



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...

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.

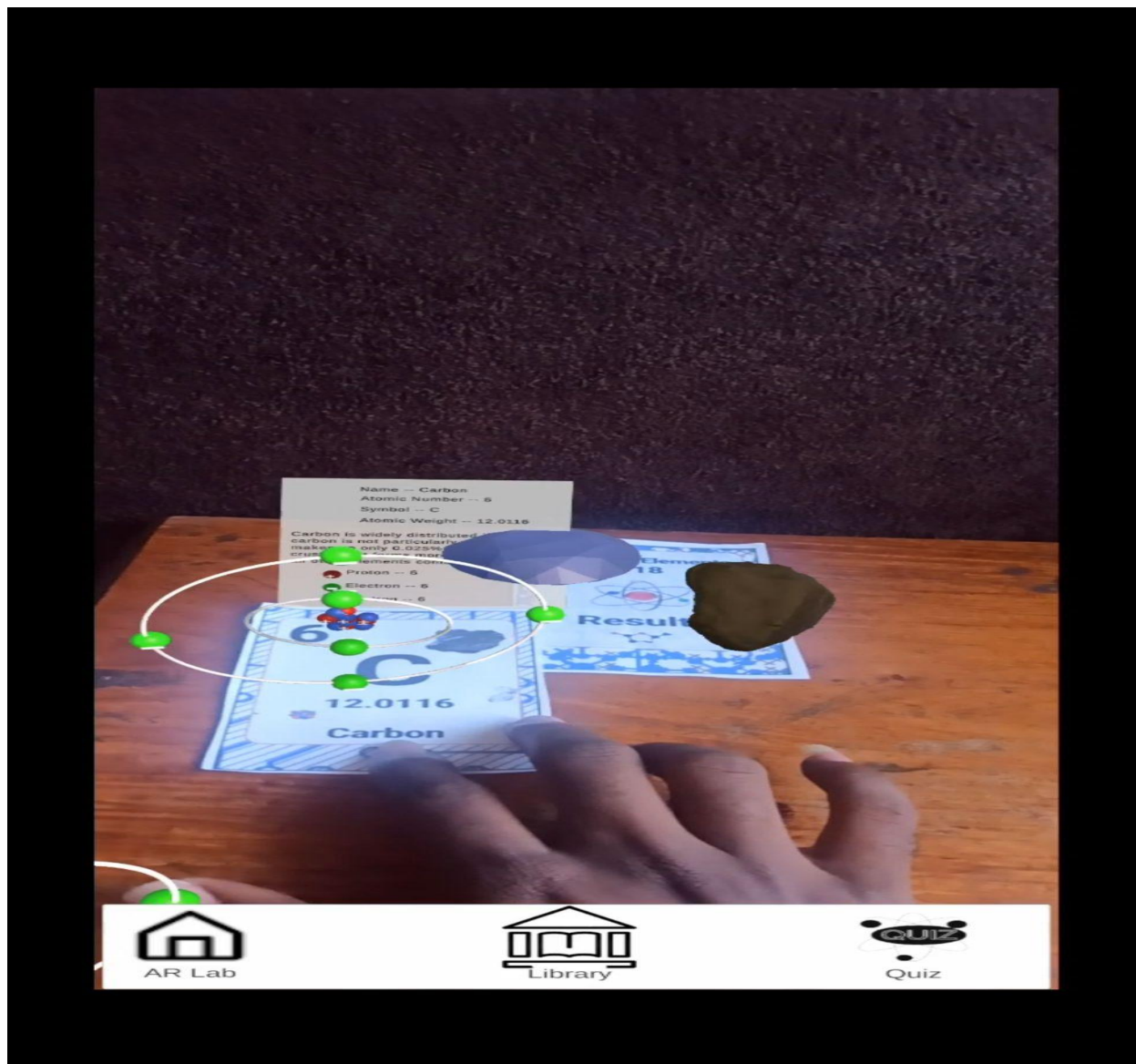
Feature 3- Quiz

- Answer the correct answers from the questions displayed.

- Switch between Normal Quiz and AR quiz.

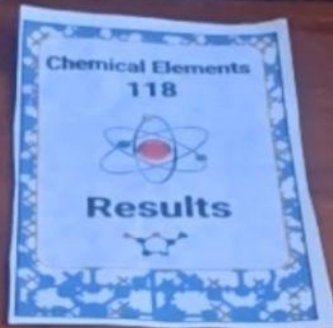
Note: in AR quiz mode, the image target to bring up the quiz question board is the 'Result card'

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

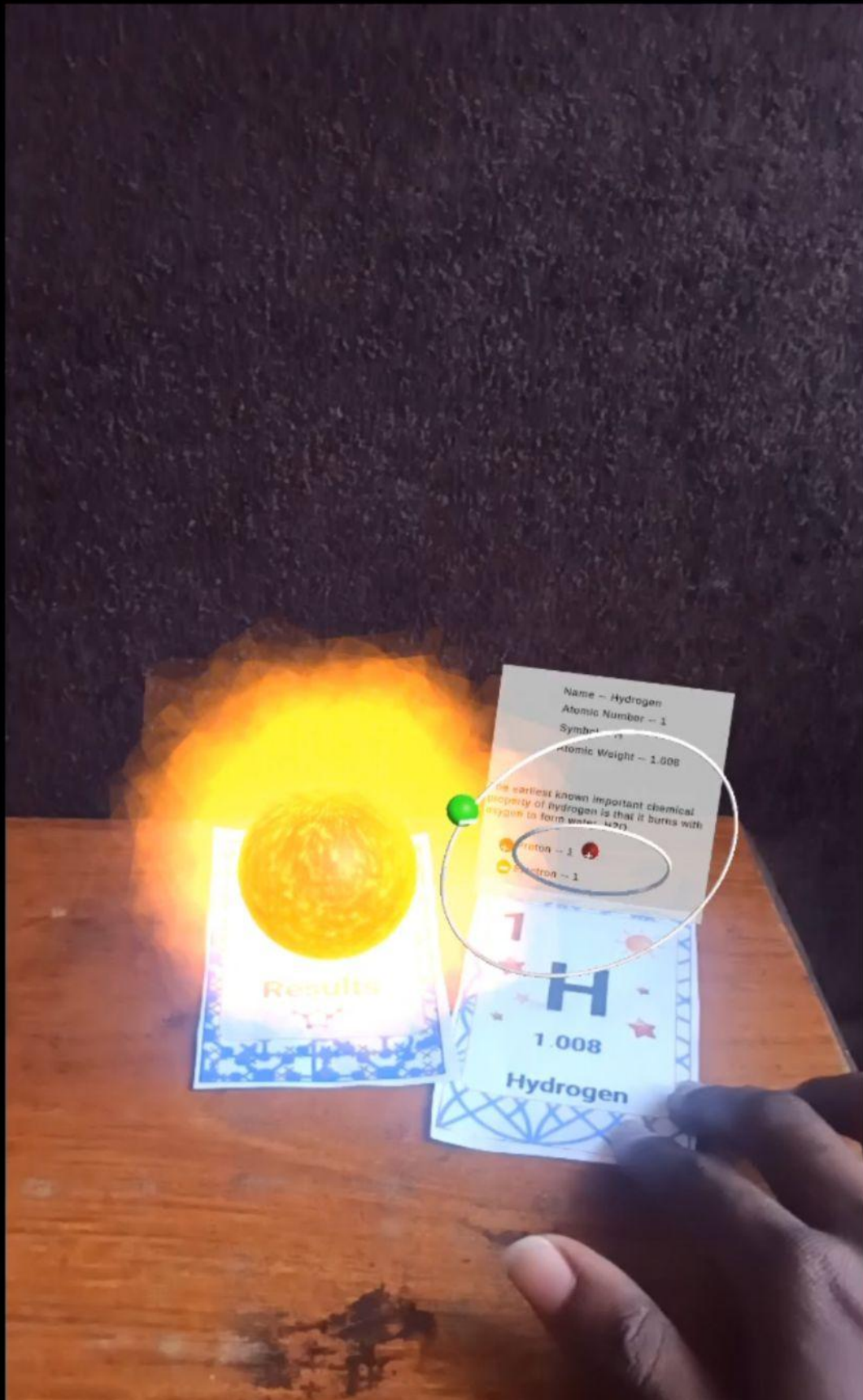


Name -- Hydrogen
Atomic Number -- 1
Symbol -- H
Atomic Weight -- 1.008

The earliest known important chemical property of hydrogen is that it burns oxygen to form water, H₂O

Proton -- 1
Electron -- 1





Results



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 — $2H_2 + O_2 \rightarrow 2H_2O$

Proton — 1
Electron — 1

1
H
1.008
Hydrogen