



## How to Test the Project

### Main Requirements

1. Android mobile device with an Active Camera.
2. [Target Images](#) we have prepared for testing( Hydrogen, Oxygen, Helium, Carbon and Results) ... Link to get the APK and Image Targets [here](#)

Note: the Result card is important...

Video Demonstration: <https://youtu.be/V4X612OZCCQ>

### Onboarding

- Launch the App
- Follow the onboarding process
- Tap on Login( you do not need to fill the input field)
- Proceed to the first main screen(AR Lab)

### Feature 1- AR Lab

AR Lab- This is the first feature of the Application where you get to test different chemical reactions by placing the target Image cards beside each other.

**Note:** The '**Result**' card is the most important card that must be tracked( must be in camera view), it does not Augment any results until a reaction has triggered it, so it will always look empty.

List of current possible reactions and how to achieve them...

1. **Hydrogen and Oxygen**
  - a. Start by pointing the Result Card In Front of the camera to get it tracked.
  - b. Track Hydrogen and Oxygen to display the atomic structure models.

- c. Place Hydrogen and Oxygen side by side to cause a reaction that will augment on the 'Result Card'( the result should be Water)
- 2. Carbon and Result**
  - a. Point the camera to both Carbon card and Result card once the Carbon card has displayed.
  - b. Place the Carbon card beside the Result card to cause a reaction
- 3. Helium and Result**
  - a. Point the camera to both Helium card and Result card once the Helium card has displayed.
  - b. Place the Helium card beside the result card to cause a reaction.
- 4. Helium and Hydrogen**
  - a. Place the Helium card and hydrogen card side by side to cause a reaction.
- 5. Hydrogen and Result**
  - a. Point the camera to both Hydrogen card and result card once the Hydrogen card has displayed.
  - b. Place the Hydrogen card beside the result card to cause a reaction.

## Feature 2- Library

AR Library- A collection of Augmented Reality information of each Chemical element on the periodic table.

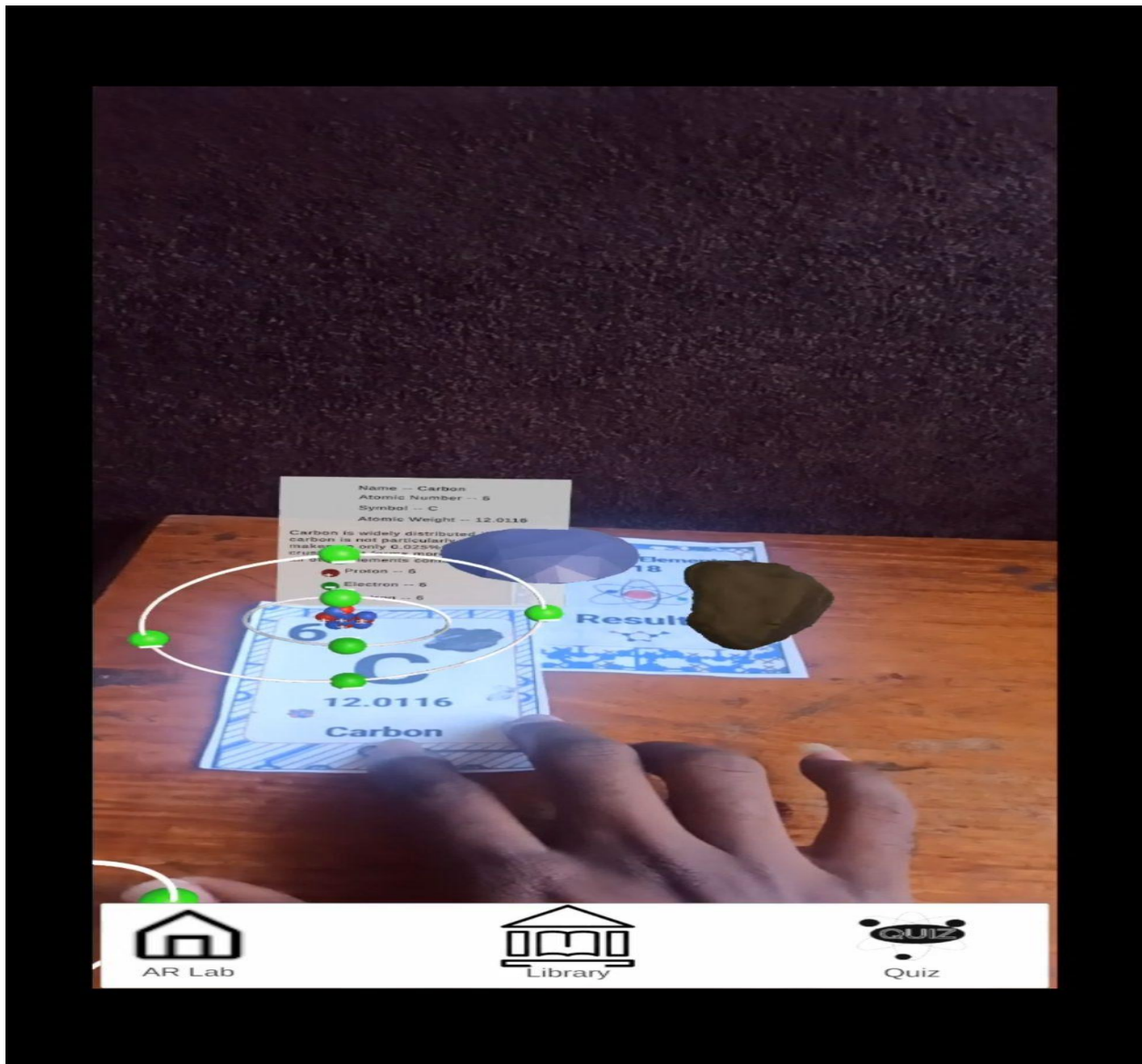
- Step 1
  - Navigate to the Library from the Navigation bar.
- Step 2
  - Tap on Hydrogen ( It is currently the only active Library collection)
- Step 3
  - Point the camera to the Hydrogen Card.
- Step 4
  - Read, Scale , Rotate and manipulate augmented informations around you.

### Feature 3- Quiz

- Answer the correct answers from the questions displayed.
- Switch between Normal Quiz and AR quiz.

**Note:** in AR quiz mode, the image target to bring up the quiz question board is the 'Result card'

### Appendix



-- Oxygen  
c Number -- 8  
ol -- O  
c Weight -- 15.999

ounds by reacting with  
ell as by reactions  
nts from their  
th each other.  
-- 8  
n -- 8

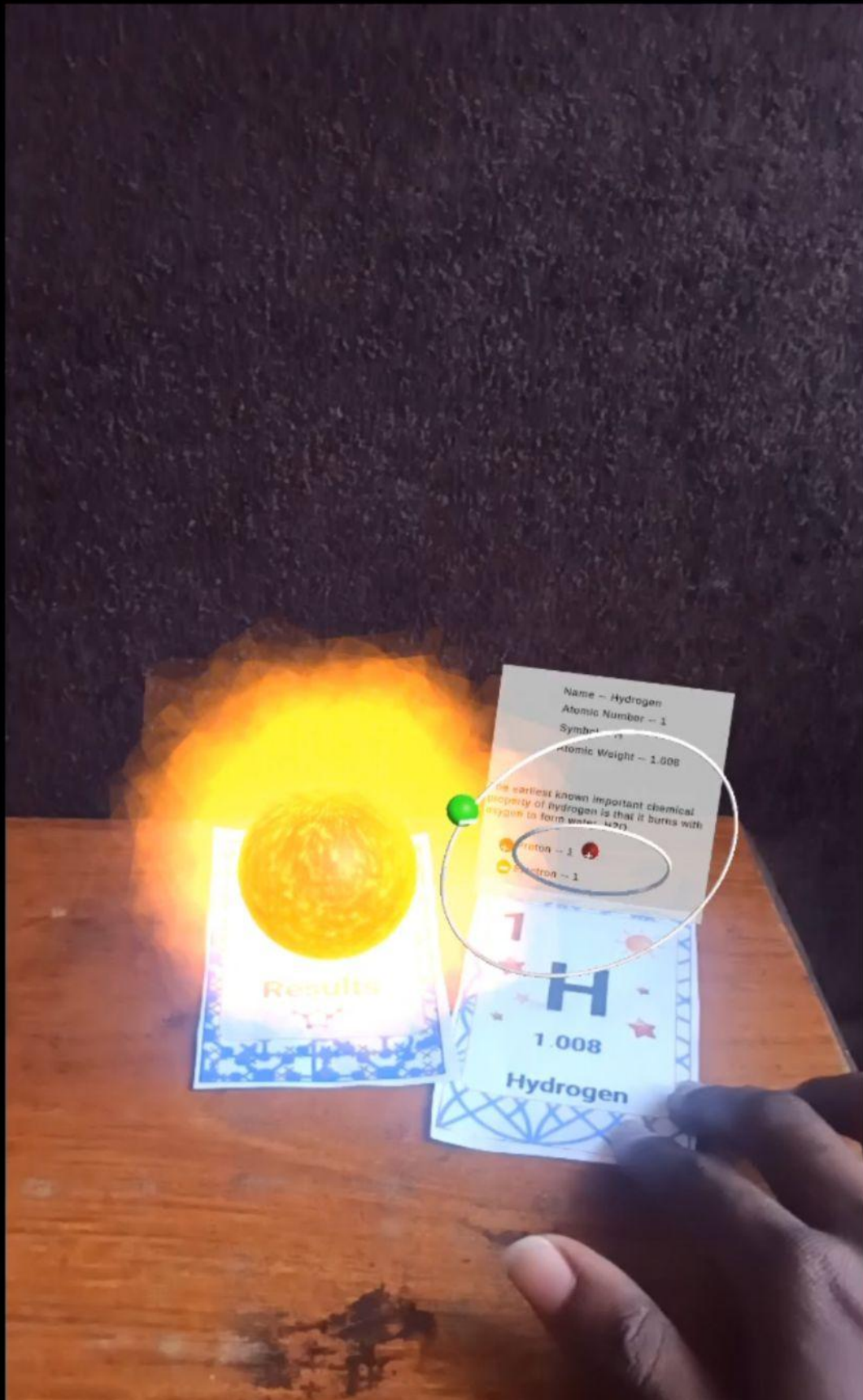


Name -- Hydrogen  
Atomic Number -- 1  
Symbol -- H  
Atomic Weight -- 1.008

The earliest known important chemical property of hydrogen is that it burns oxygen to form water, H<sub>2</sub>O

Proton -- 1  
Electron -- 1





Name — Hydrogen  
Atomic Number — 1  
Symbol — H  
Atomic Weight — 1.008

The earliest known important chemical property of hydrogen is that it burns with oxygen to form water —  $2H_2 + O_2 \rightarrow 2H_2O$

1 Proton — 1  
1 Electron — 1

1  
H  
1.008  
Hydrogen