



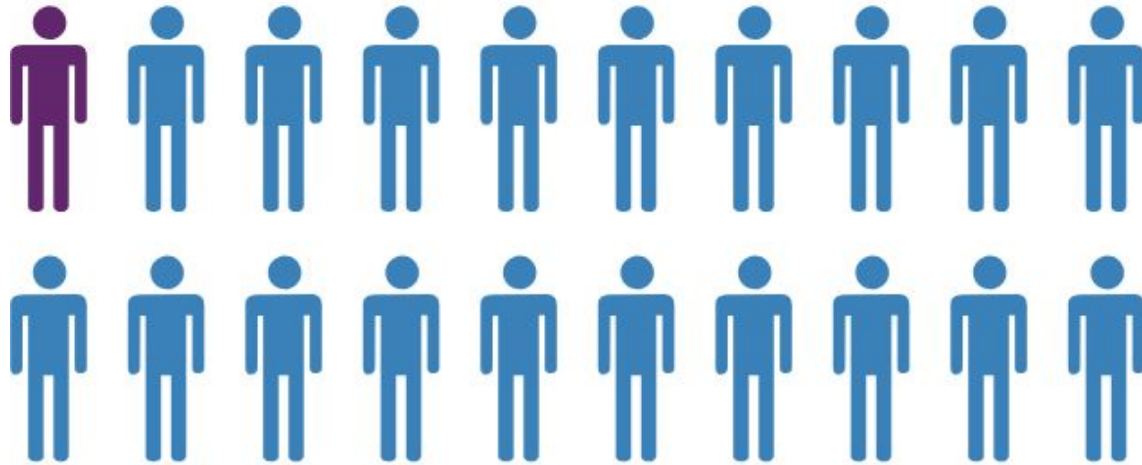
WPI

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Expanding Childhood Eyecare Education Through a Mobile Application

One out of every twenty Armenians suffers from visual impairment.

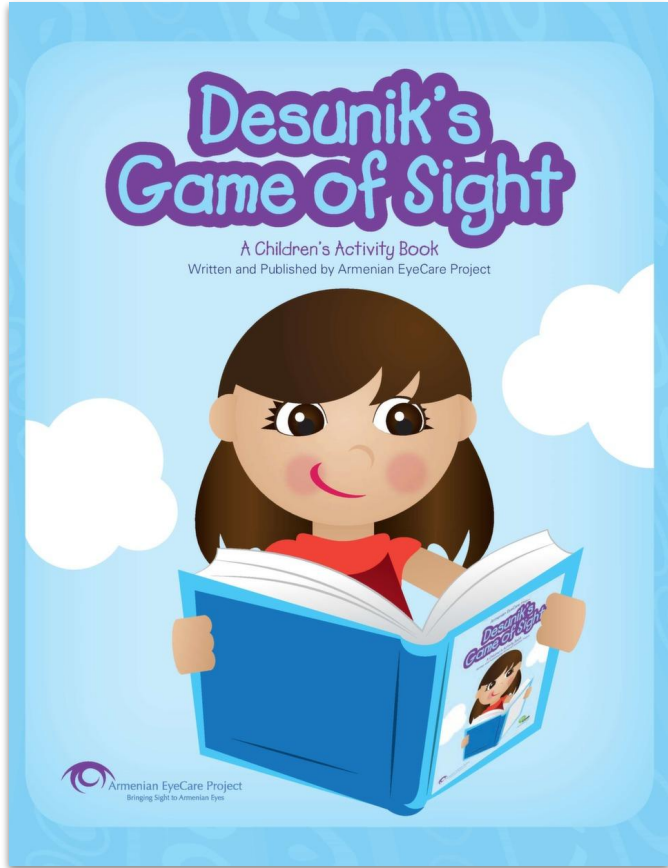


■ Visually Impaired ■ Healthy Vision

Vision impairments can substantially reduce a child's ability to learn.

- Armenian children suffer higher rates of strabismus and other visual disorders.
- 50% of learning disabilities are vision related.

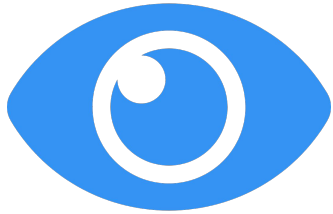




The AECP provides eyecare education through a children's book to increase childhood eyecare awareness.



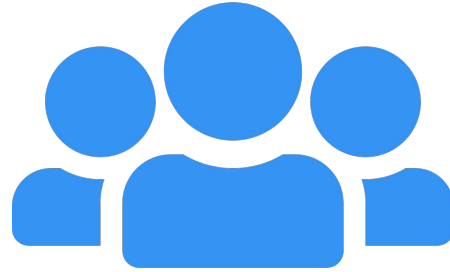
A digital supplement to *Desunik's Game of Sight* offers several benefits.



**Prevention
measure**



Cost



**Extended
audience**



**Better use
of time**

Knowledge to transfer to students was collected and refined from four sources.



Eye Health

Eye Function

Eye Anatomy

Eye Safety

Eye Diseases

Activities were chosen based on enjoyability and educational criteria.

Enjoyability Scorecard

Activity	Elements of Enjoyability				
	Sound Effects	Bright Colors	Point System	Varying Difficulty	Gameplay Similar to a Frequently Downloaded App
Assemble The Eye	✓	✓	✓	✓	
Protect Desunik's Eyes	✓	✓			
Color-Blind Maze	✓	✓	✓	✓	
Eyelash Dash	✓	✓	✓	✓	✓
Eye Spy	✓	✓	✓		✓
Convergence	✓	✓	✓		

Activity Selection Scorecard

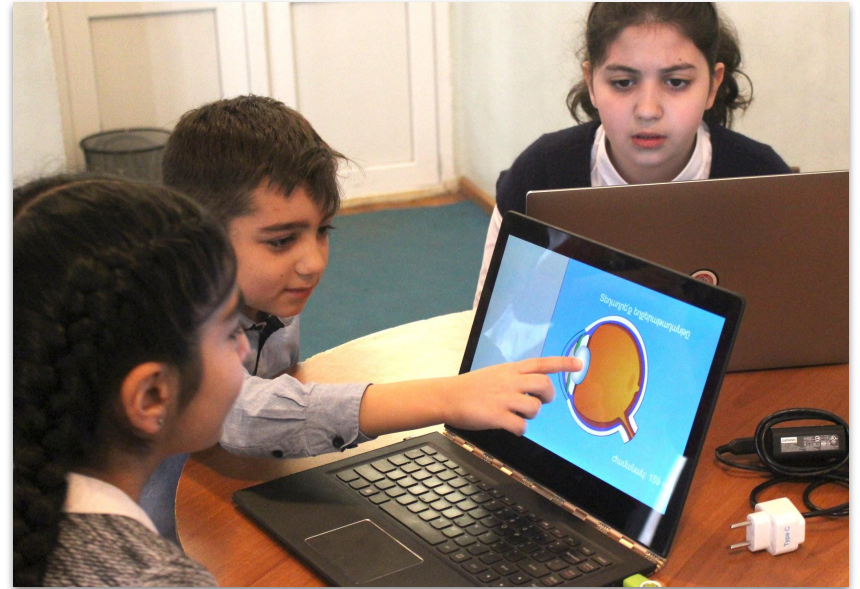
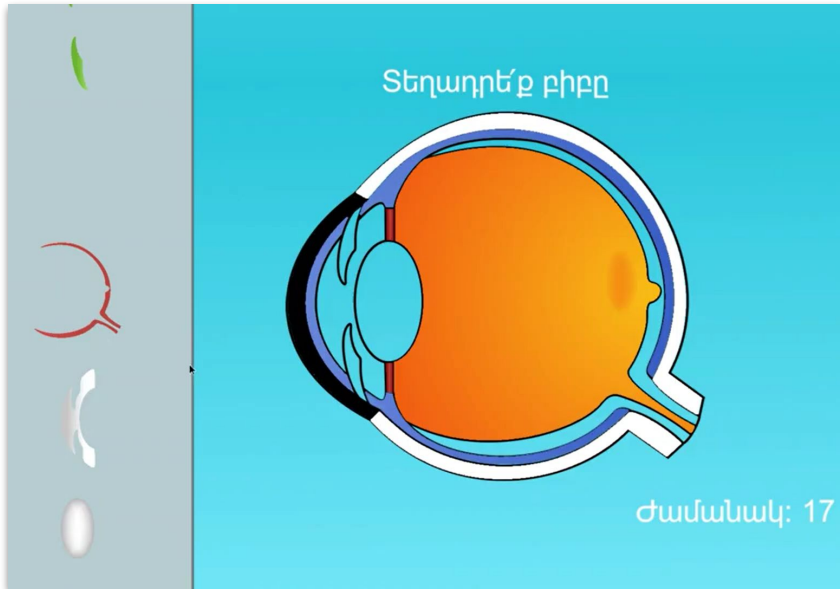
Criteria	Description of Use	Quality of Criteria Use		
		Low	Medium	High
Must Have				
Educational Pedagogy	Combine: students will have to recreate the anatomy of the eye to make it functional, by combining parts to see how an image is formed			X
Student Motivation	Sounds rewarding correct placement, feedback from Desunik, and the motivation to reveal the hidden picture / improve score			X
Relevance	Makes an eye to see an image of something they are familiar with such as famous buildings in Armenia or superheroes for younger students			X
Should Have				
Progress Tracking	A Badge can be awarded when they successfully assemble an eye		X	
Student Flexibility	Can be customized for each age group to have more or less parts to add		X	
Agency	Very short game they can complete in a small time with a phone			X
Want to Have				
Colaboration	Compete with friends for better time		X	
Customization	They can experiment by placing eye parts in different places. However, only the correct configuration will be accepted	X		

Mock-up activities were brought to schools for testing.



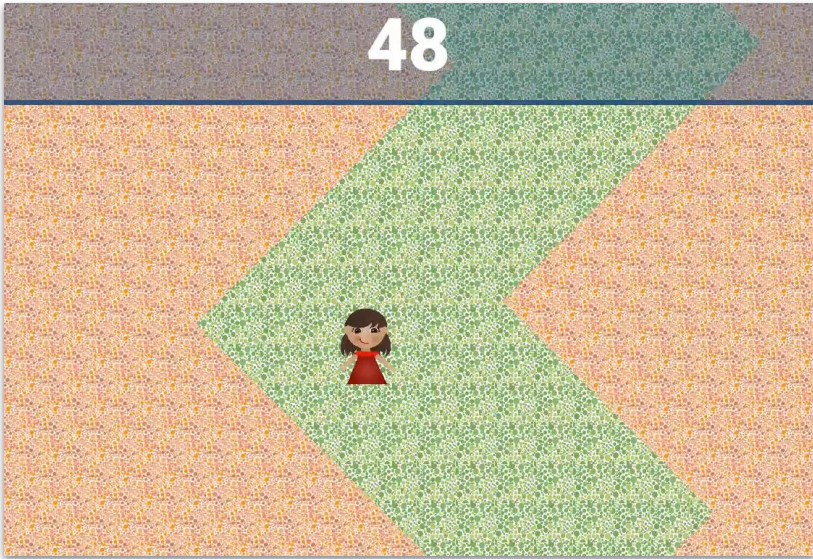
Video Lesson

Mock-up activities were brought to schools for testing.



Assemble the Eye

Mock-up activities were brought to schools for testing.



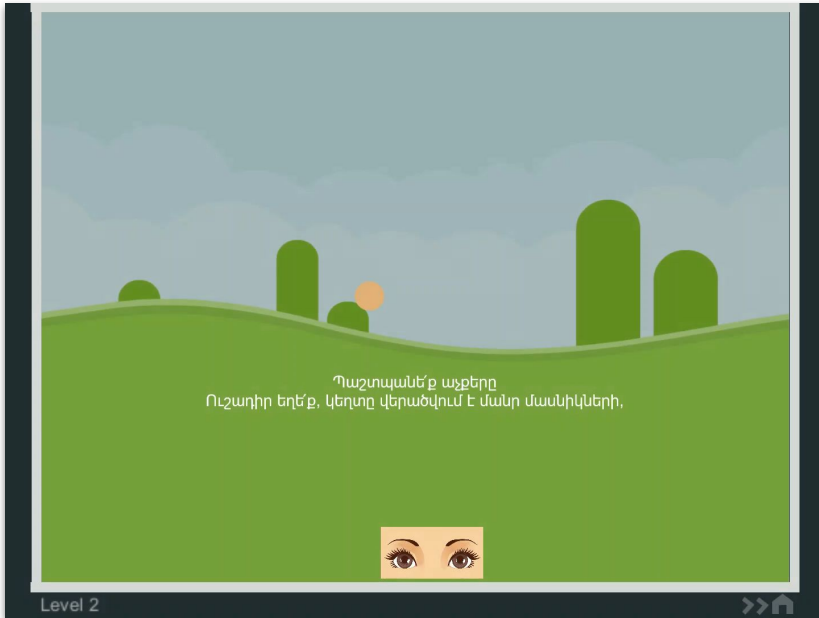
Colorblind Maze

Mock-up activities were brought to schools for testing.



Search and Find

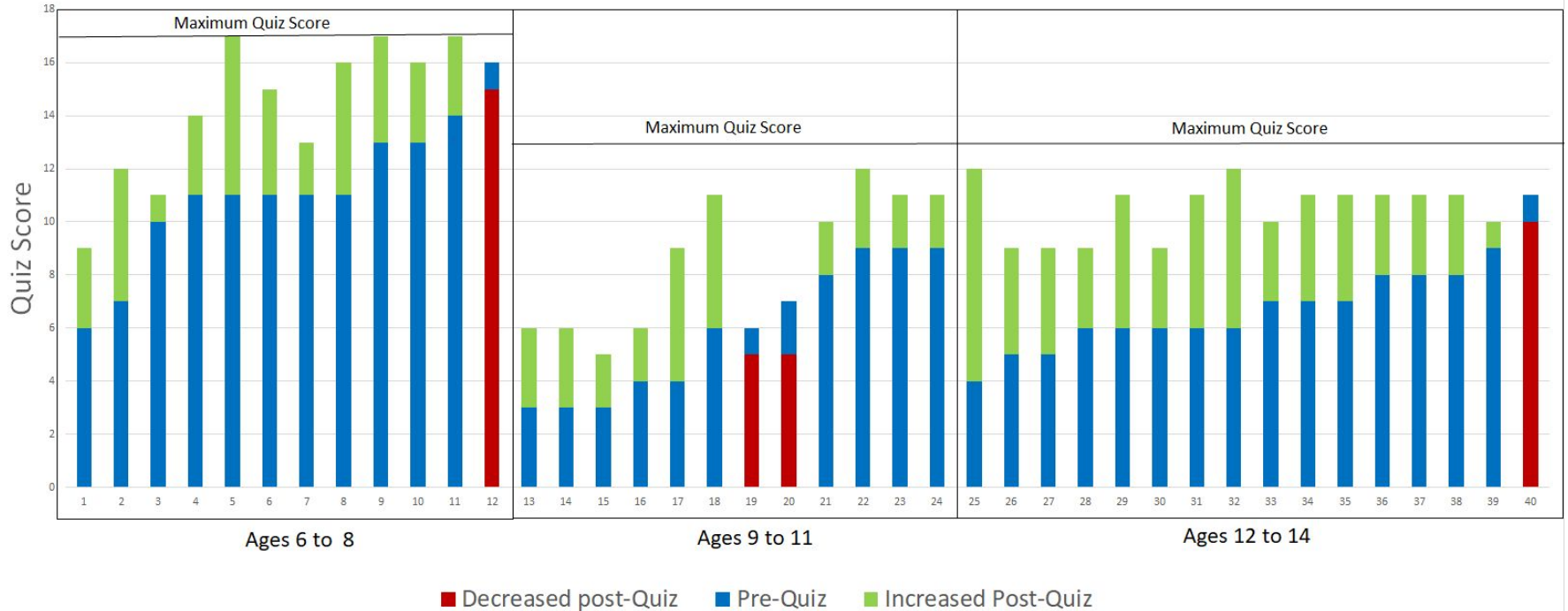
Mock-up activities were brought to schools for testing.



Protect the Eye

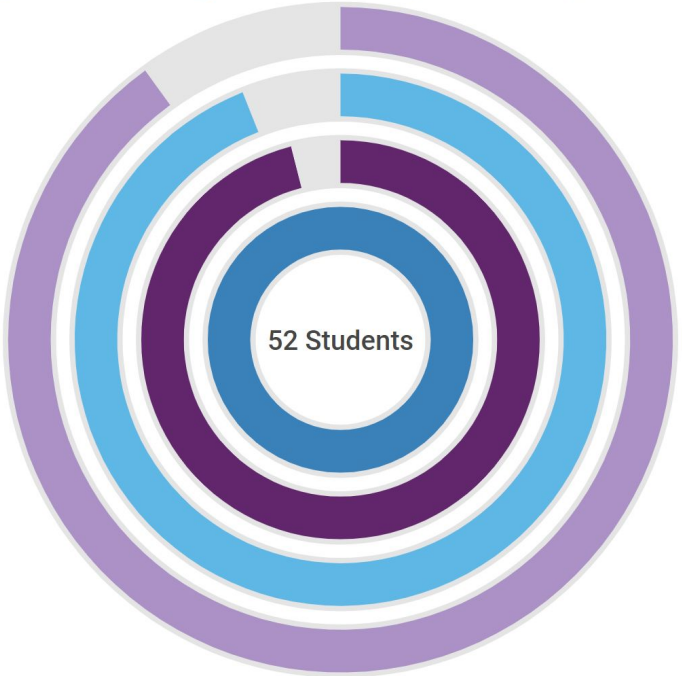
Quizzes administered before and after displayed educational growth as a result of the mock-up.

Progress Evaluation

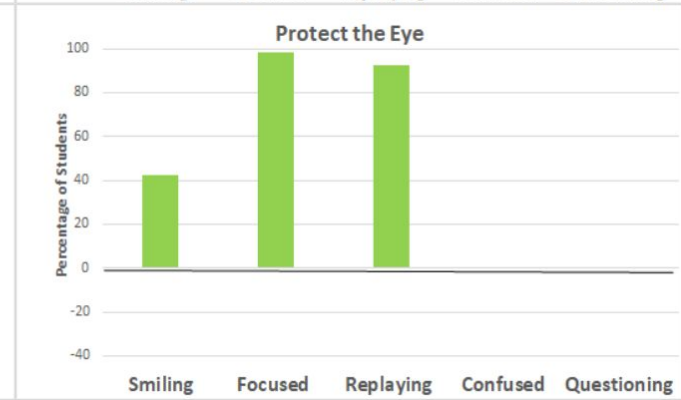
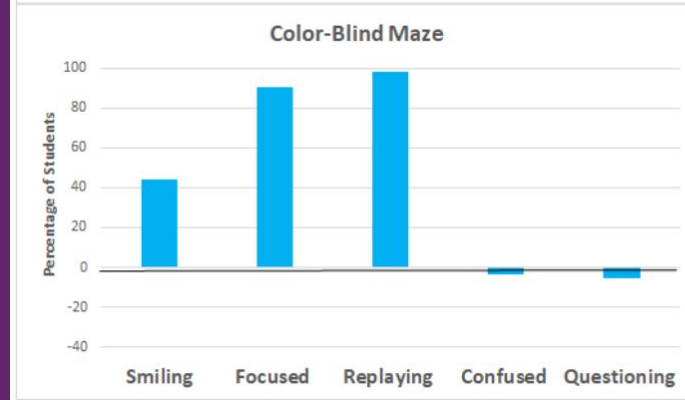
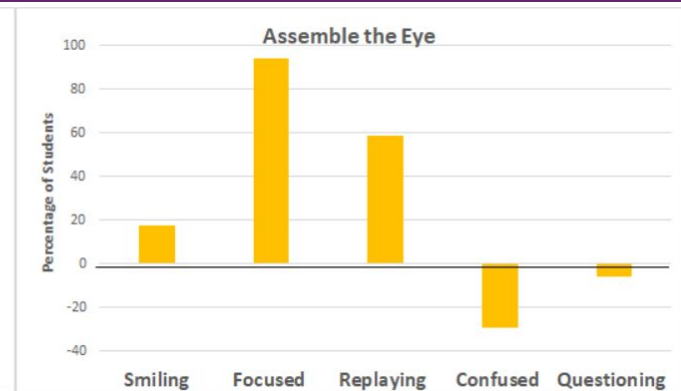
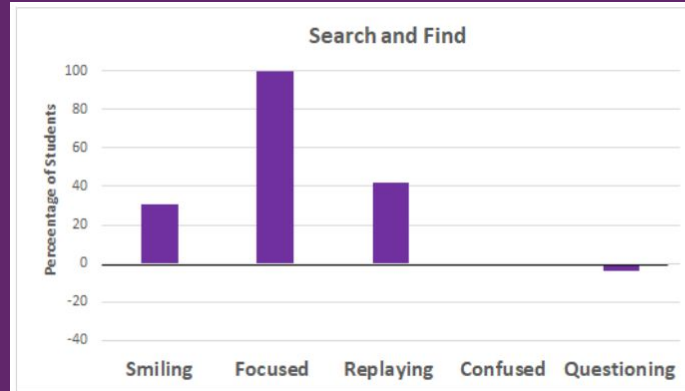


Questionnaires revealed student enjoyment and positive attitudes towards mock-up.

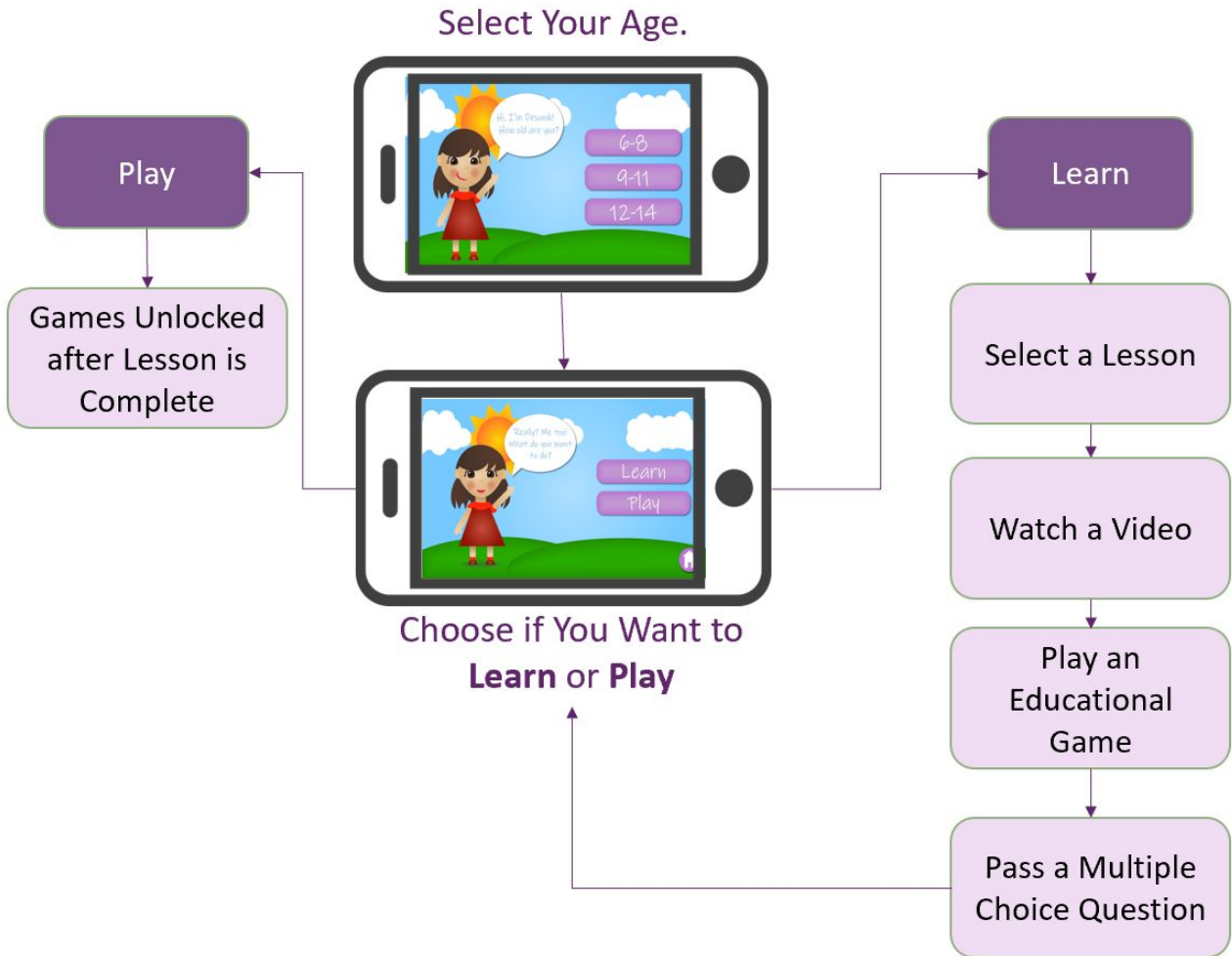
- Would Play Again (90%)
- Learned Dangers to Their Eyes (94%)
- Had Fun (96%)
- Learned New Things About Their Eyes (100%)



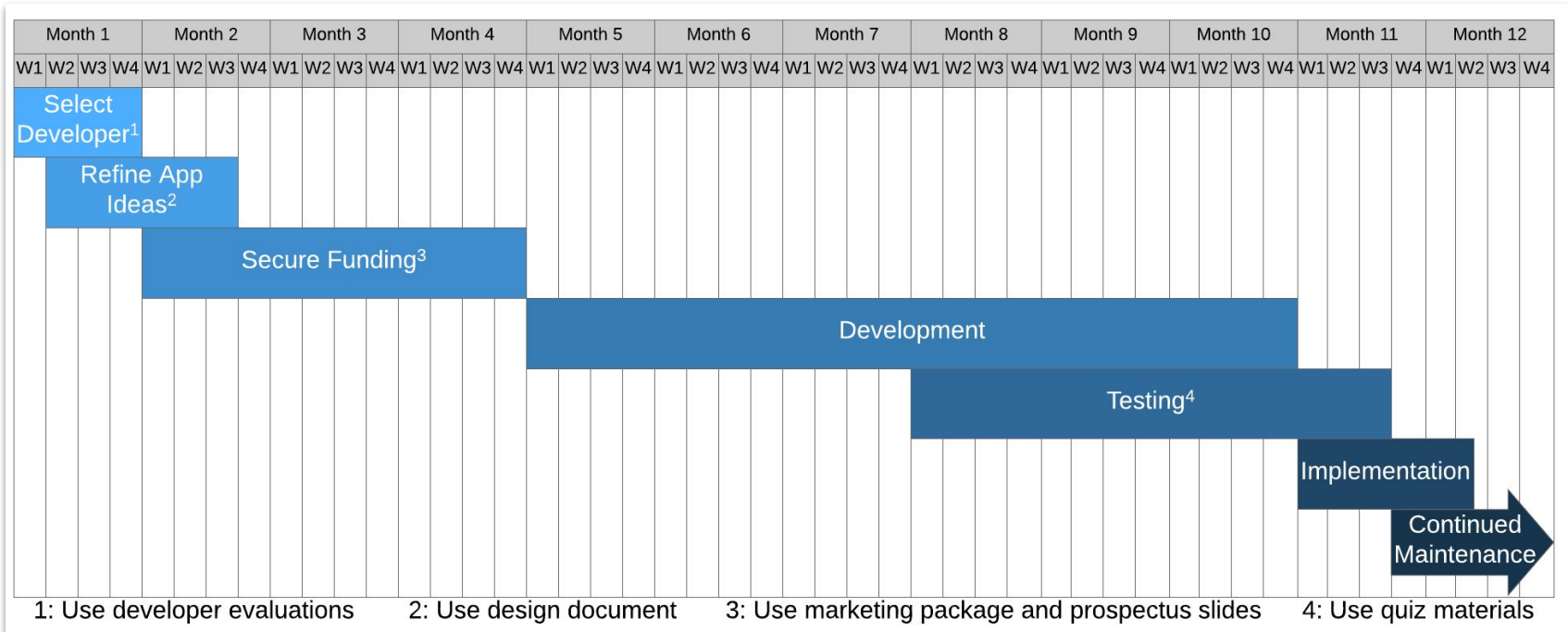
Observations portrayed levels of enjoyment and engagement in students.



Recommended application structure and design reflect the vision of original booklet.



Implementation Plan



Acknowledgements

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Thank You!

