

I went through the topics which are currently being studied by grade 1 to grade 10 students and I made a list of 10 science themed activities .

## 1. My Body

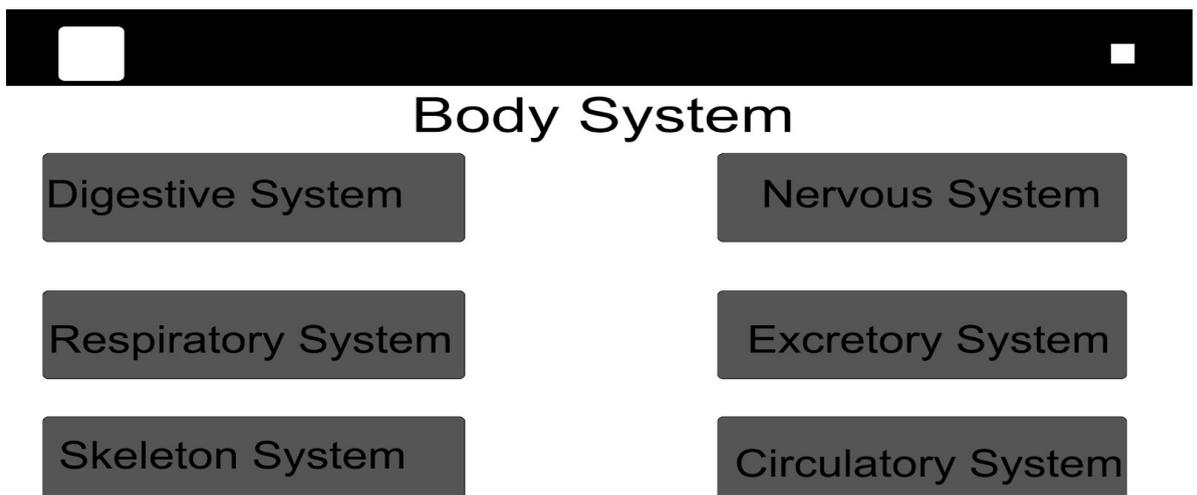
This activity is about the human body System like digestive system, respiratory system, Nervous System, Excretory system and reproductive system .

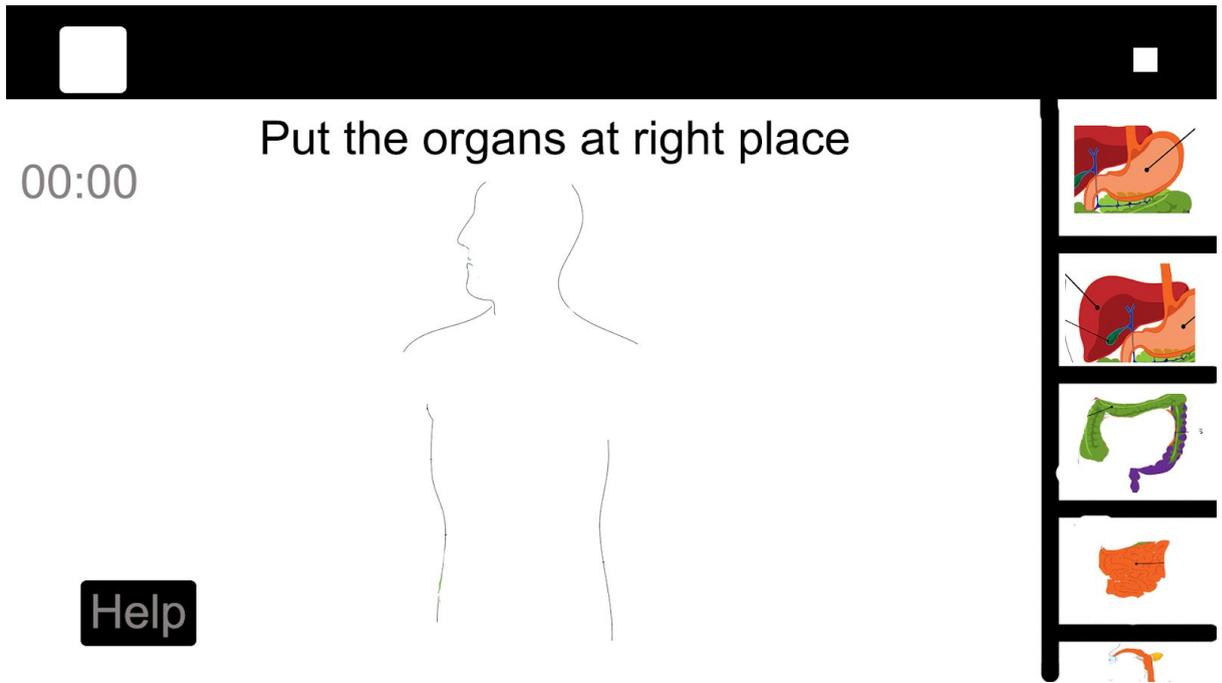
In this activity, first the student will choose the body system then they will learn with the help of labeled diagram of the respective human body system. Every label will be clickable where there will be information about that organ. This will be shown right part of the screen.

Also there is a game where students will apply their learning.

About the Game: Students will put the organs at the correct location to complete the challenge. Journal will save the best time.

Here are the sample image of activity how it will basically look:





Same for all the other human body systems.

## 2. Plant

This activity is about plants, fruits and flowers. This activity will be similar to My body activity. Instead of different body system buttons there will be options of Plant, Tree, Fruit and Flower.

About the game : same as My Body.

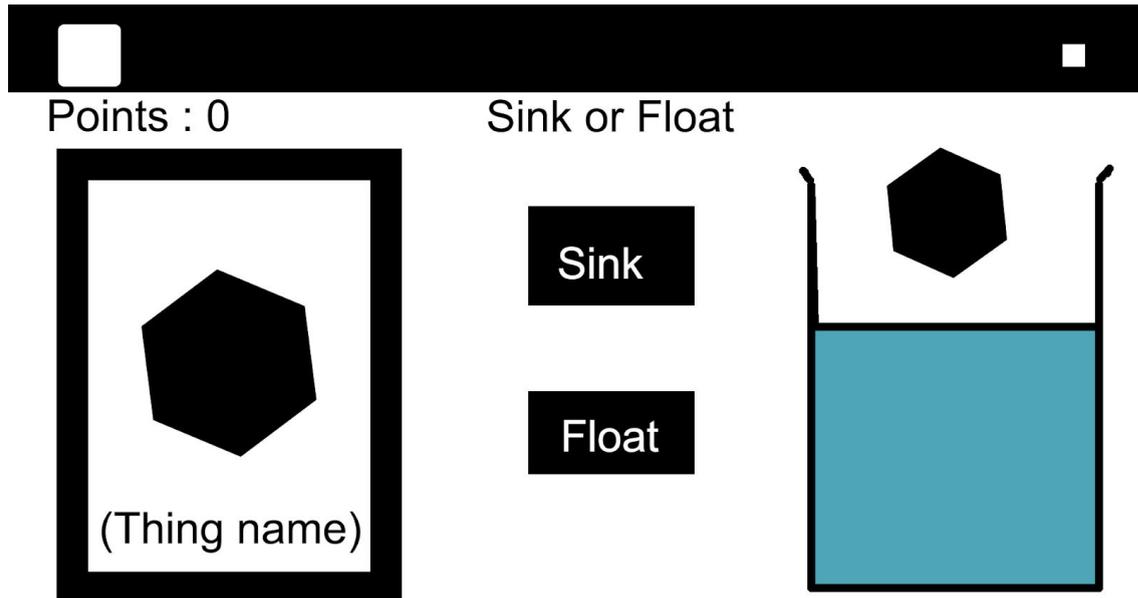
Additional: There will be information about growing a plant where they learn how plants grow and how they will grow plants from seeds.

## 3. Sink and Float

This activity will help students to learn about which items sink or float in water. This activity is mainly for grade1 or grade 2 students.

It will be a game activity where as shown below in fig. the hexagon represents an item and the student will choose whether it will sink or float . This game will be points

based. There will be small animation whether it will float or sink. The number of items we will be around 10 (discuss later).Journal will save the high score.



#### 4. Recycle

This activity will help students to learn about which items are recyclable and which are not. This activity is for grade-2 students.

At start there will be information about recyclable items. Then there will be a game where students will select whether the shown item is recyclable or not.

Here Dustbins were the buttons and they will click on which dustbin it belongs to. (there will be slight change in image shown below)

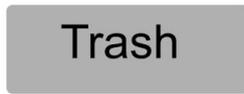
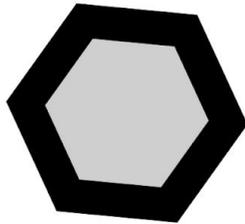
As shown in figure, hexagon represents an item and students will select recyclable or not.

This will be a point based game. Journal will save high scores.



Recyclable ?

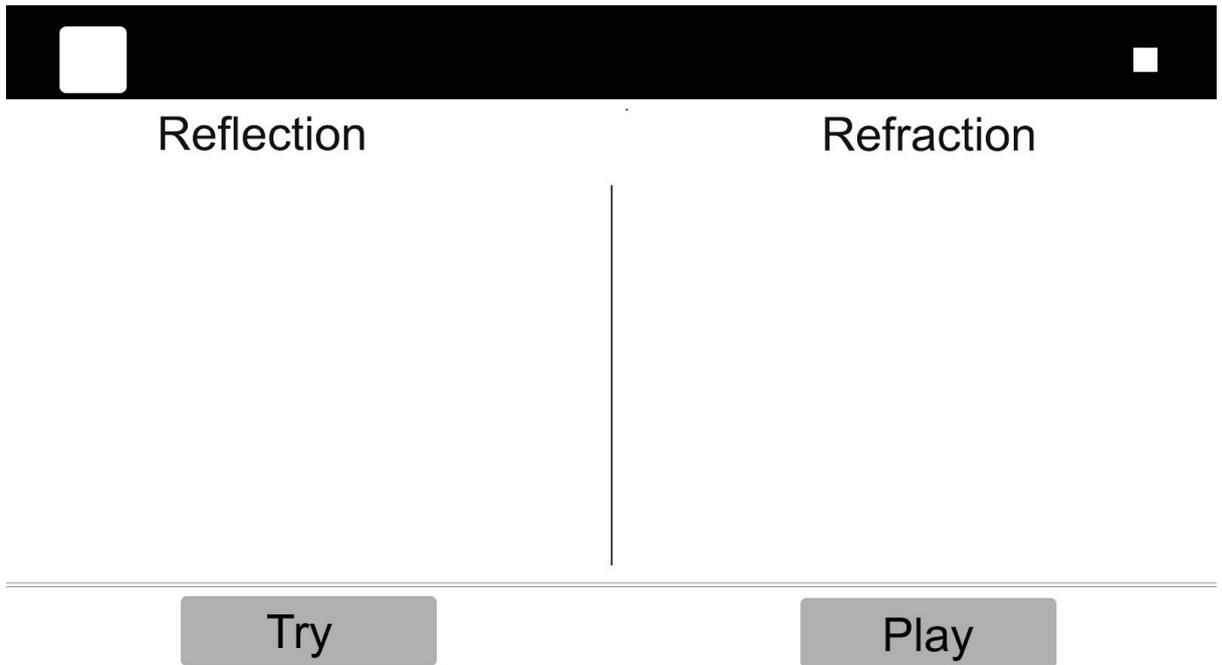
Points:0



## 5. Light

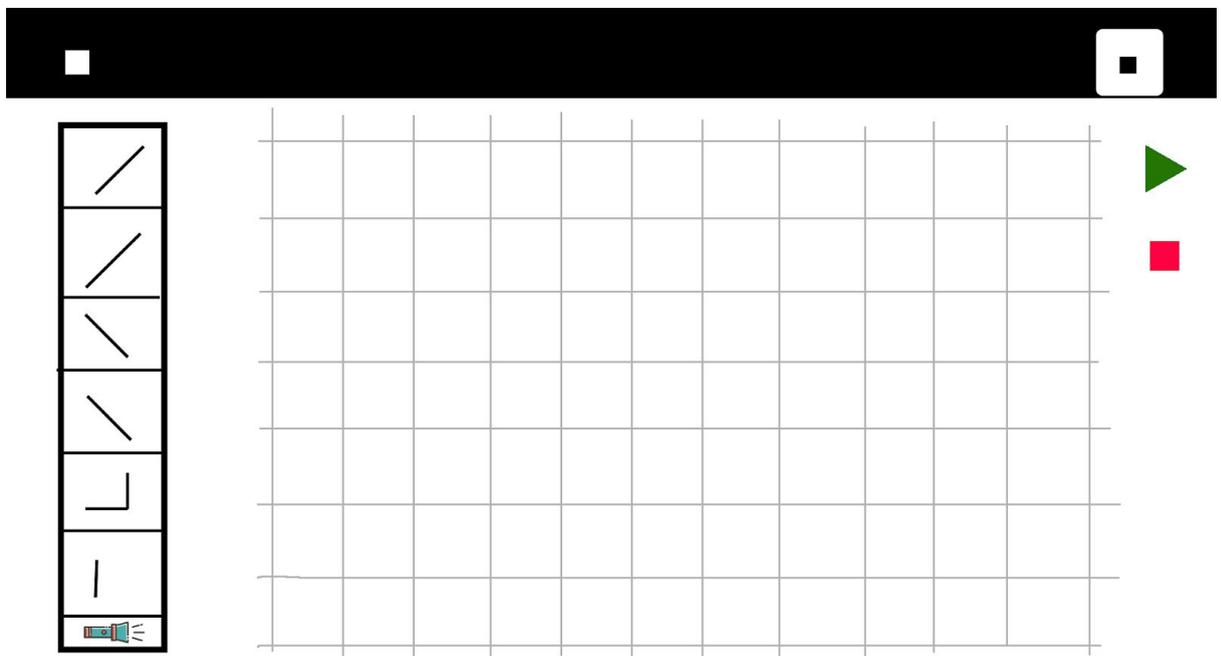
Here students will learn about reflection and refraction of light. This activity is for students of grade 6 - 8 .

In this activity, firstly there will be information about reflection and refraction similar to shown in figure.



This activity include **Try** and **Play** option.

In Try mode : In this activity, student will simulates the light ray by putting the components like torch and mirrors and play around to change the direction of light ray. The sample image for activity is shown below:

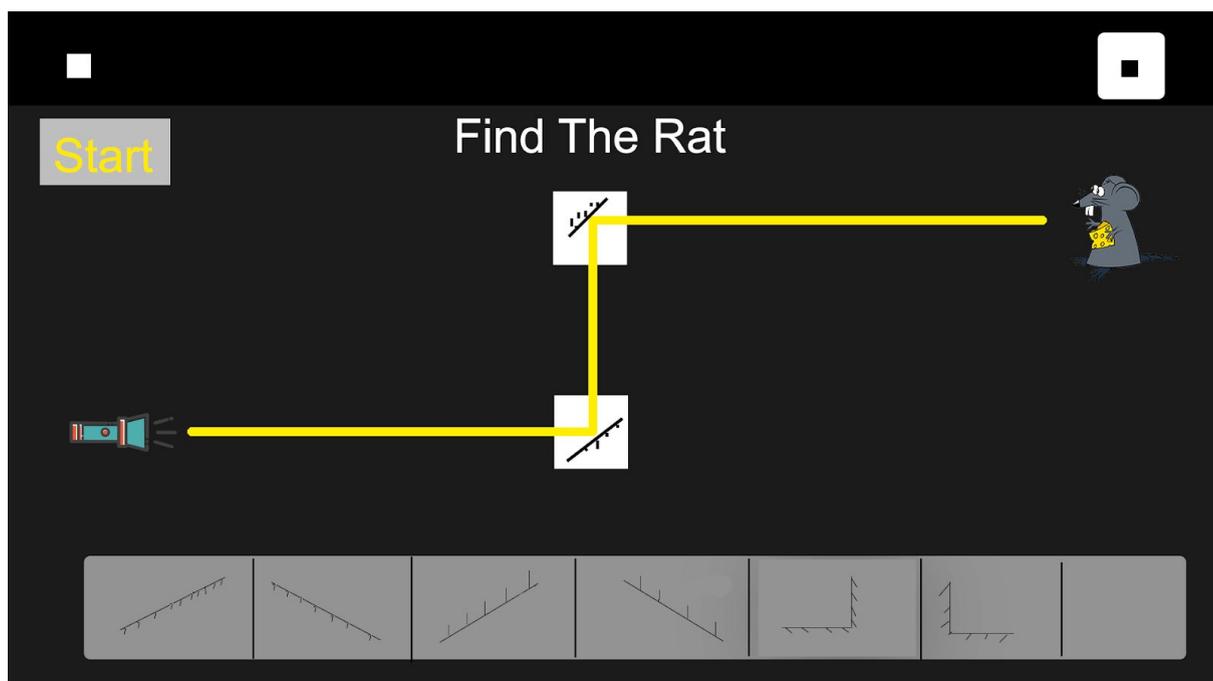


In the leftmost column, there are different angled mirrors where they can be used to change the direction of light rays.

When the play button is clicked the torch will emit light rays and go as the components are placed. Start Button will change to stop button. There will also be reset button which clears the grids.

In **Play** mode: In this activity, there is a game called **Find the Rat**.

As shown in the figure below you have to place the correct item (like angled mirror) in the white box such that torch light beam reaches to rat.



Start button will start emitting the light beam from the torch. Here it will be checked whether you placed the right component at the right place or not.

There will be different 5 stages with increasing difficulty.

## 6. Circuit

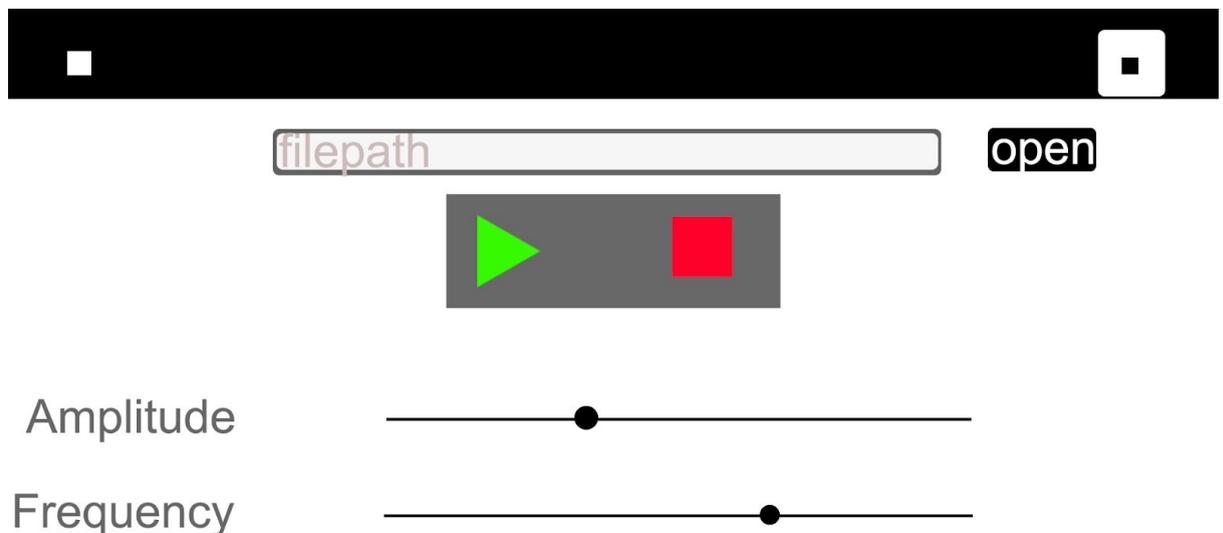
In this activity, students will learn about basic electrical components (like Battery, cell, connecting wire, bulb etc). Firstly there will be an introduction to all above components.

This activity includes simulation similar to **Light** activity's **Try mode**. Instead of mirror components there will be electrical components . After completing the circuit by placing the components will simulates the circuit by pressing start button.

About game: similar to **Light's** activity **play mode** . Instead of mirror component there will be electrical component. In the game, there will be circuit of cell, connecting wires and bulb. So they have to complete the circuit by clicking on grid cell which make portion of wire to rotate. Correct combination of all will result in glow of bulb..0

## 7. Sound

In this activity, students learn about the Sound. As shown in the figure there will be a music player with option to change the value of amplitude or frequency and notice the change in sound.



## 8. Atoms

In this activity, students will learn about atoms and molecules. Firstly there will be an introduction to atoms which includes info about electrons, protons, periodic tables too.

This activity includes a periodic table with every cell carrying information about the element.

## **9. Degradables**

In this activity, students will learn about biodegradable and non-biodegradable materials. This activity will work similar to Recycle Activity. There they will choose whether the shown image is biodegradable or non- biodegradable.

## **10. Beaker**

In this activity, students will simulate chemical reactions / Mixing chemical between acids, bases, metals, salts etc. As shown in image below, there is a beaker where all the reactions take place. There is a burner below the beaker and lid above that beaker. Students will choose chemicals from the leftmost column and it will be added to the beaker. Chemical color will change as it changes in real world.

H <sub>2</sub> O	K
H <sub>2</sub> SO <sub>4</sub>	Pb
SO <sub>3</sub>	Li
HF	Ag
HCl	Ba
HNO <sub>3</sub>	Ca

