

Value: A play experience should be...	Why should a play experience be <i>Value</i> ...	Need: In order for a play experience to be <i>Value</i> it must be...	<i>Need</i> is important in a play experience....	Design Requirement
Fun	Fourth graders' primary interest is having fun, rather than learning. While the two are definitely not exclusive, we aim to create an experience that they will find fun and not focus on a story-based experience.	→ not too much story → physically engaging	An aspect of fun that is fairly important is physicality: the more physically engaging a game is, usually the more fun children tend to find it, such as dodgeball or tag. This is why we want to focus on a more physical and less story-based play experience.	→ we will not ever explicitly explain a story → it will be behavior-based → they will learn through doing → the game will be action-based → the game will require them to move around and/or to operate tools such as an elephant trunk
Competitive	Most people, including fourth graders, like competitive games because they have a clear objective: to do better than others. This “raises the stakes”, acting as an incentive to engage in the game.	→ simultaneous competition or leaderboard-type ranking	There are several types of competition: playing against each other, playing simultaneously but separately, and playing at different times but being ranked by performance. We hope to use one of these types of competition to engage the fourth graders.	→ simultaneous competition or leaderboard-type ranking
Collaborative				

Interactive				
Social Belonging	→ Interactive → Collaborative	→ Teamwork		
Value	Need	Requirement		
Fun	→ Physically engaging → Not story-based → Competitive	→ Learn by doing, not by telling → Simultaneous competition or Leaderboard ranking		
Accessible	→ Level playing-field → Fast-paced	→ Adjustable game elements → Intuitive/Easy to learn → Objective does not take long to complete		

Stakeholders	Values	Needs	Goal	Requirements
4th Graders	Enjoyment	Feel challenged but successful	Develop a play experience inspired by a frog's communication behaviors that promotes interdependency to solve challenges that involve new concepts.	...
		Physical engagement		Kids are engaged over time duration: $\geq 10$ min
	Being with others	Social interaction		Engages multiple children: count $\geq 2$
		Interdependency		...
Parents	Sharing	Positive opportunities to share		
	Learning (constructively)	Exposure to new concepts		

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Elements are light enough to lift and carry comfortably:  $\leq 10\text{lb}$

- Communicating
- Eating
- Drinking
- Bathing/washing
- 

(Lilo:) How about something like this:

Values	Needs	Requirements
Fun	→ Physically engaging → Not too story-based → Competitive	→ Activity will require them to move around or operate game elements → Learn by doing, not by telling → Simultaneous competition or leaderboard ranking
Accessibl	→ Usable by all	→ Intuitive/easy to learn

e	→ Fast-paced	→ Elements are light enough for fourth graders to lift and carry comfortably → Adjustable game elements if necessary → Objective does not take too long to complete
Interactive	→ Teamwork/collaboration	→ Some aspect of the activity requires working together

Our stakeholders value accessibility and fun. Identifying their needs based on these values, our play experience should be physically engaging and competitive in order to promote fun. It should also be usable by all and fairly fast-paced to make it accessible.

#### Requirements:

- Activity will require them to move around or operate game elements
- Learn by doing, not by telling
- Simultaneous competition or leaderboard ranking
- Intuitive/easy to learn (can be figured out in less than five minutes)
- Elements are light enough for fourth graders to lift and carry comfortably (less than ten pounds)
- Adjustable game elements if necessary
- Objective does not take too long to complete (less than ten minutes long)
- ~~Some aspect of the activity requires working together~~

It's missing bioinspiration