

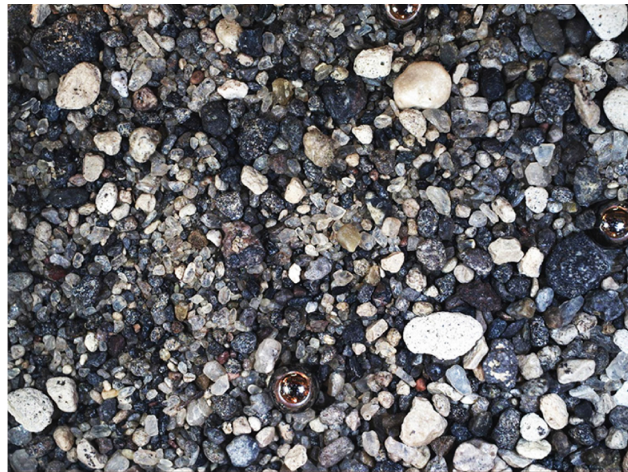
## Virtual and Augmented Reality for Solar Eclipse Activities

There are various resources for learning more about space science and the solar eclipse available for via augmented reality and virtual reality environments. This hand-out contains the resources used in the Saturday camp as well as additional resources you can use to try at home!

### Augmented Reality Apps

#### SpaceCraft 3D

- SpaceCraft 3D brings various spacecraft to life with just simple printable markers.
- First, download the app “SpaceCraft 3D”
- Second, you have been given a copy of the 6 printable markers in your folders. Cut out each, individual marker. If you lose your markers or would like to create more copies, visit <http://www.jpl.nasa.gov/apps/images/3dtarget.pdf>.
- Once inside the app, there are several different categories to choose from including “Mars”, “Earth”, “Planetary”, “Launch” and “Other”. Within each category are several options that create different spacecraft. Scan the marker with your iPhone/iPad to view



the spacecraft. The marker that you will most often use looks like this:

- If you choose the option “Select by Marker”, then you can use the other 5 markers too.
- You have the option to zoom in/zoom out on the spacecraft, rotate it 180°, and select spacecraft come with animations.

#### Aurasma

- Aurasma allows you to create and save your own auras and then apply augmented reality to see your creations.
- How to create an aura using the Aurasma app:

- 1.) Open the app and press the + in the top right corner
- 2.) Take a photo of the object you would like to act as the trigger (Note: the aura will work better if the white dot on the scale above is in the green section)
- 3.) Once the photo is taken you can choose an overlay from either the given library or upload a photo from the device
- 4.) Once an overlay is chosen, you can position the overlay how you would like it to appear
- 5.) Name your aura and press Submit
  - To view your aura, press the button in the bottom center.
  - Focus your camera on the object you chose as the trigger.
  - The website version can be found at: [www.aurasma.com](http://www.aurasma.com)

#### Elements 4D

- Elements 4D uses augmented reality to display what real elements look like and even show chemical reactions.
- You can find the printable templates at <http://elements4d.daqri.com/documents/elements-blocks-all.pdf>.
- To construct the blocks from the printed paper, cut along the outside edges a
- Putting two elements close together that react with each other will show a reaction (Note: Not all combinations of elements will react)

## **Virtual Reality Apps**

#### InMind 2

- InMind2 is an interactive VR game that takes you on a 360° journey through the human brain and teaches you about neurotransmitters and how they affect your feelings and decisions.
- Your job is to collect the different neurotransmitters by physically moving your head to focus on the neurotransmitters (appear in yellow, green, and blue).
- To focus on a neurotransmitter, you must position your head so that the white dot is on the object you would like to collect. Once focused on the object, a circle will be traced around the white dot. Once the circle has gone completely around the white dot (should only take about 1 second) you have successfully collected the object you focused on.
- Depending on the amount and ratio of neurotransmitters you pick up, you will control your destiny in the game, which might not be the same as the destiny of the person next to you.
- Make sure to watch the tutorial before beginning!

#### InCell VR

- InCell VR is an interactive VR game that takes you on a 360° journey through a human cell. This app will teach you about the functions of a human cell and the immersive experience will demonstrate the complexity of a singular cell.

- Your job is to collect different proteins while avoiding the obstacles and similar to InMind2, you must physically move your head and focus on the proteins in order to gain points.
- To enhance the experience, use headphones and listen to the audio throughout the game.

### Dinosaurs VR Experience

- Immersed into an environment mimicking the world in which dinosaurs lived in
- Further experience the 360 view
- Three different options:
  - 1.) Dino Treck Experience- Surrounded by animated dinosaurs that interact with you in different ways
  - 2.) Dino Treck Horror Experience
  - 3.) Dino Treck Ultimate Safari- Surrounded by stationary dinosaurs as you are taken through a virtual tour

### ***Other VR Activities to Try on your Own!***

#### LiftOff VR

- Interactive VR game

#### Stormrunner VR Rollercoaster

- Interactive VR game

#### VR Skydiving

- Interactive VR game

#### InMind VR

- Interactive VR game