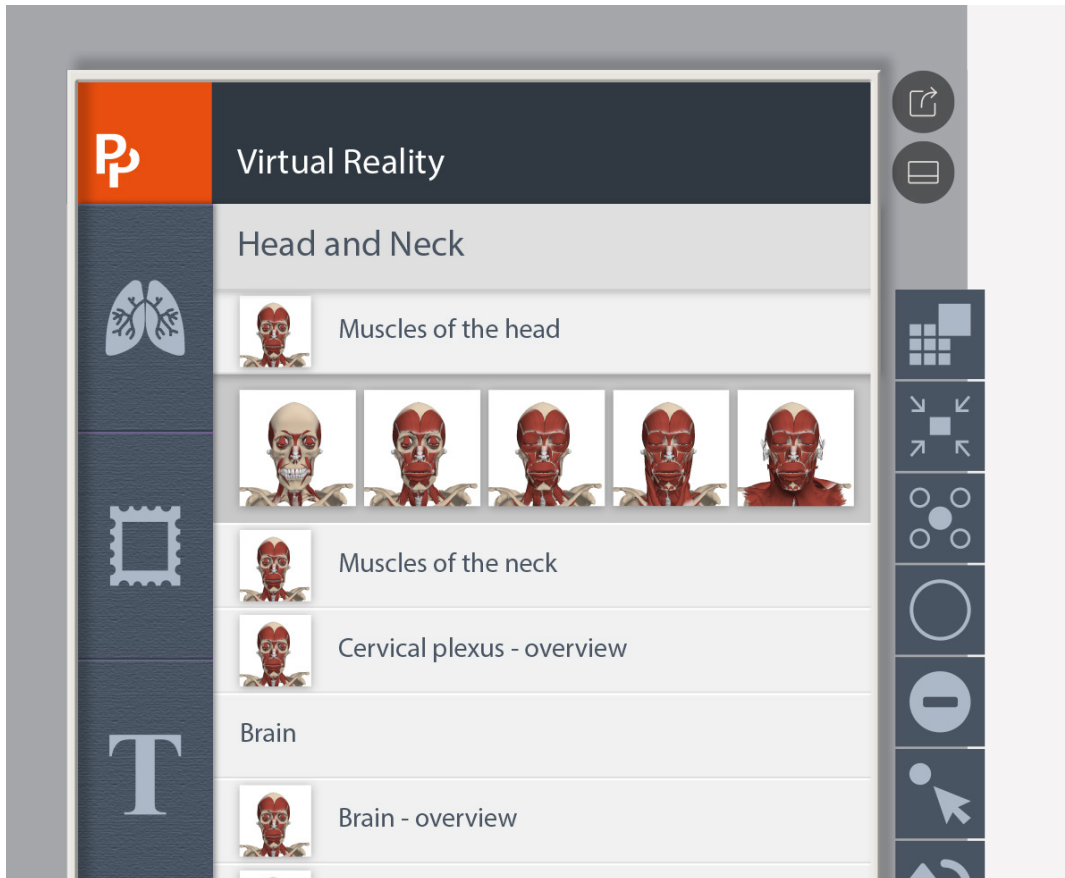
Interface

The interface is the main navigational menu. It allows the user to browse and choose content from the library.

After the scene (anatomical body parts) is displayed in VR the user can use the viewing modes on the right of the interface to show and hide scene layers.

Content is organized by media type and illustrated with thumbnails to make finding what you need quicker and easier than ever.

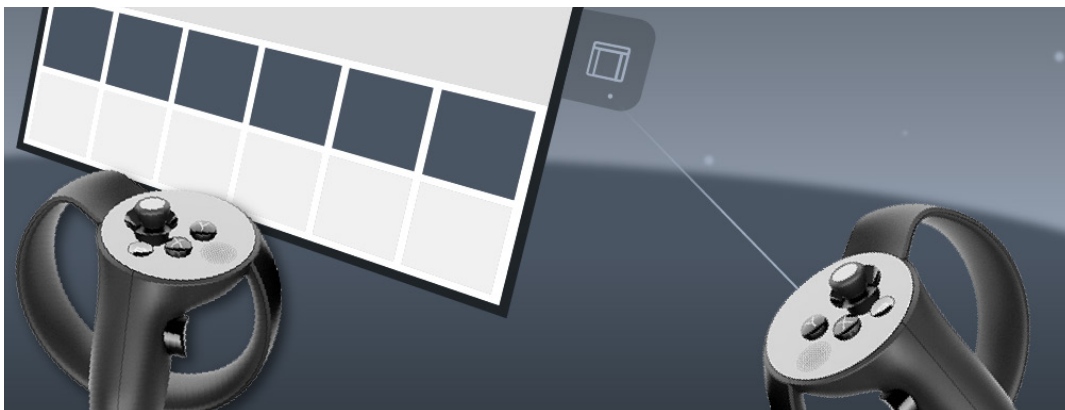The interface can be manipulated to any size or position that the user may choose. For more information on how to manipulate the interface, please refer to the Tutorial section in this manual or inside the Primal VR application itself.

Mini menu

The mini menu is a compact version of the interface which is locked to the users primary controller (chosen left or right hand).

The mini menu view is helpful when the user is inside or in close view to the scene, where the interface is not visible.

Scene

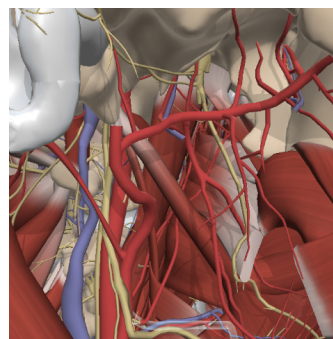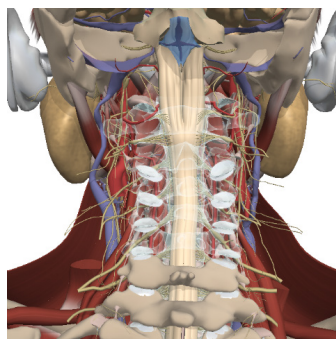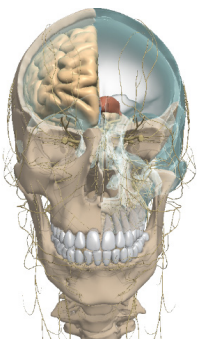Scenes describe and of the anatomical body parts offer in the interface library by Primal VR. The scenes can be manipulated to any size or position that the user may choose. For more information on how to manipulate the scene, please refer to the Tutorial section in this manual or inside the Primal VR application itself.

Fitting a VR headset

1	A Virtual Reality Headset is commonly known as a HMD which stands for a Head Mounted Display
2	Clean both of the lens inside the HMD with a soft cloth. Also wipe clean the outer padding that fits over your face
3	Make sure your HMD headset is connected to your PC and powered on
4	Holding the front of the HMD over your eyes with your primary hand, pull the strap backwards and place the HMD onto your head
5	Hold the front of the HMD and adjust the top and side straps until it feels comfortable
6	If your HMD allows, focus the display so that it is sharp. By either a) positioning the headset higher or lower on your face b) moving the slider, knob or dial
7	If your HMD allows, set the volume to a reasonable level that is not to loud
8	Wearing glasses? Follow step four to put the HMD on. Reverse the steps to remove the HMD.
9	Some HMD models contain a sensor inside which will put the HMD to sleep when it is not worn, the headset will wake when re worn

VR Manufacturer

For more detailed information regarding your particular hardware, please choose a 'Getting started guide' from the manufacturer table.

Oculus	Rift	Getting started guide
Oculus	Rift S	Getting started guide
HTC	All products	Getting started guide

Using the controllers

Different controller types

There are two main controller functions when using the Primal VR application. Firstly, the trigger (illustrated by orange circles) which is located at the bottom front of the controller. The trigger is the primary function for navigating inside Primal VR. Once you have selected your dominant controller (left or right hand), activate an action inside Primal VR by pointing the laser and pulling the trigger into the controller using your index finger. The application will action your selection.

Once you are inside Primal VR, you will have the ability to manipulate (scale, rotate and position) the scene (anatomical parts) and interfaces (menus). To manipulate, you will need to pull both triggers at the same time and move the controllers together. This will manipulate the scene or interface.

The second function is the thumbstick or trackpad control. Oculus, Rift and Rift S, HTC Cosmos all have a thumbstick which protrudes out of the top of the controller. HTC Vive uses a flat clickable trackpad on the top of the controller which acts in the same way as the thumbstick.

The thumbstick is used to view a scene or interface in a 360 manner by either pushing the thumbstick in any direction or pressing and moving the trackpad in any direction. To reset the scene or interface, simply press the thumbstick or trackpad down once. This will reset the item back to its original position.

1	Oculus	Controllers
2	HTC	Vive controllers
3	HTC	Cosmos controllers
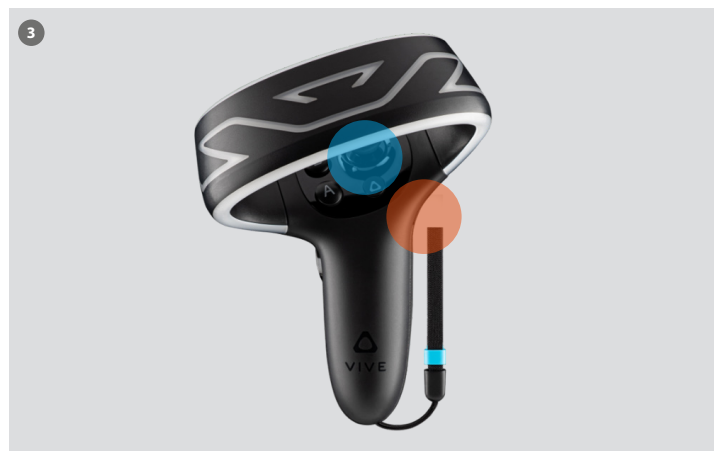
Basic app functions
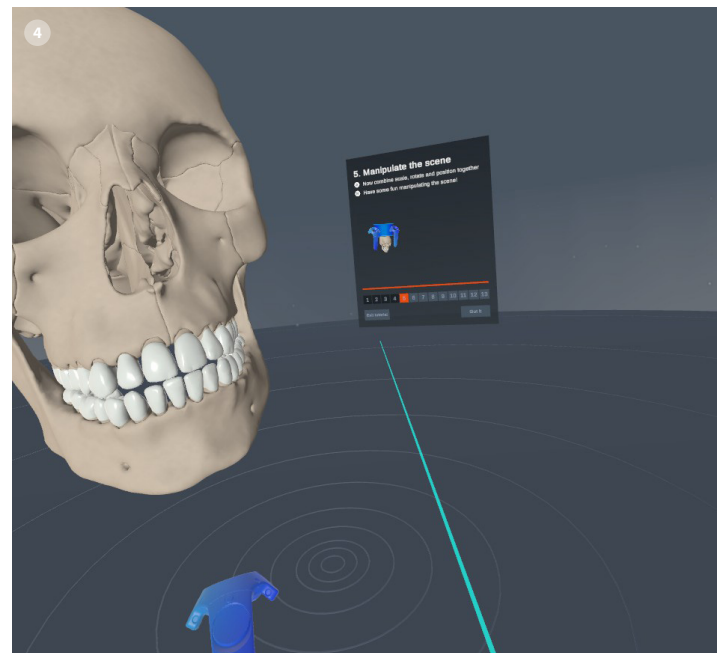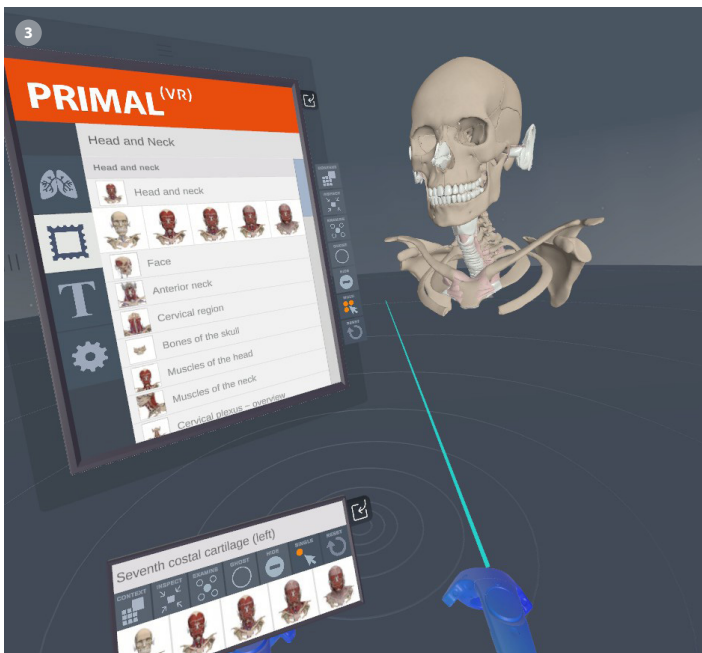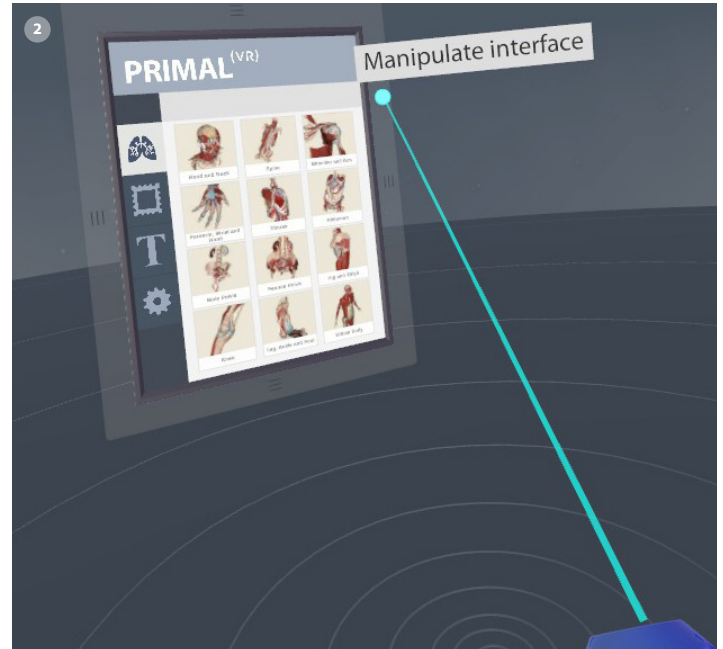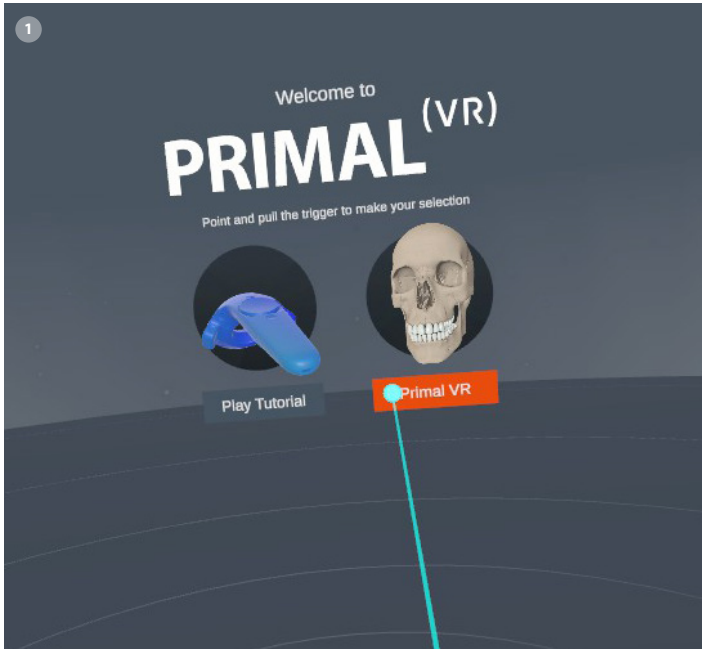
1	Dominant hand	On entry both controllers are active, to confirm left or right handed use, pull the trigger on one of the two controllers
2	Interface	Scale and position the interface by activating the manipulation mode frame
3	Personalised	Arrange the interface to best suit your viewing needs by arranging the scene, mini menu and interface in any combination and layout
4	Tutorial	Play the tutorial (located inside settings on the interface) to learn how to use all of the app features and functions

Understanding the interface

Interface Overview

Left hand panels
Content is organized by media type and illustrated with thumbnails to make finding what you need quicker and easier than ever. The buttons down the left-hand side of this panel allow you to access the main functions of the application: Top Level, Gallery, Scene Text, and Settings.

Interface manipulation
Manage how you wish to position and view menu options.

Scene view options
Choose from a selection of viewing modes to reveal or hide the scene layers.

|		
1	3D Real Time	Top level Anatomical Regions
2	Gallery	Predefined views which will help you understand key anatomical areas
3	Scene Text	Read detailed text about the most recently selected anatomical structure
4	Settings	Features numerous controls to adjust how the VR application is set up
5	Context	See your selected structure in relation to the associated anatomical scene
6	Inspect	Close-up view, study in isolation, all other visible objects are temporarily hidden
7	Examine	Selected structures remain opaque whilst the rest of the scene is ghosted
8	Ghost	Turn the selected structure semi-transparent
9	Hide / Show	Structures can be hidden or shown
10	Multi Select	Multi-select mode allows you to select (or deselect) more than one structure at a time
11	Reset	Reset the scene to its original position

Virtual Reality App Tutorial

1. Welcome to the tutorial
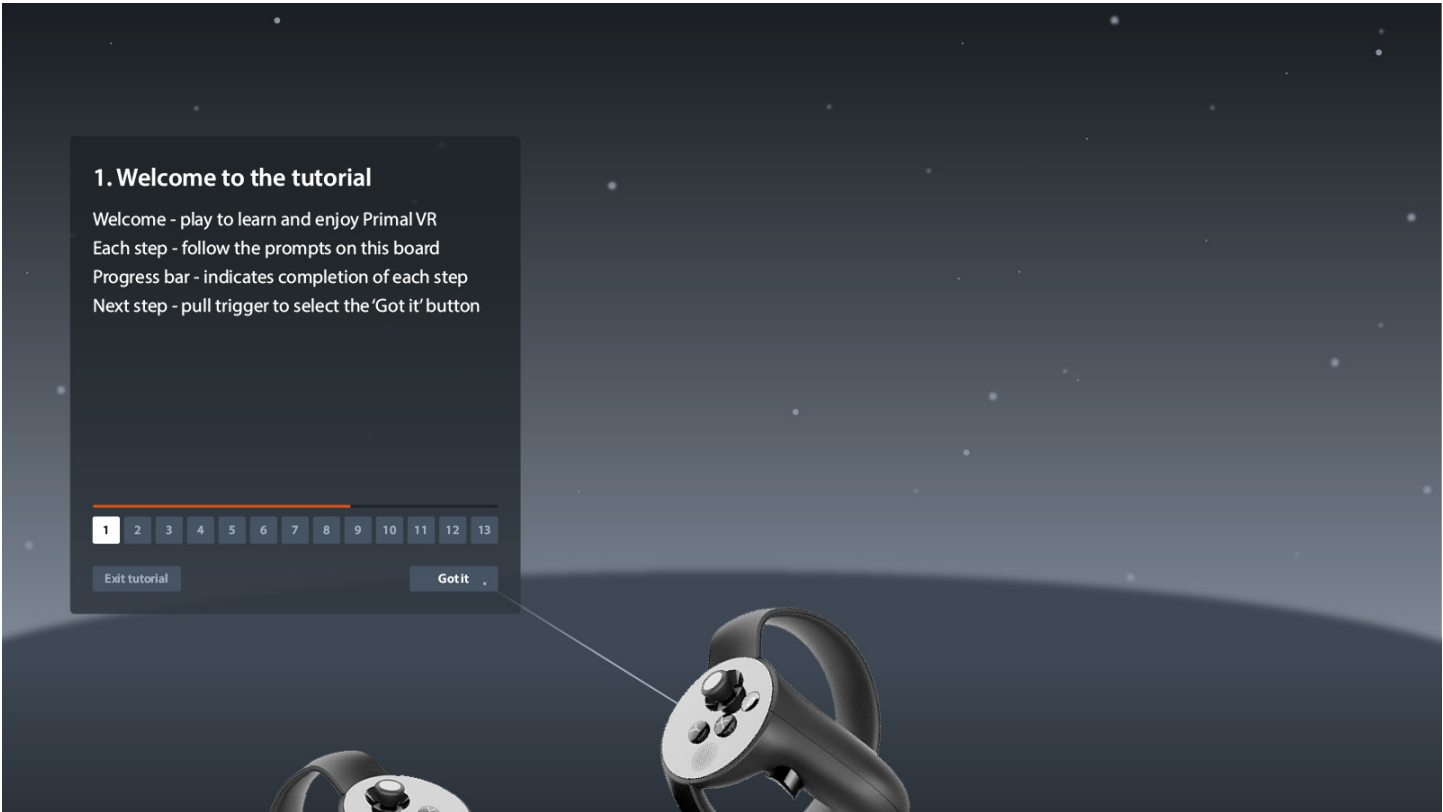
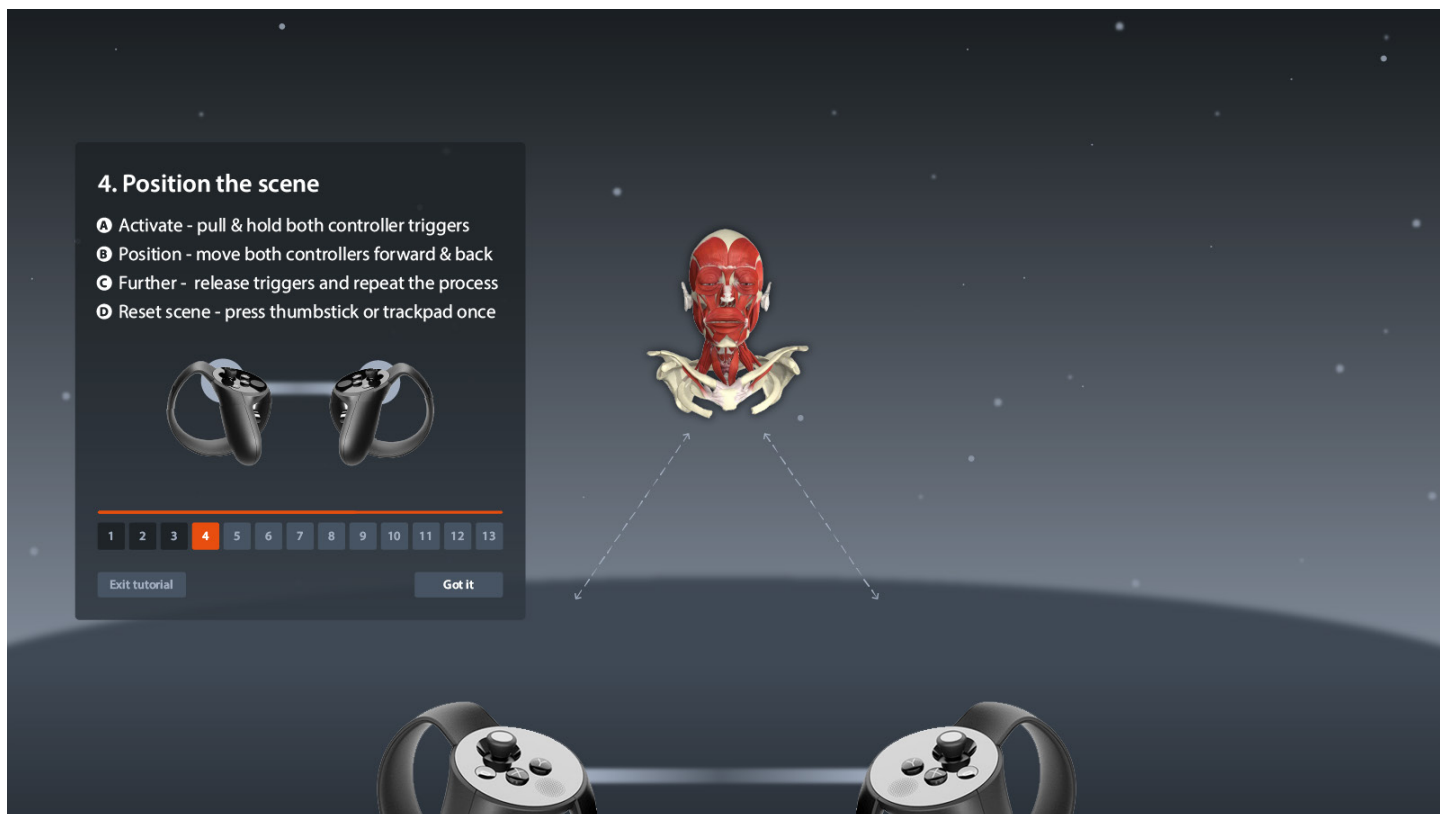| Action	Description
Welcome	Play to learn and enjoy Primal VR
Each step	Follow the prompts on this board
Progress bar	Indicates completion of each step
Next step	Pull trigger to select the 'Got it' button

2. Scale the scene

2	Action	Description
A	Activate	Pull & hold both controller triggers
B	Scale	Move controllers horizontally
C	Reset scene	Press thumbstick or trackpad once

3. Rotate the scene
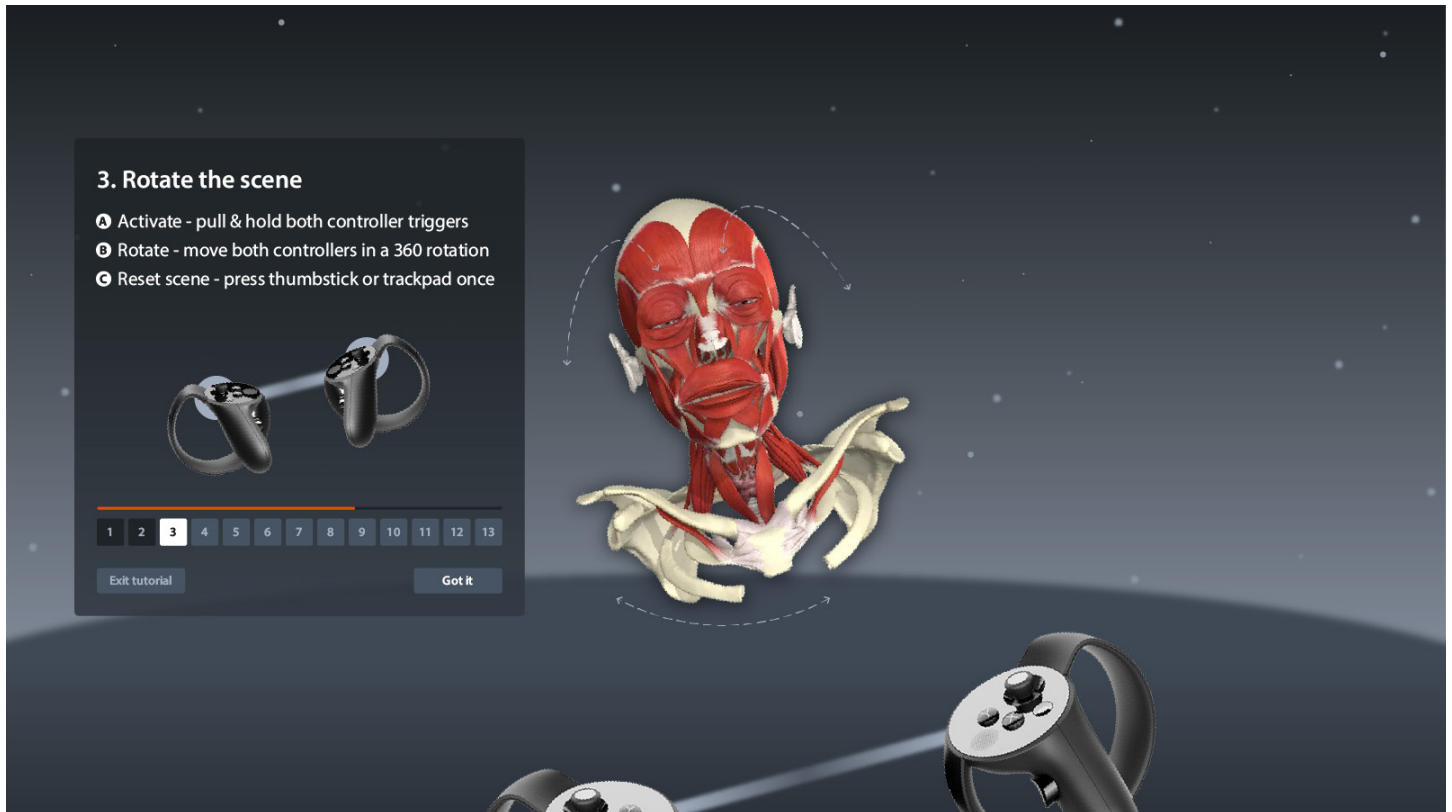
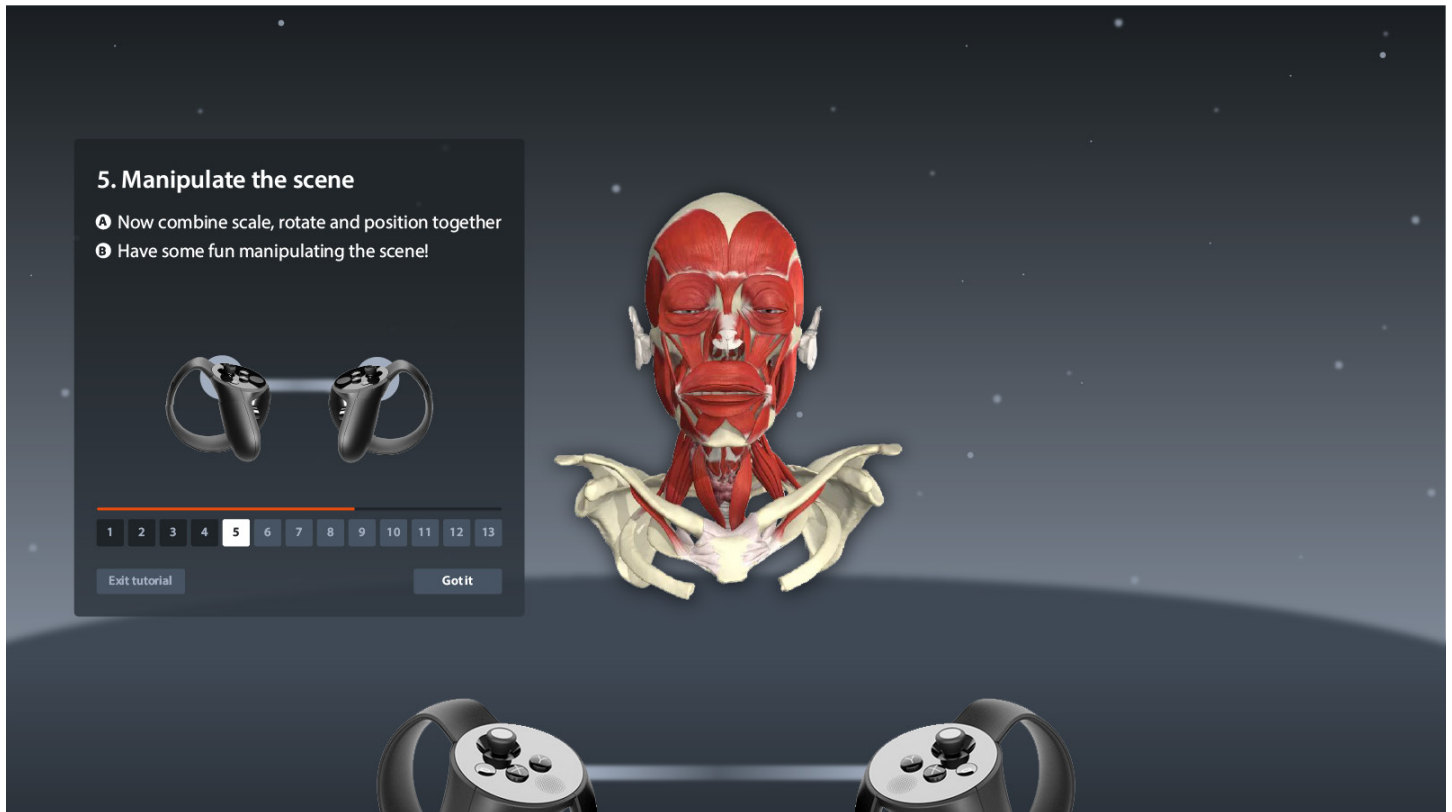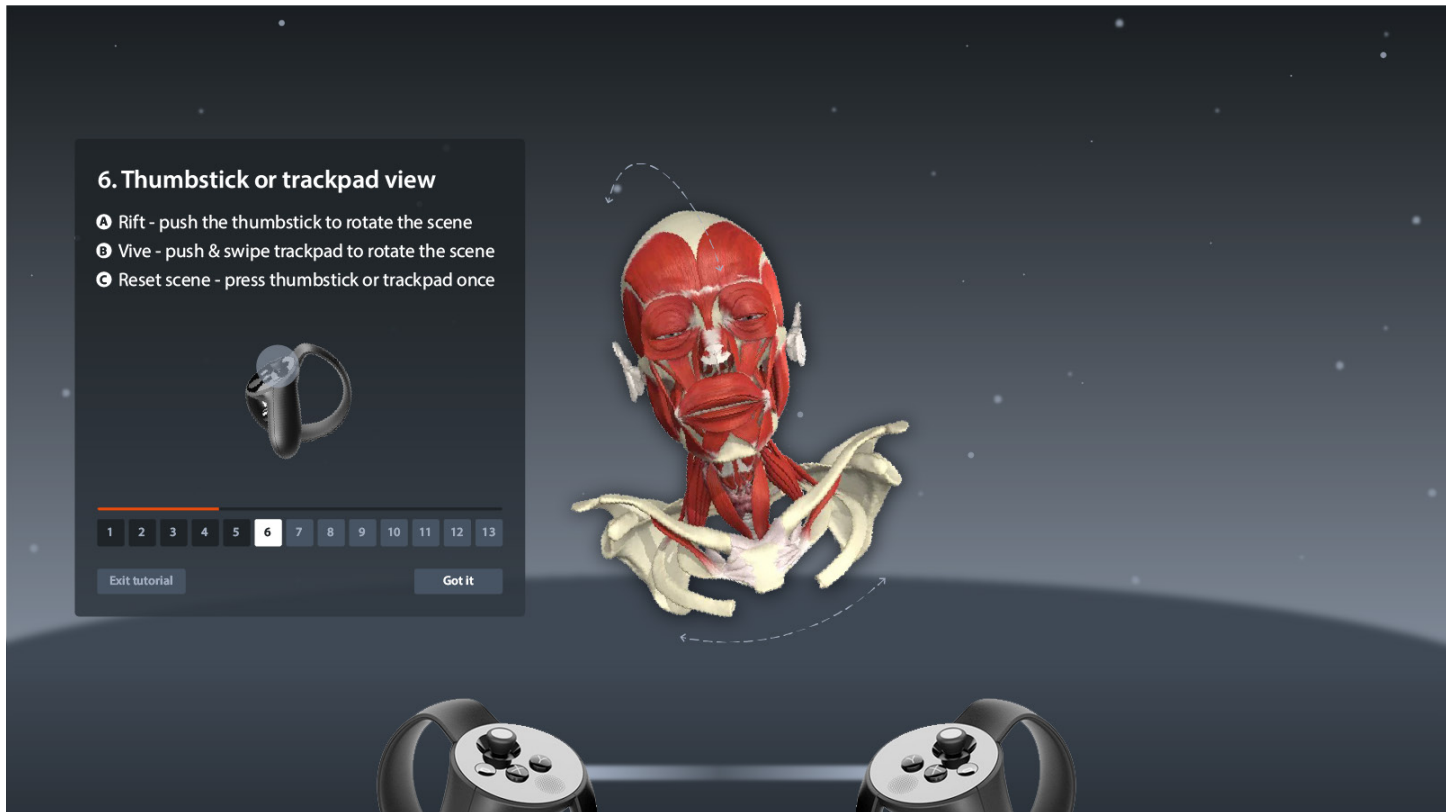| 3	Action	Description
A	Activate	Pull & hold both controller triggers
B	Rotate	Move both controllers in a 360 rotation
C	Reset scene	Press thumbstick or trackpad once

4. Position the scene

4. Position the scene

Ⓐ Activate - pull & hold both controller triggers
Ⓑ Position - move both controllers forward & back
Ⓒ Further - release triggers and repeat the process
Ⓓ Reset scene - press thumbstick or trackpad once

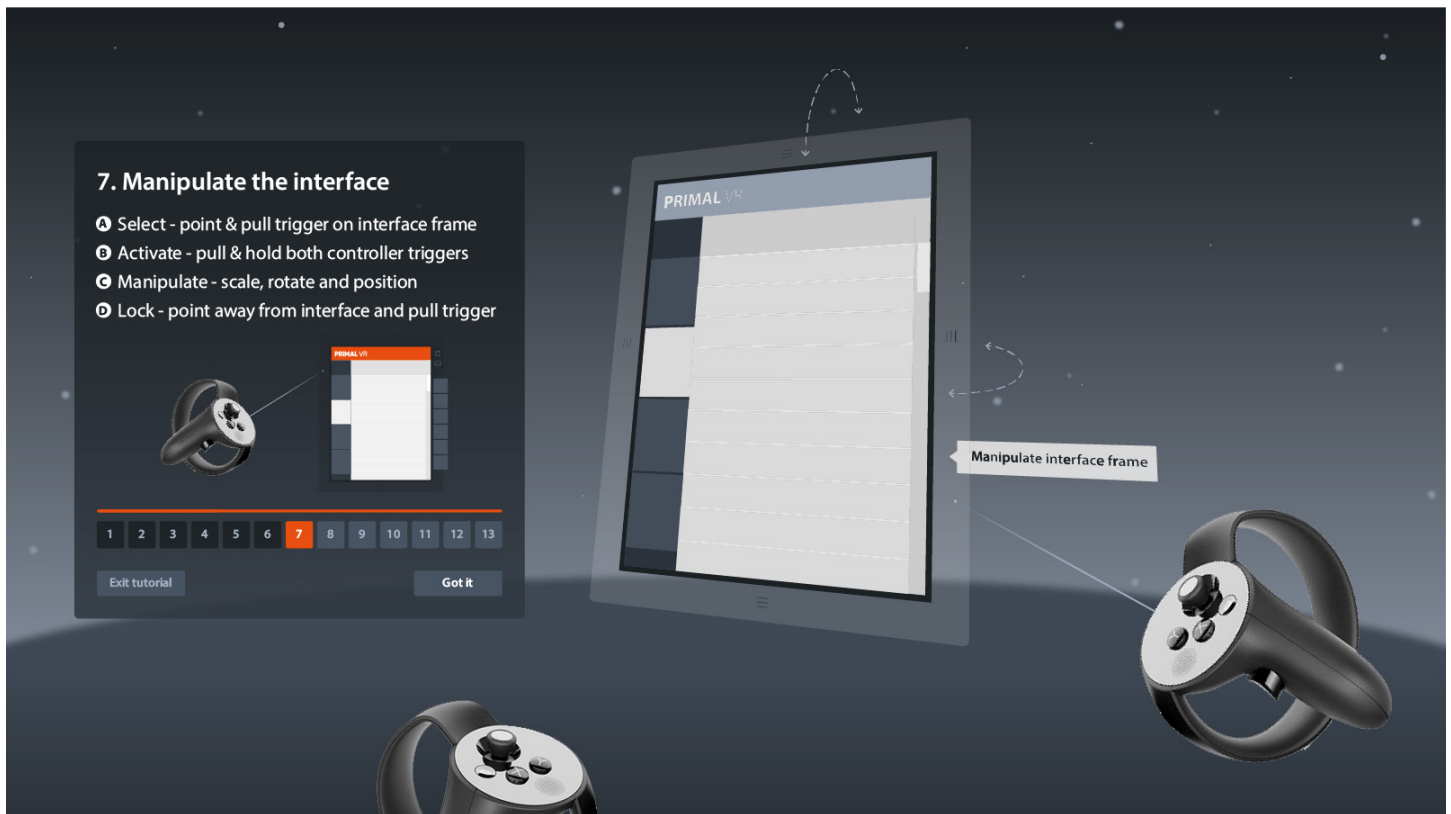| 4	Action	Description
A	Activate	Pull & hold both controller triggers
B	Position	Move both controllers forward & back
C	Further	Release triggers and repeat the process
D	Reset scene	Press thumbstick or trackpad once

5. Manipulate the scene

5	Description
A	Now combine scale, rotate and position together
B	Have some fun manipulating the scene!

6. Thumbstick or trackpad view

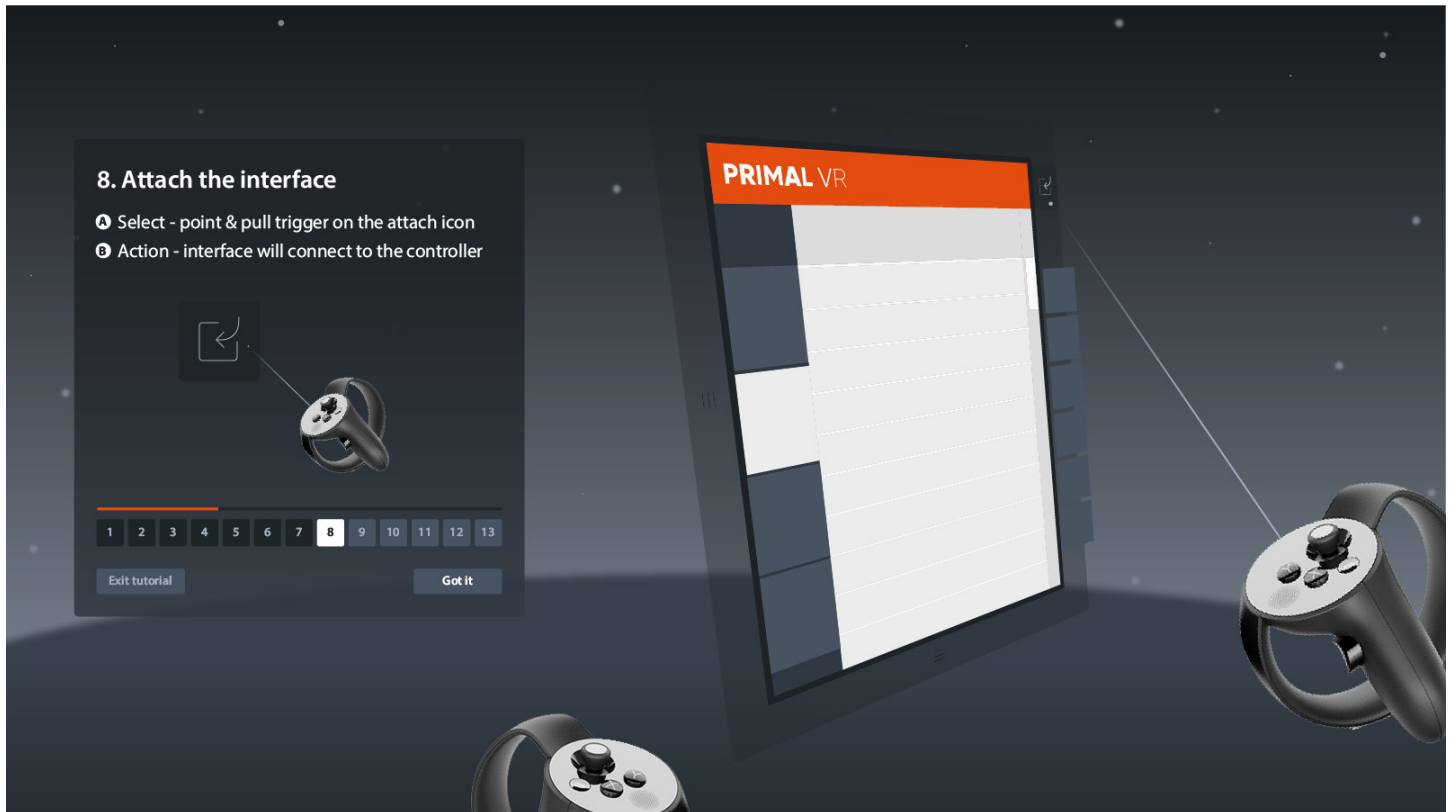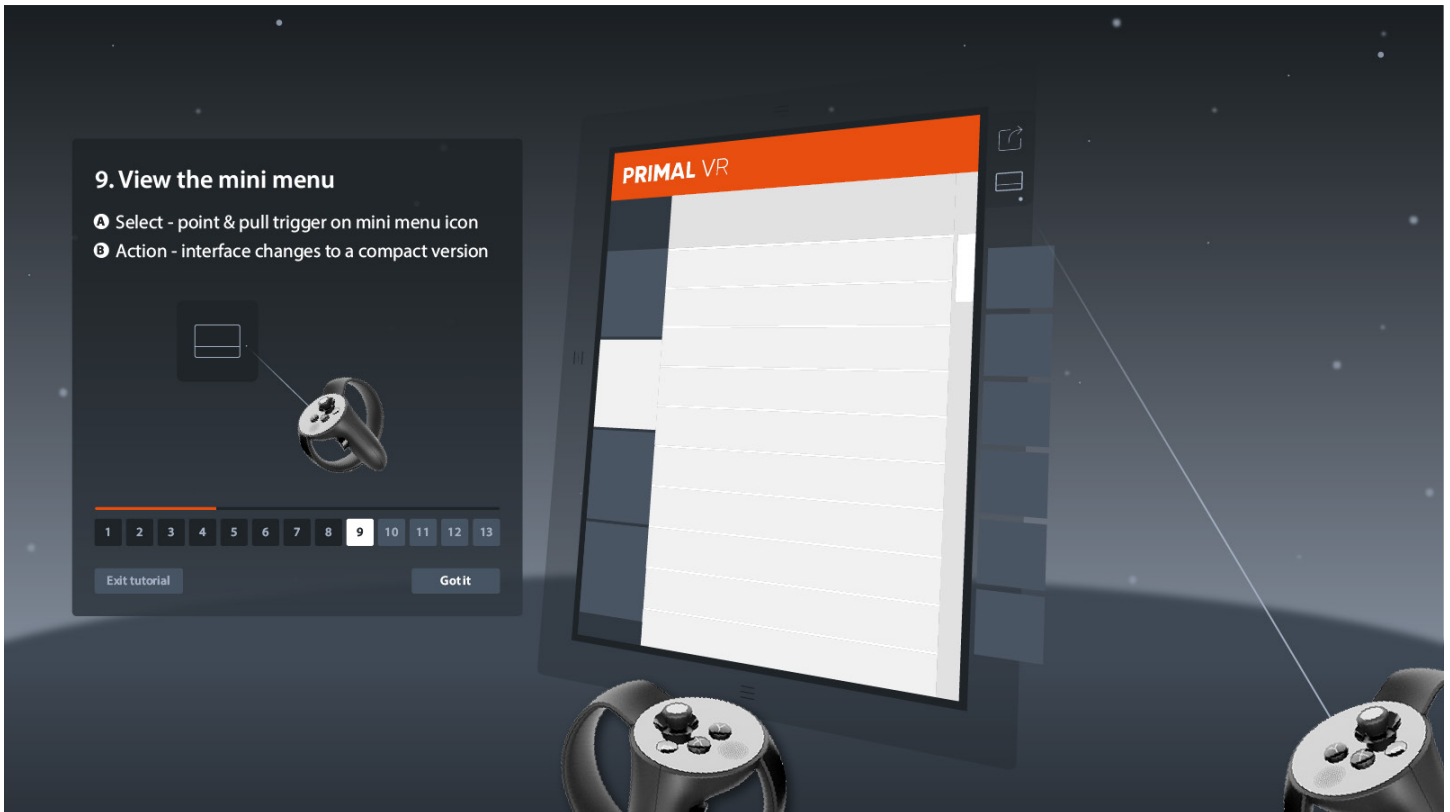| 6	Action	Description
A	Rift	Push the thumbstick to rotate the scene
B	Vive	Push and swipe trackpad to rotate the scene
C	Reset scene	Press thumbstick or trackpad once

7. Manipulate the interface

7	Action	Description
A	Select	Point & pull trigger on interface frame
B	Activate	Pull & hold both controller triggers
C	Manipulate	Scale, rotate and position
D	Lock	Point away from interface and pull trigger

8. Attach the interface

8	Action	Description
A	Select	Point & pull trigger on the attach icon
B	Action	Interface will connect to the controller

9. View the mini menu

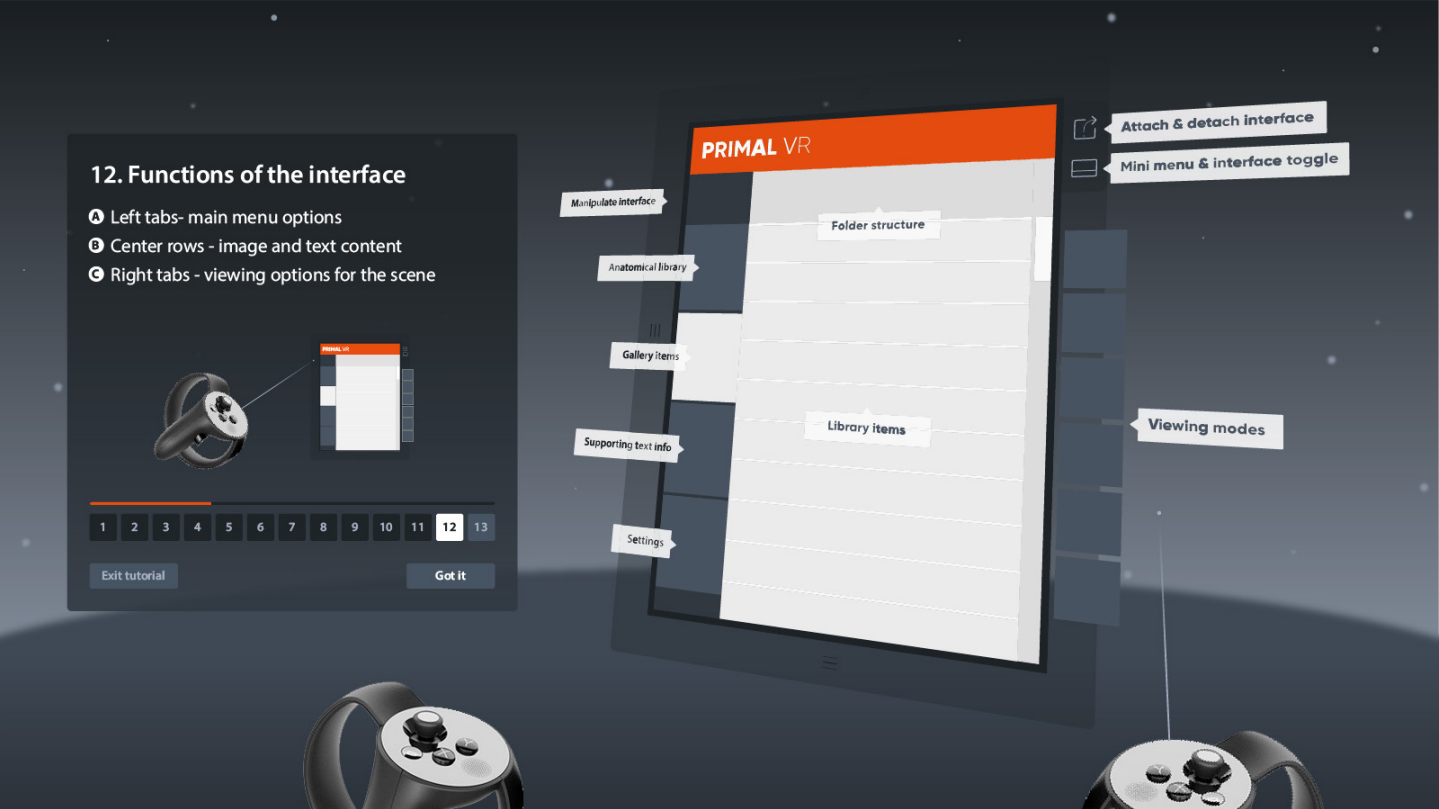| 9	Action	Description
A	Select	Point & pull trigger on the mini menu icon
B	Action	Interface changes to a compact version

10. View the interface
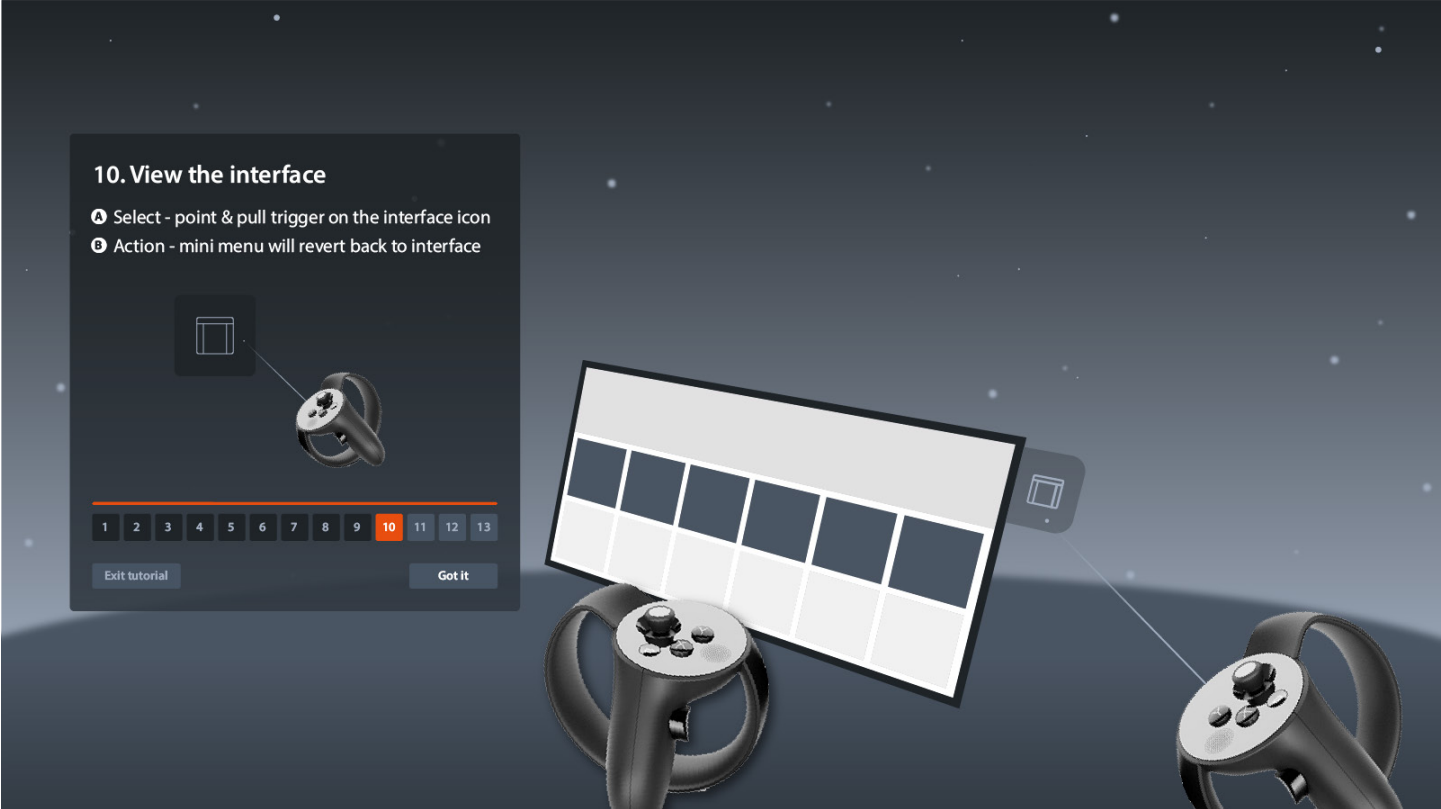
10	Action	Description
A	Select	Point & pull trigger on the interface icon
B	Action	Mini menu will revert back to interface

11. Detach the interface
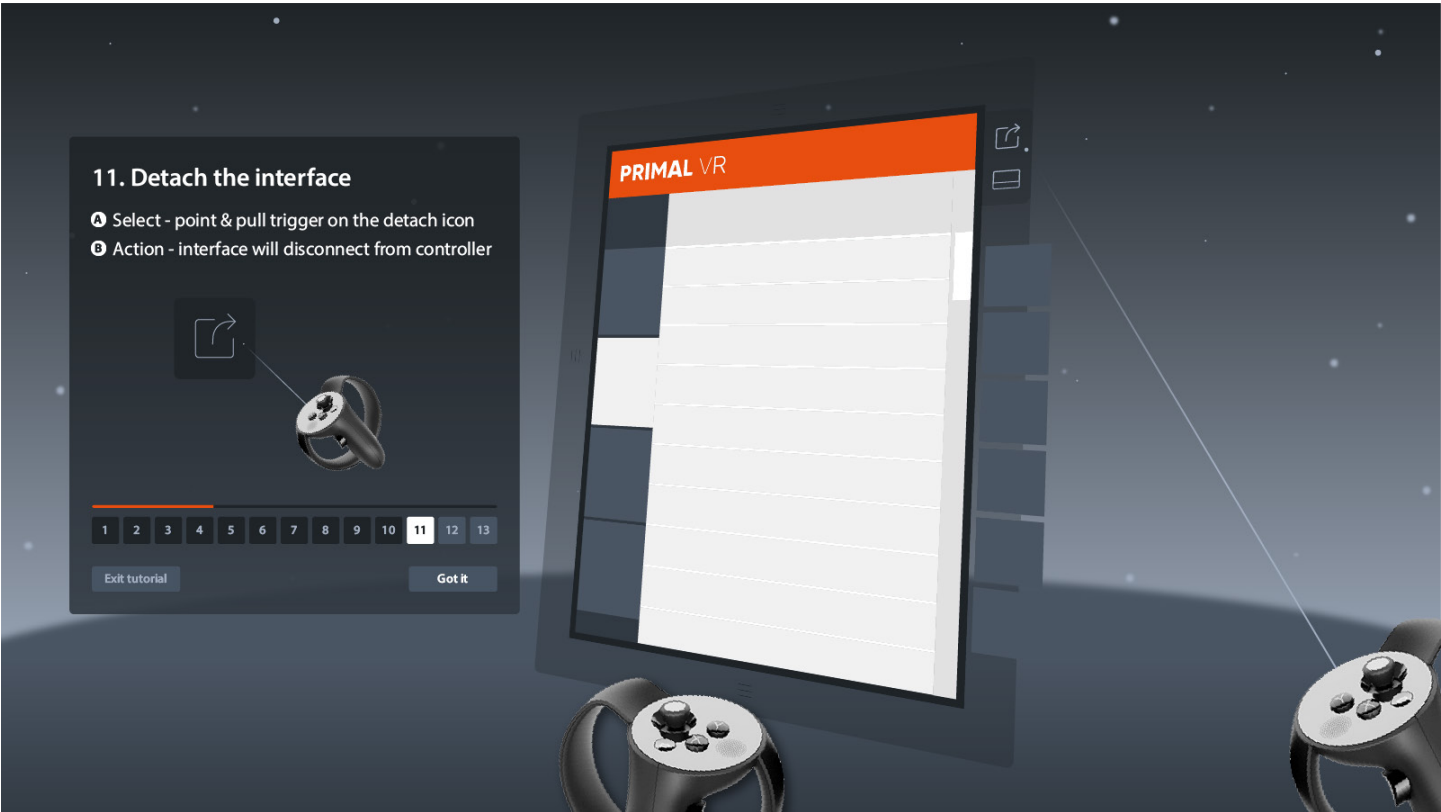
11	Action	Description
A	Select	Point & pull trigger on the detach icon
B	Action	Interface will disconnect from the controller

12. Functions of the interface

12	Action	Description
A	Left tabs	Main menu options
B	Center rows	Image and text content
C	Right tabs	Viewing options for the scene

13. Tutorial complete
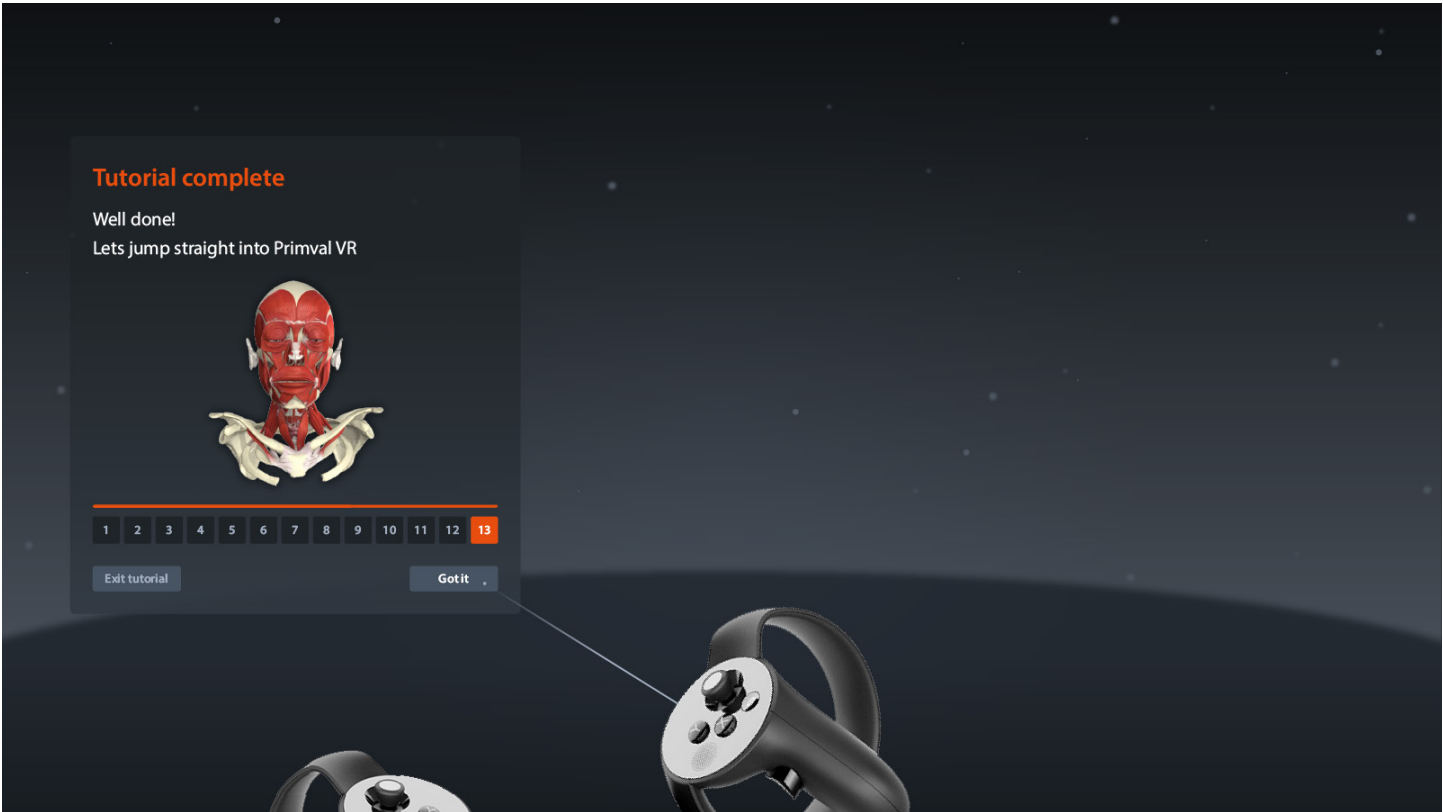
Description
Well done!
Let's jump straight into Primal VR

Index

Icon Directory

Grab Handles	Detach Menu	Attach Menu	Interface	Mini Menu	Alert

VR Safety

Manufacturers Recommendations

In addition to the virtual reality basic guidelines explained here. We recommend that you also please refer to your specific hardware Manufactures Recommendations. Click on the Support links in the table.

Oculus	Click here for support	HTC	Click here for Support

⚠ **Classroom suitability**	⚠ **Equipment use**
Be aware of the school's policy on safety in the classroom and the use of digital technologies.	Please consult the VR manufacturer guidelines for information regarding the suitability of the equipment for the specific purpose and intended use.
⚠ **Headset irritation**	⚠ **Virtual vs reality**
The headset is worn next to your skin and scalp. Stop using the headset if you notice swelling, itchiness, skin irritation or other skin reactions. If symptoms persist, contact a doctor.	Immersive virtual reality can evoke powerful reactions in children who may not be able to cognitively regulate the experience and, for the very young, may come to believe that the virtual experience was real.
⚠ **VR sickness**	⚠ **Social understanding and awareness**
Some people get cyber-sickness when using VR headsets. This is a type of motion sickness. If the participant begins to feel unwell or uneasy, then instruct the student to take the headset off and sit down. Check students' health records for any health-related issues that may be triggered in using Virtual Reality.	Learning to use equipment safely is central to working with digital technologies. It is important for students to explore and create interactive solutions for sharing ideas and information online and in VR, including taking into account safety, social contexts and legal responsibilities when applying techniques to make ethical decisions.
⚠ **Hardware controls**	⚠ **Play area boundaries**
Read and follow all the setup and operating instructions provided with the virtual reality headset and controllers. This will make the students experience more easier to navigate once in VR.	Ensure that a guardian has been set up correctly, so the boundary is free of obstacles in your VR play area. Don't go beyond your guardian zone, which is marked by your play area boundary.
⚠ **Real world surroundings**	⚠ **Recommended session times**
Instruct students to be aware of their own surroundings and of others. Caution students about potential dangers before they begin an activity.	It is important that users of VR limit their time in the headset in a continuous block, as extended times in VR may increase the chance of getting cyber-sickness.
⚠ **Safe practices**	⚠ **Equipment recommendations**
Instruct students that if they ever feel the experience is too intense or unpleasant then they are to take the headset off. Discuss and display a list of safe practices for VR based activities.	Review the hardware and software recommendations for use of the headset. Risk of discomfort may increase if recommended hardware and software are not used.
⚠ **Student suitability**	⚠ **Content suitability**
Teachers should consider the physical (motor and perceptual), cognitive, linguistic, emotional (affective), social and moral developmental stage of learners before using VR in their classroom.	When using VR for learning, teachers should consider how children at different developmental stages might respond to the content, modes of interaction and affordances of VR technology.

Contact Details

For further technical assistance,
please contact Curiious Pty Ltd.
Email: help@curiious.com or
Phone: +61 2 9439 0122
These materials and the hardware
are intended for education and
training only.