

# WONDER FACTORY

## Team 2-A: Words

Shamlan Alshammari -----→ Client Contact

Bader Alshammari -----→ Project Manager

Mohammad Alsaïdi ---→ Web Developer / Document Manager

Mohammad Alotaibi -----→ Budget Holder

# PROJECT DESCRIPTION

- We are building Wonder Factory
- Wonder Factory is a place to display items for children's
- Items which follows the concept under STEM are:
  - **Science**
  - **Technology**
  - **Engineering**
  - **Mathematics**
  - **Addition: Art**

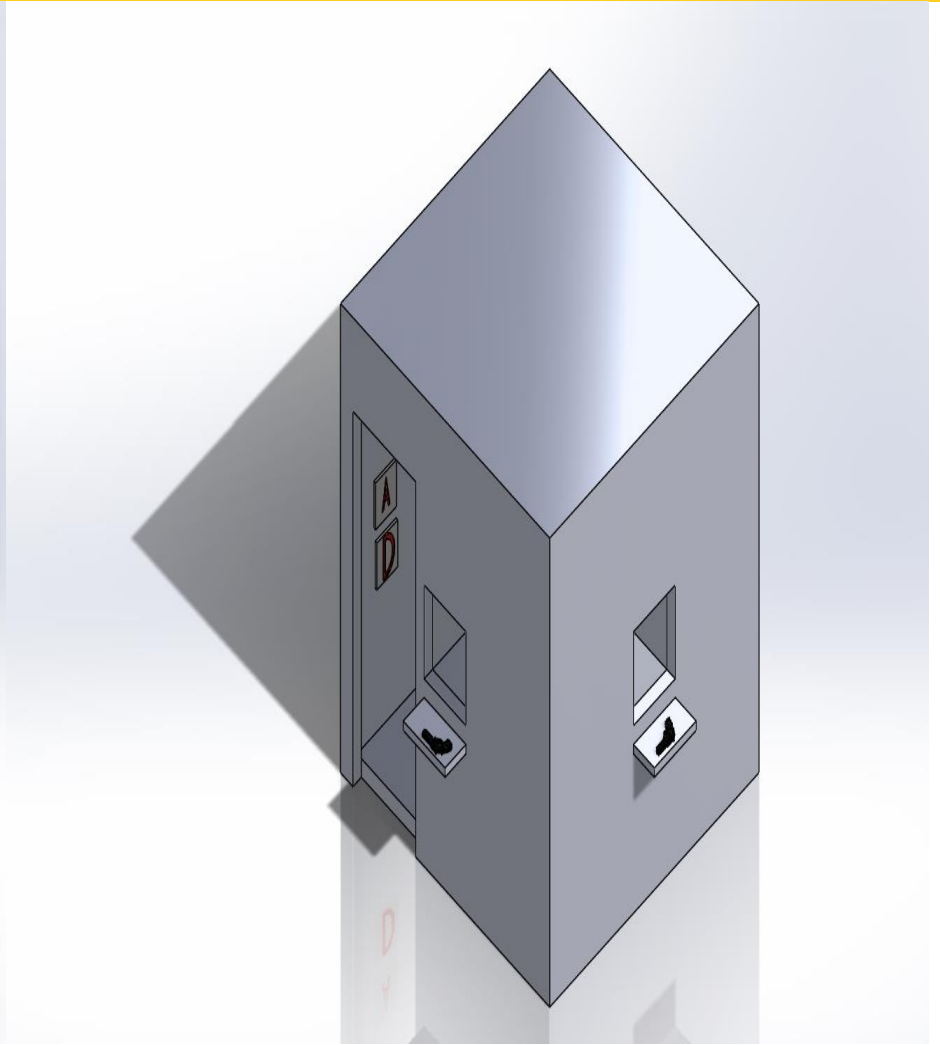
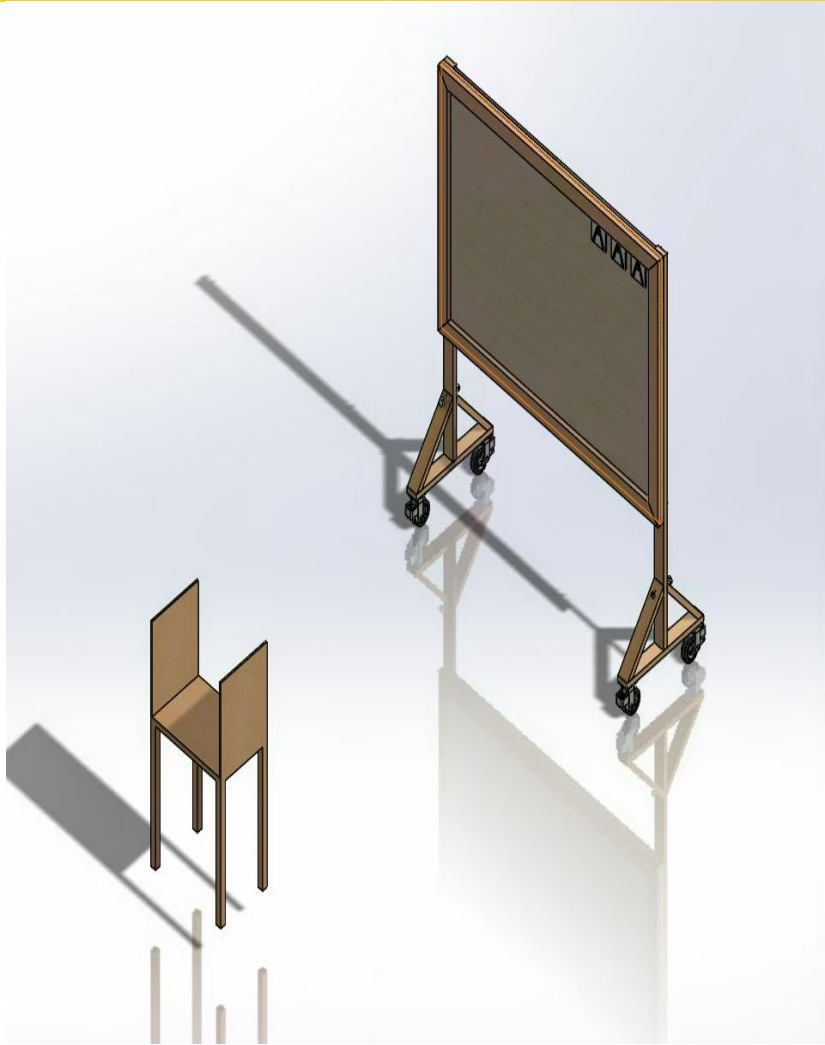
# CLIENT DETAILS

- Wonder Factory is actually a project led by
  - **Jackee Alston.**
  - **Steve Alston.**
- Wonder Factory is a Non-Profit organization that specifically work with kids from 5-12 years old.
- Project is sponsoring by these two clients
- It is important to know about sponsors because they are actually running the Wonder Factory so they will better judge our project and we have to make the project up to their mark.

# MANUFACTURING



# CAD DESIGN



# ANALYTICAL ANALYSES

- There were 4 different analyses for this project:
  - ❖ Tipping by drag
  - ❖ Projectile Motion
  - ❖ Material type and measurement on board
  - ❖ Tipping and Slipping



# BOM

Bill of Materials							
Project Name					Wonder Factory Project (Words)		
Team					Team 2-A: Bader Alshammari, Shamlan Alshammari, Mohammad Alotaibi, Mohammad Alsaiddi		
Vendors	Part #	Part Name	Quantity	Description	Material	Dimensions	Cost(\$)
The Home Depot	1	Hex Bolts	2	A bolt to keep the boards stick to each other	Steel	3/4-10"X8"	3.55 each
The Home Depot	2	Plywood Board	2	A board to hold the Alphabetical boxes in it	Wood	1/4 in x 4 ft x 8 ft	26.92 each
The Home Depot	3	Caster Wheels	4	To move the project from one place to another	Steel	2 in with 90 lb	3.98 a piece
The Home Depot	4	Redwood Lumber	8	To cut and build the project from it	wood	2 in x 4 in x 8 ft	9.77/ PIECE
The Home Depot	5	screws	45	To install and uninstall the wheels on the board and help board stick each other	Steel	5/16 in x 4 in	21.97 a pack
The Home Depot	6	Trim Screws	100	To help in building the boards and place items to it	steel	8 x 1-1/2 in	6.97 a pack
The Home Depot	7	plastic wood natural latex carpenter's wood filler	1	To help glue wood to each other	Fluid	N/A	4.18
Total Cost Estimate (\$):							188.14

# TESTING & CONTINGENCIES

- Project will be done within 2 weeks
- Testing afterword
- Time it takes to rebuild
- Budget to rebuild



# WORK DIVISION

- Work has divided between all the members
  - **Finalized Design – All team Members**
  - **BOM & CAD** – Bader Alshammari & Mohammad Alsaidi
  - **Budget and Gantt Chart** – Mohammad Alotaibi & Shamlan Alshammari
  - **Final Report – All team Members**
  - **Website** – Mohammad Alsaidi
  - **Client Contact** -- Shamlan Alshammari

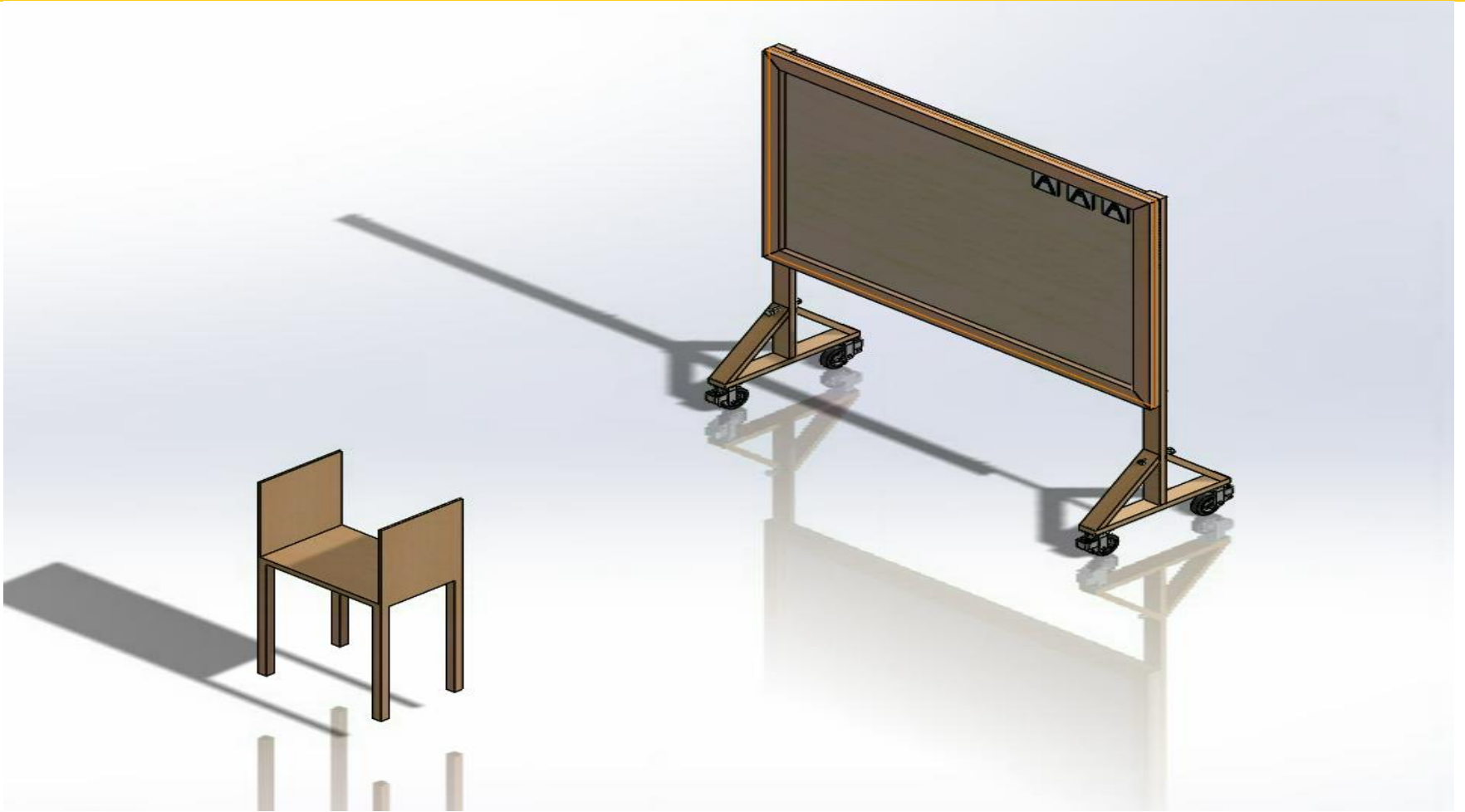
# GANTT CHART SUMMER 2018

Tasks	Due Date	Assigned Personal	Status
Final Proposal Rewrite	week 1	All	Red
Individual Post Mortem	week 1	Individually	
Website Check 1	week 2	All	
Hardware Review 1	week 3	All	
Peer Evaluation 1	week 3	Individually	
Individual Analysis 2	week 4	Individually	
Midpoint Report	week 5	All	Blue
Midpoint Presentation	week 6	All	
Hardware Review 2	week 6	All	
Peer Evaluation 2	week 6	Individually	
Draft of poster	week 7	All	
Operation Manual	week 7	All	
Final Product Testing Proof	week 8	All	
Website Check 2	week 8	All	
Final Poster	week 9	All	
Final Presentation	week 9	All	
Operation Manual	week 9	All	
Final Report	week 10	All	
Website Check 3	week 10	All	
Peer Evaluation 3	week 10	Individually	
CAD package	week 10	All	
		Unfinished	Blue
		Finished	Red

# SCHEDULE

- Key Tasks:
- Peer Evaluations
- Website Checks
- Reports
- CAD DRAWING & BOM
- Product Testing

# EVIDENCE



# SYSTEM WORK

- ❖ Adjust the angle of the catapult to hit the alphabet in the upper row.
- ❖ Then launch the ball toward the board that will attach to the Velcro material.
- ❖ Afterword remove the ball from the board and hit as many as you can toward the alphabet that contains the required word and must be done within a limited time.

# ORIGINAL VS ALREADY IN SOCIETY

- Original:
  - ❖ The way the system works
  - ❖ The manufacturing process
  - ❖ Playing rules
  - ❖ New project for Wonder Factory
  
- Already in society:
  - ❖ Material used



**THANK YOU FOR YOUR ATTENTION!**

**Any Questions?**