

Team Purple

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Scope

- Recap on HMW statement
- Concept generation
- Concept selection
- Concept testing
- Initial Prototype testing



Recap on HMW Statement

Counting money, understanding saving & spending,
needs vs wants

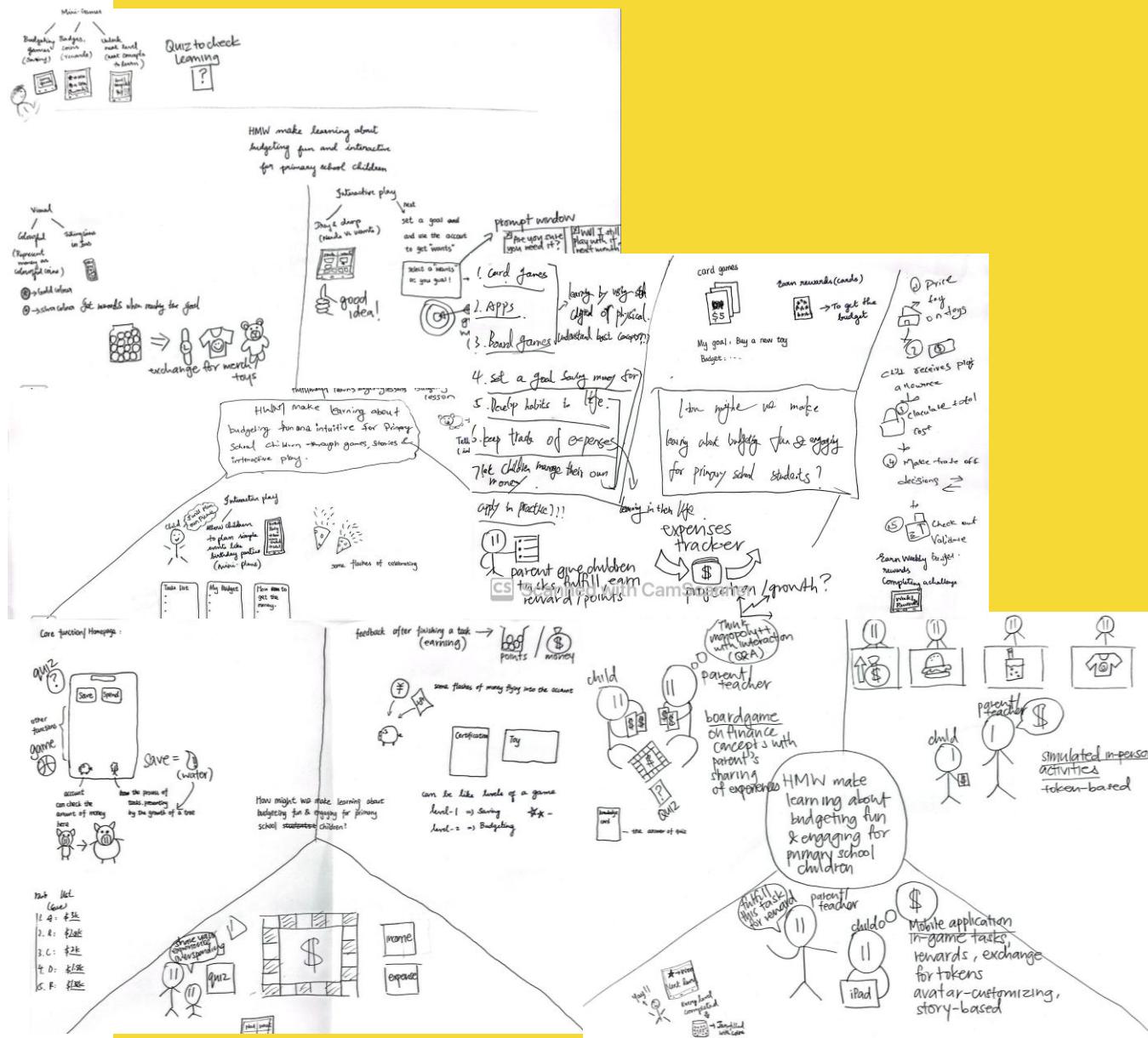
"HMW make learning about budgeting fun and
intuitive for primary school children through
games, stories, and interactive play?"

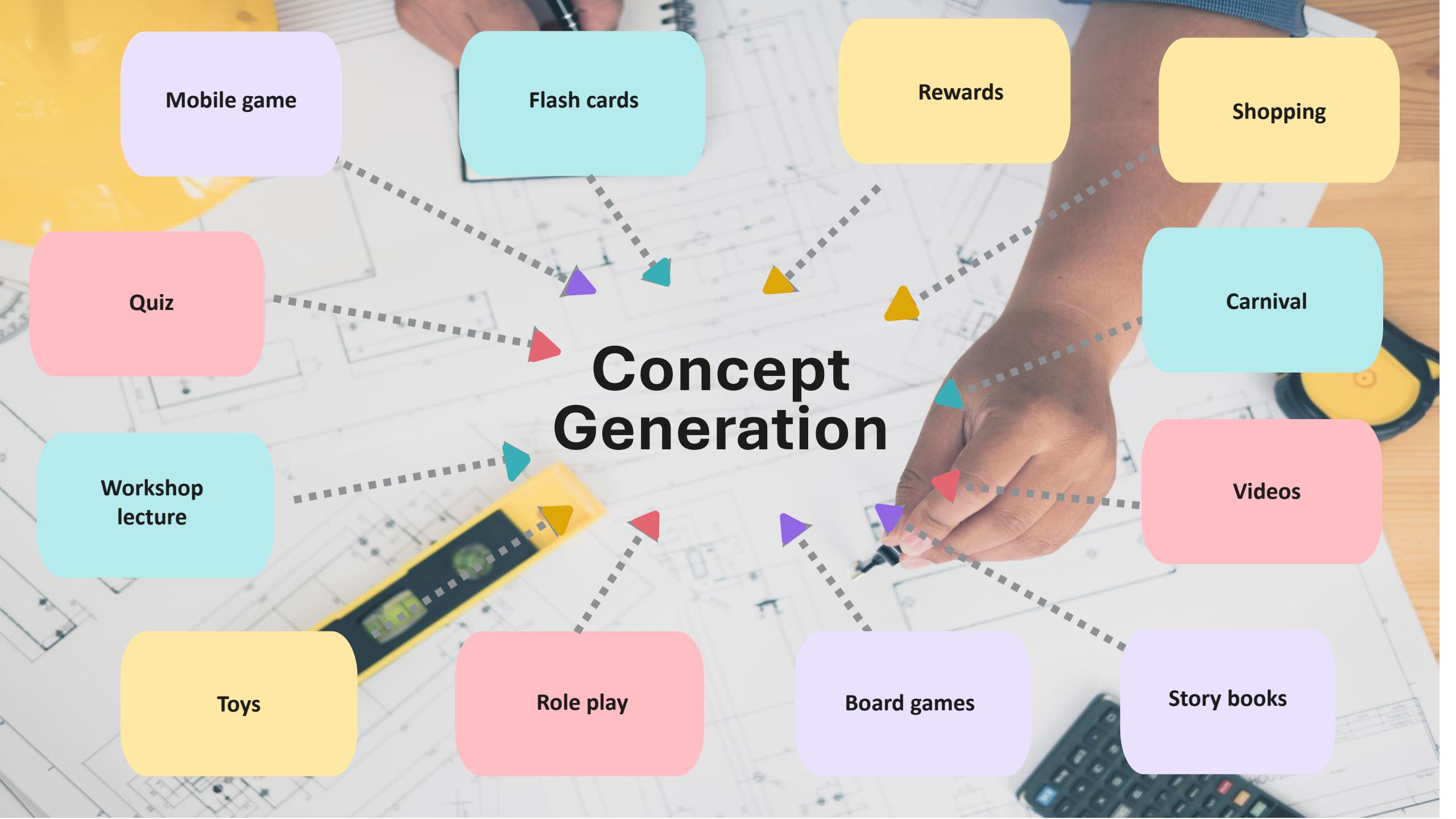
Engaging, easy to understand

Practical
application

Family engagement

Concept Generation: C-Sketching





Concept Generation

Mobile game

Flash cards

Rewards

Shopping

Quiz

Carnival

Workshop
lecture

Videos

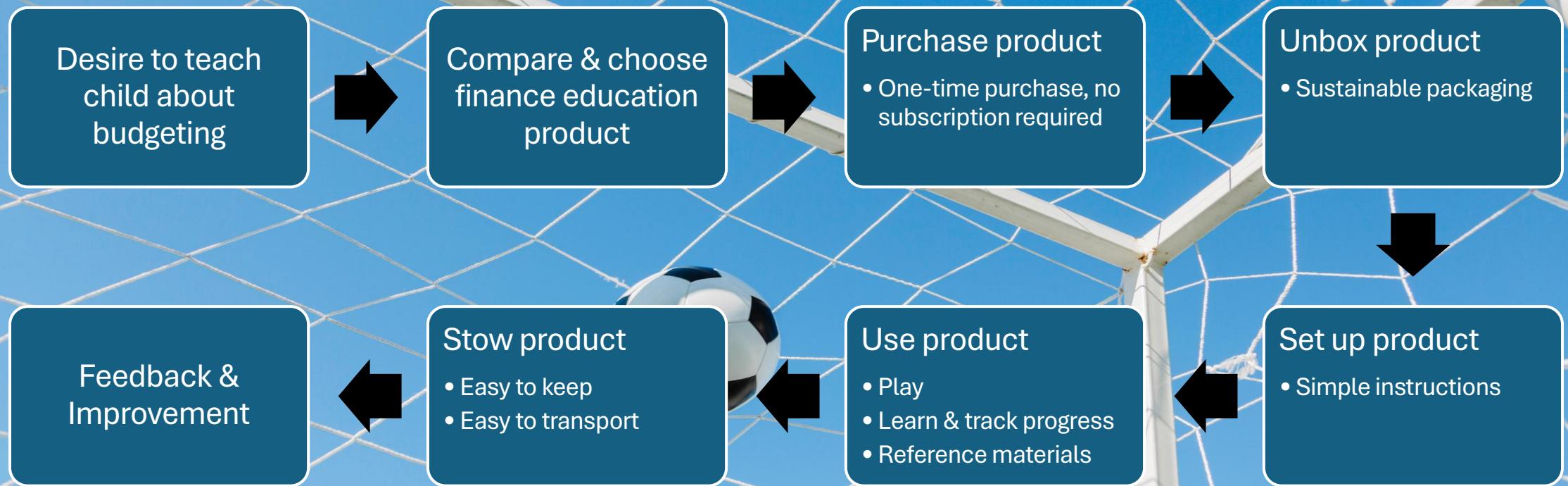
Toys

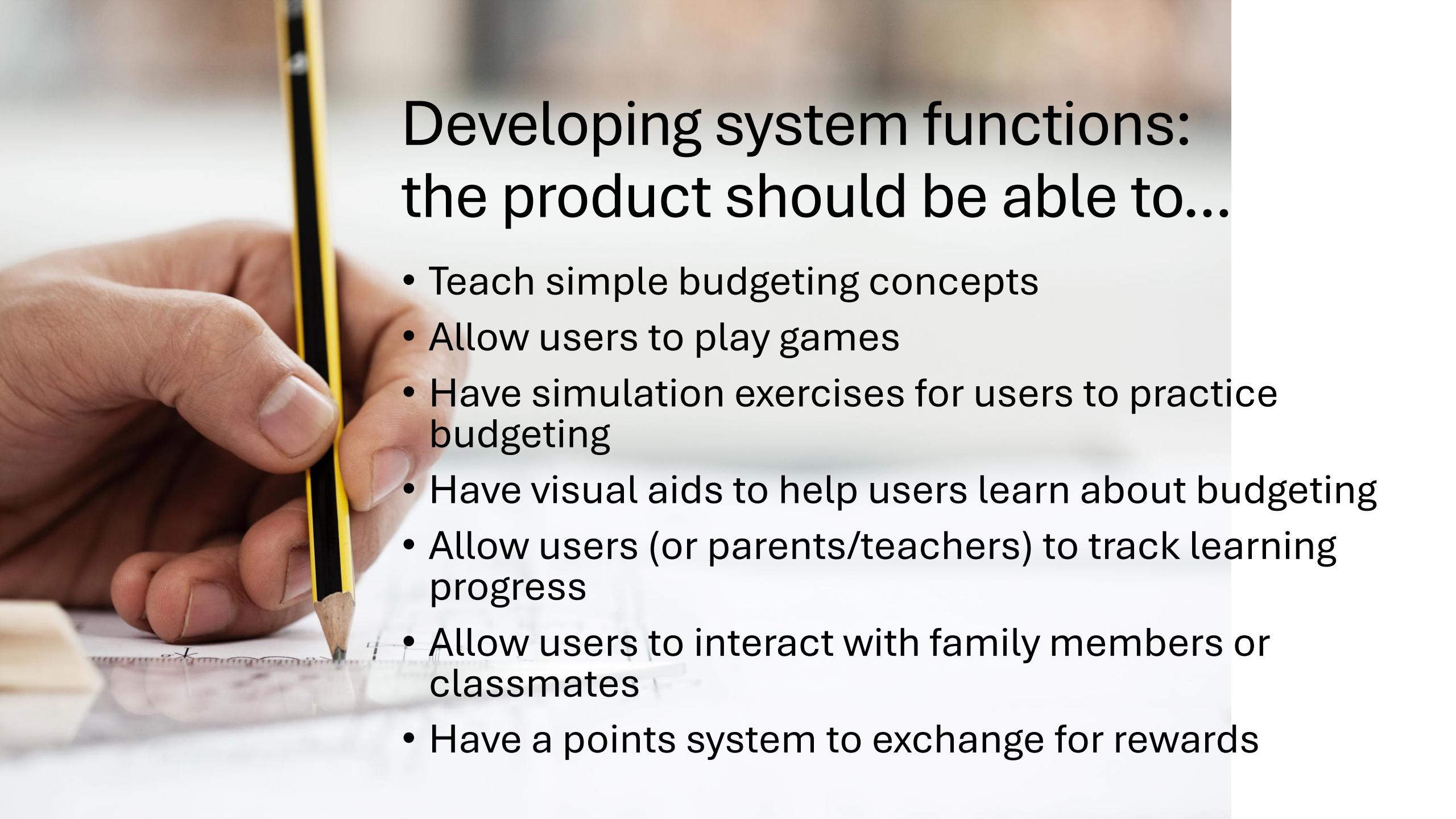
Role play

Board games

Story books

Activity Diagram



A close-up photograph of a person's hand holding a yellow pencil. The hand is positioned as if it is writing or drawing on a piece of paper. The background is slightly blurred, showing what appears to be a notebook or a sheet of paper with some faint markings.

Developing system functions: the product should be able to...

- Teach simple budgeting concepts
- Allow users to play games
- Have simulation exercises for users to practice budgeting
- Have visual aids to help users learn about budgeting
- Allow users (or parents/teachers) to track learning progress
- Allow users to interact with family members or classmates
- Have a points system to exchange for rewards

Contextual drawings



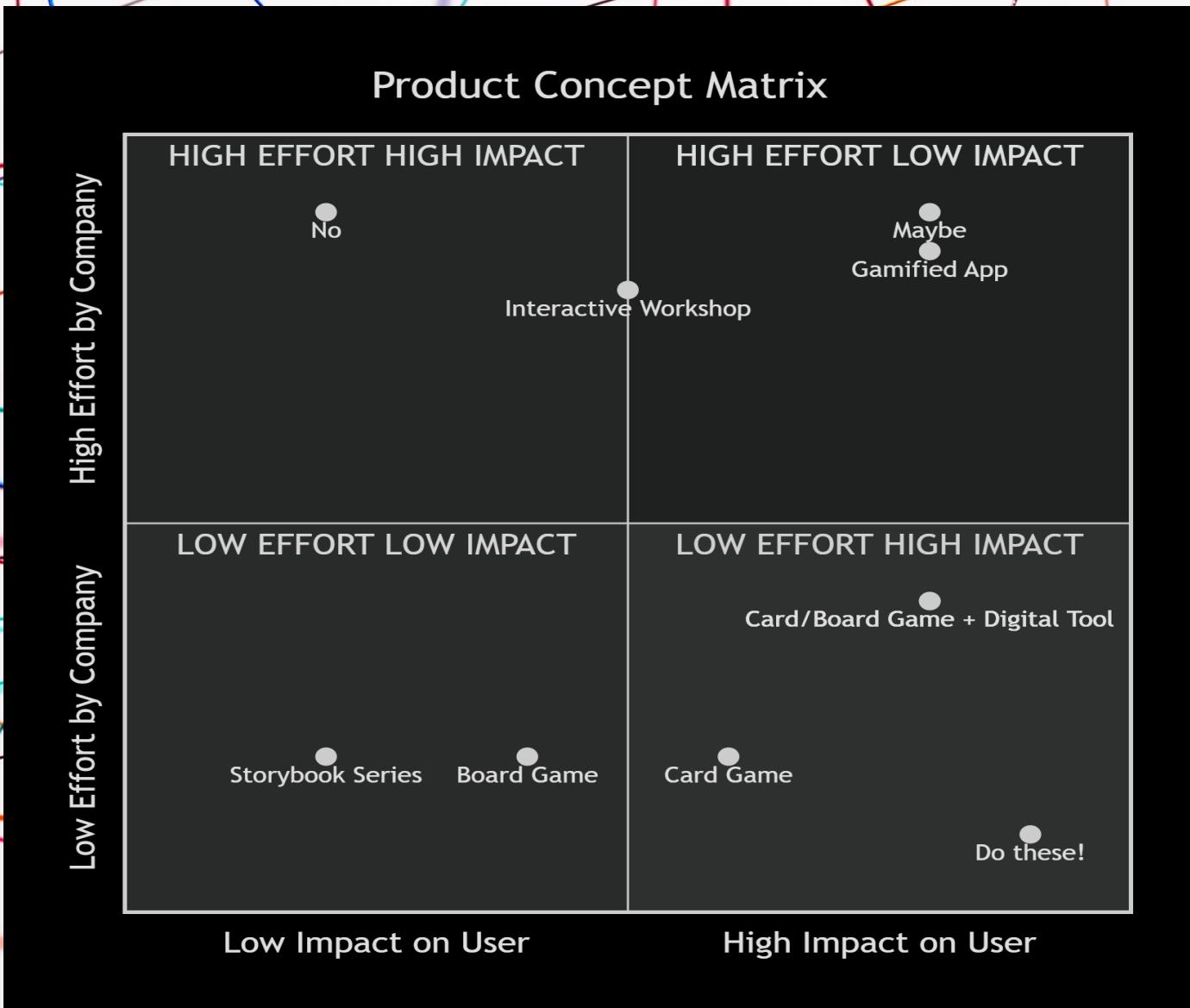
Concept Screening

SELECTION CRITERIA	GAMIFIED APP	BOARD GAME	STORYBOOK SERIES	INTERACTIVE WORKSHOP	CARD GAME	CARD/BOARD GAME + DIGITAL TOOL INTEGRATION	REFERENCE "GREAT FIN CHAMP"
Engagement Level	+	0	+	+	+	+	0
Ease of Use	+	+	0	-	0	+	0
Educational Value	+	0	+	+	0	+	0
Family Involvement	0	+	-	+	+	+	0
Cost Effectiveness	-	+	0	+	+	+	0
PLUSES	4	3	3	4	3	5	
SAMES	1	1	2	0	2	0	
MINUSES	1	0	1	1	0	0	
NET	3	3	2	3	3	5	
RANK	2	2	5	2	2	1	
CONTINUE?	Yes	Yes	Yes	Yes	Yes	Yes	

Concept Scoring

Selection Criteria	Weight	Gamified App Rating	Weighted Score	Board Game Rating	Weighted Score	Storybook Series Rating	Weighted Score	Interactive Workshop Rating	Weighted Score	Card Game Rating	Weighted Score	Card/Board Game + Digital Tool Integration Rating	Weighted Score
Engagement Level	20%	4	0.80	3	0.60	3	0.60	4	0.80	3	0.60	5	1.00
Ease of Use	15%	4	0.60	4	0.60	3	0.45	3	0.45	3	0.45	5	0.75
Educational Value	25%	4	1.00	3	0.75	4	1.00	4	1.00	3	0.75	5	1.25
Family Involvement	20%	3	0.60	4	0.80	2	0.40	4	0.80	4	0.80	5	1.00
Cost Effectiveness	20%	3	0.60	4	0.80	3	0.60	4	0.80	4	0.80	5	1.00
Total Score			3.60		3.55		3.05		3.85		3.40		5.00
Rank			3		4		6		2		5		1
Continue?			Yes		No		No		Yes		No		Yes

Prioritisation Matrix



Concept Testing: Gathering Feedback



Name: Mr Du

Age: 27

Gender: Male

Occupation: Teacher

"A board game or mobile app that children can play at school or home is what I would like to see. **Teachers do not have time, and children can learn on their own time**"



Name: Mr Xiao

Age: 36

Gender: Male

Occupation: Father of P3 student

"I don't think my son is interested in workshops and a storybook with this topic won't be interesting. **Games would be better.**"



Name: Ms Toh

Age: 8

Gender: Female

Occupation: P2 student

"I like mobile games but card games are fun as I get to play with my parents too. I don't really learn about budgeting in school"



Name: Ms Chew

Age: 36

Gender: Female

Occupation: Teacher, mother of 2 (8 & 5 yo)

"Card or mobile games are great as teachers do not have time and resources to teach. But **children today have a lot of screen time** too. Would be great if we could **track their learning progress**"

PROTOTYPING CANVAS

PROBLEM/OPTION

Make learning about budgeting fun and engaging

CONCEPT/SOLUTION

Gamified learning for parents/teachers to track progress

STAKEHOLDERS



Users: primary school children, teachers, parents

ASSUMPTIONS & QUESTIONS

About the user and their needs

- Children find learning about budgeting boring and too difficult to understand, and may not know how to apply in real life
- Teachers/parents do not know if children learnt concepts



About the technical feasibility & functionality

- Can we create a physical portable game for learning?
- How do we check the child's learning?
- Do we need to create a digital interface for gamified learning?

About the cost and business

- Minimal cost to physical portable game
- Might be costly to develop digital app
- Is the school/MOE or parents willing to pay for such a product?

CRITICAL ASSUMPTION/QUESTION

Answer above list: what is the most critical to the success of the project?



Children do not know budgeting concepts such as spending and saving, needs vs wants and parents/teachers do not have ready resources to teach them/track their learning progress.

INSIGHTS GAINED FROM TESTING

What did you learn? Did you answer the critical assumption/question?



Game easy to play but might be too simple (boring). Need to add complexity and elements for parent/teacher to check progress on learning.

COMMUNICATION STRATEGY FOR PROTOTYPE



Explain
Feedback
Negotiate
Persuade

Use prototype to explain concept to user then ask for feedback to improve it

RESOURCES TO BUILD

Materials readily available or needed

- Paper, printer, laminate sheets



Time, Money, & People Allocated

- 5 days
- First prototype, minimal stationery costs
- 5 team members

PROTOTYPING APPROACHES

- | | |
|------------------------------------------------------------|------------------------------------------------------------|
| <input type="radio"/> Parallel Prototyping | <input checked="" type="checkbox"/> Sequential Prototyping |
| <input type="radio"/> Sub-system Isolation | <input type="radio"/> Scaling |
| <input type="radio"/> Requirements Relaxation | <input type="radio"/> Remove Unessential Features |
| <input type="radio"/> Wizard-of-Oz | <input type="radio"/> Repurpose Existing Products |
| <input checked="" type="checkbox"/> Experience Prototyping | <input checked="" type="checkbox"/> Paper Prototyping |
| <input checked="" type="checkbox"/> Role Playing | <input type="radio"/> Other: _____ |



TESTING PLAN

What are you testing?



Testing the fun level of the game and concepts learnt by students and parents/teachers' involvement in the learning process

What metrics are needed? Qualitative/Quantitative assessment.

Quantitative:

- Time spent playing
- No. of repeated plays

Qualitative:

- Positive survey rating

Time, Place, People, & Materials required to test

Test with 3 primary school teachers/parents/children
22 Nov at 6pm

Return on 29 Nov 6pm to test next iteration

SKETCH & BUILD PLAN

Build the simplest prototype possible (least cost, time, and materials required) to test critical assumption and/or answer critical question.

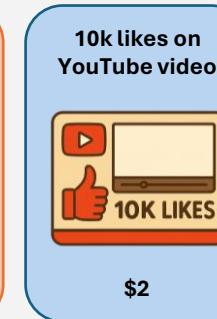


Sequentially prototype gamified learning device first as a paper prototype (in the form of a card game). Then prototype integration with digital integration. Role play scenarios as a team and gather user experience with teachers and parents.

1. Paper prototype (card game)



-\$2



\$2



+\$0.50

2. Paper prototype (digital integration)

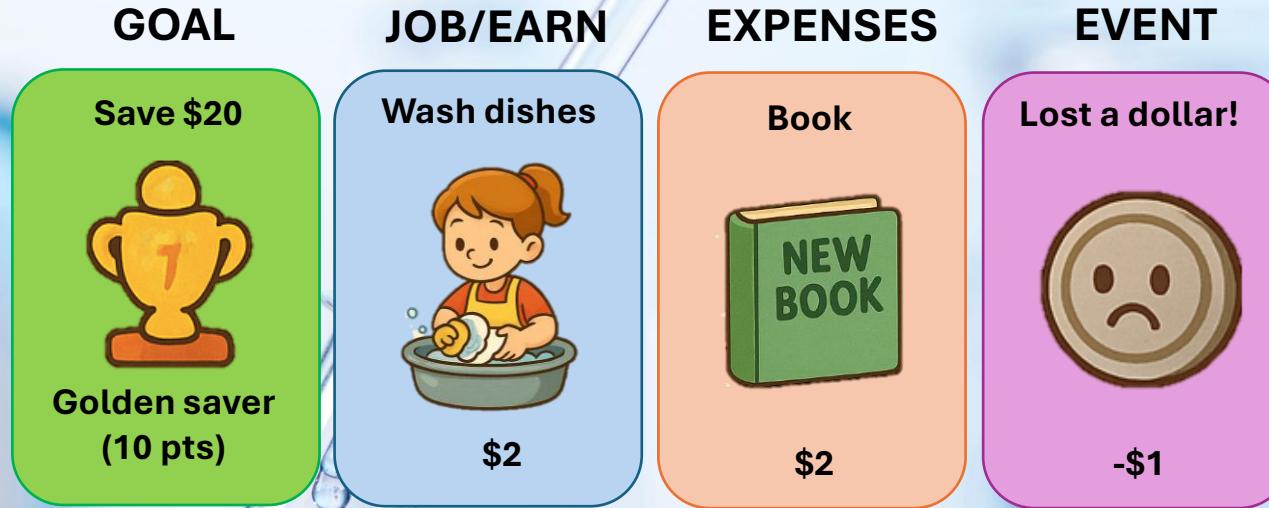


Initial Prototype Testing

Objective: First to hit savings goal wins



Ver 1



Ver 2



- Generic, “boring”
- Learnt about savings
- Learnt how to count money
- Don’t understand expenses

- Localized, relatable
- Meaningful savings goals
- Needs vs wants
- Check for learning progress

**THANK YOU
END**

