THE SLINGSHOT PROJECT

Team members

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Project Description

- Client is 'Wonder Factory'
- An organization made up of parents and volunteers in Flagstaff getting an engineering and science center.
- Wonder Factory works is
  - Science
  - Technology
  - Engineerin
  - Mathematics
  - Art Subjects

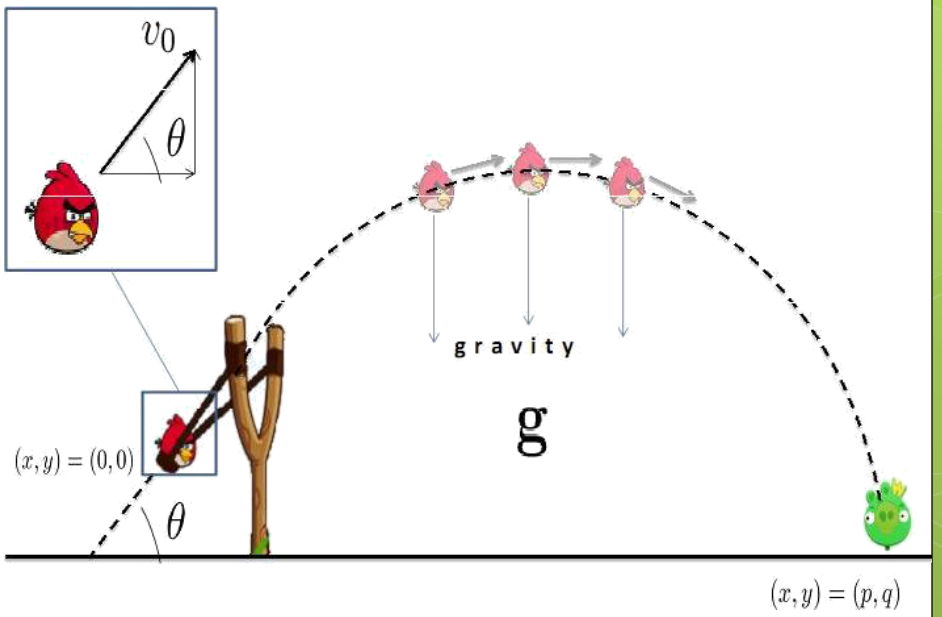
- Provide distinguished items for children's wonder

Project Description

- Our project is to develop a unique thing for wonder factory play space area
- A wow factor game for children's
- Game concept is ‘Slingshot’
- Children will able to indulge themselves
- Multiple Slingshots are available
- This game is a new concept

Project Description

- This game needs
  - Separate play area
  - Target Icons
  - Ball
  - Slingshot
  - Walls



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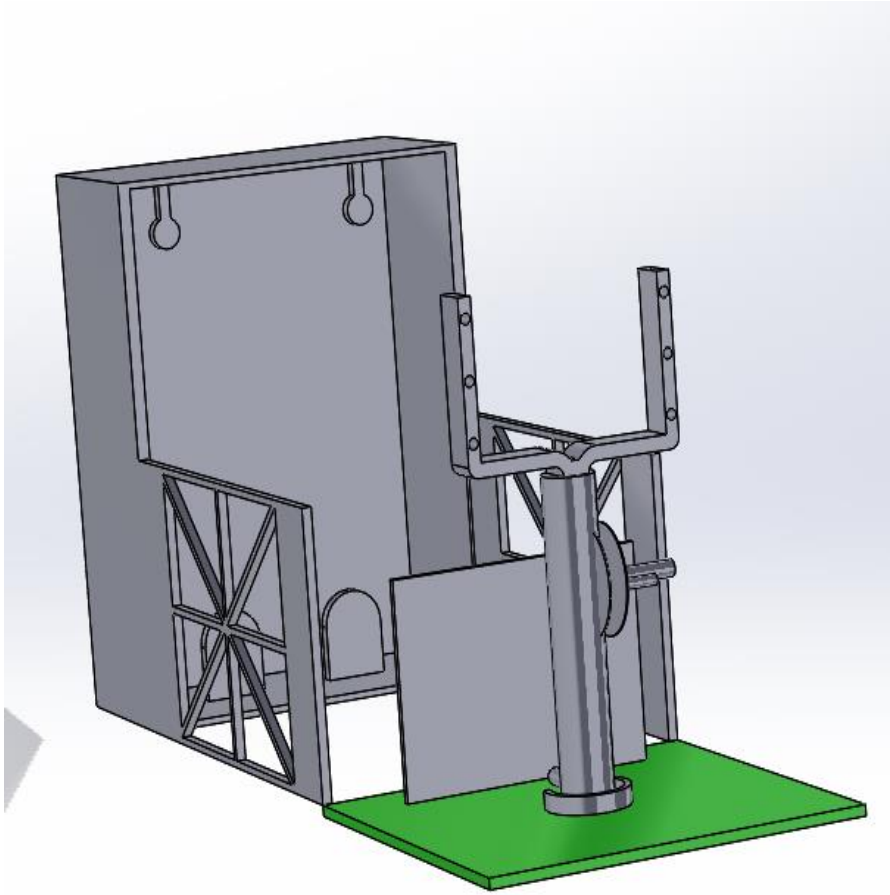
Final Design



- The slingshot will launch a ball to hit a target.
- This project will be about designing a game for children known as slingshot
- It will be designed in a way that it can work on itself without any human help
- The project will be designed to provide for:
  - Hands-on opportunity for children
  - Interactive experiences

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Customer requirements and weighting

Customer requirement	Description
Safety	Anyone can use it without being exposed to any danger
Easy to use	It can be used without so much hustle
STEM concept	It must incorporate Science, Technology, Engineering, and Mathematics
Entertainment	It must have fun to use
Portable	Easy to move from one location to another

Design Requirements

- Safety
  - Design is safe to use as there are no sharp edges
  - For safety purposes it cannot rotate beyond 45 degrees
  - At the front there will be a fence to keep the children away from going in front of the slingshot
  - The fence will also assist in preventing the ball from going so far once it is released
  - To enable the game to work on itself without human help we will create a pulley to drag back the slingshot through it again and again without human help
- Easy to use
  - There is no difficulty in using the project as it is simple and easy to play

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Design Requirements

- Entertainment
  - The design is entertaining by playing a throwing game to hit the target
- Portable
  - The design is portable and easy to carry
- STEM Concept
  - It is using the science technology of slingshot using projectile motion

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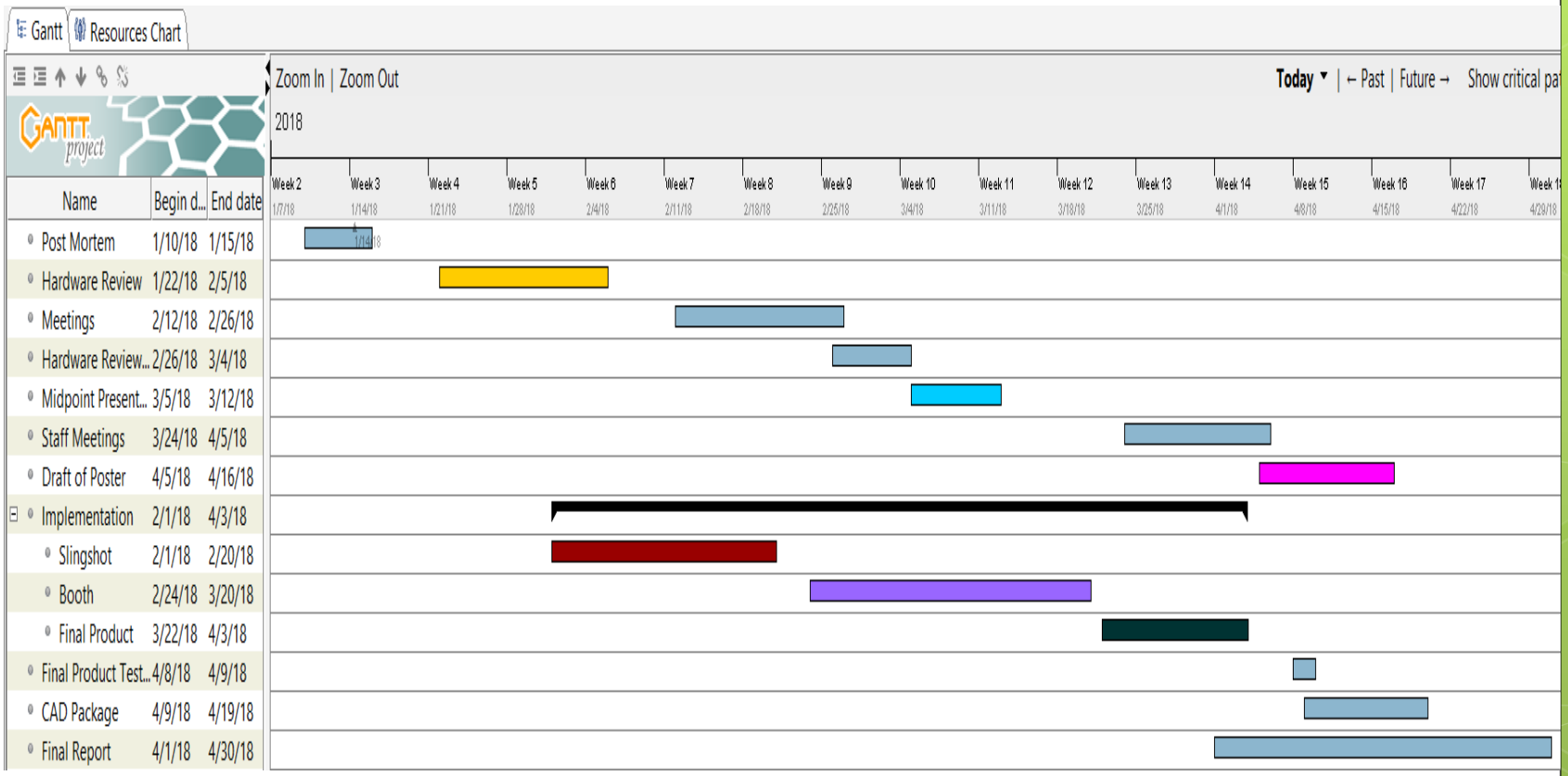
Schedule For Next Semester



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Budget

- Available budget is $2500
  - Our goal is < 1400$
  - Material is 45%
  - Manufacturing 40%
  - Prototyping 15%

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BOM SLINGSHOT								
Item #	Part Name	Quantity.	Decryption	Function	Material	Manufacturing Process	Dimension	Price
1.1	Slingshot Rubber	1	Rubber for stretching	Energy will store in the rubber when it will stretch for throw	Rubber	Chemical heating Process	6x9mm	$7.59
1.2	Slingshot Frame	1	Base to stand up and rubber band will attach to it	Provide the hold for the rubber band to stretch properly and make the throw	Iron	Molding Process	1x 0.2 m	$100-$200
1.3	Slingshot Prong	1	A Y shaped element to tie the rubber band	Through prong the rubber band will tie for hitting the target	Iron	Molding Process	0.25 x 0.2 m	$20-$40

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1.4	**Slingshot clips**	**6**	**To hold slingshot rubber band**	**will hold the rubber band with prong**	**Steel Iron**	**Molded Steel Process**	**16 in**	**$7.29**
1.5	Slingshot base	1	Hold the slingshot frame	Frame of slingshot will stand up over the base	Iron	Molding Process	1x1ft	$50-$100
2.1	SPI Sponge Ball	1	Ball to throw	Ball that will hit the target when will throw using slingshot	Plastic	Plastic Deformation	2x2 in	$14.95
3.1	Hook	3	Hook to hold items	Connects the rope with the pulley	Plastic	Plastic Deformation	3 x 3 in	$8.04

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4.1	Pouch	1	Carry items	Ball will hold by this pouch	Leather	Leather Polishing	5 x 3 in	$20-$40
5.1	Fence	1	Boundary walls	Boundary around the gameplay area to keep the ball within the area	Plastic	Plastic Deformation	3 x 3 m	$150-$200
6.1	Boxing Balls	3	Target Icons	Target that will hit by plastic ball for play	Rubber	Chemical heating Process	10 x 10 in	$50-$100
7.1	Pole	3	Standing Up	To tie the targeted balls on the pole	Wooden	Wood Cutting Process	2 x 0.4 m	$75-$100
8.1	Color	1	To dye items	Dye the walls to make them colorful	Powder	Chemical Composition	1 Kg	$35-$65

Total Cost = $799.58

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References

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QUESTIONS?????

THE END…

THANK YOU