

NORTHERN
ARIZONA
UNIVERSITY



HOZHONI ART TEAM

MIDPOINT REVIEW PRESENTATION

Logan Bacher

Adam Barad

Brittnee Barrett

Maggie Collins

Jeannette Nelson

PROJECT REVIEW

- **Project Objectives:**
 - **Create an assistive device for individuals with disabilities to aid in the creation of art (Hozhoni Art Program)**
 - Easel-based drawing table
- **Primary Stakeholders:**
 - **Hozhoni Art Foundation**
 - Workers and Clients
- **Funding Provided by:**
 - **W.L. Gore and Associates (Flagstaff)**



UPDATES - LEGS

- Table Legs

Folding, height adjustable legs: **In Delivery**

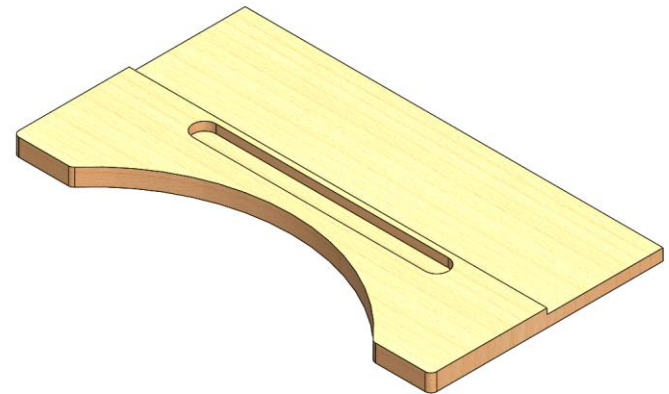
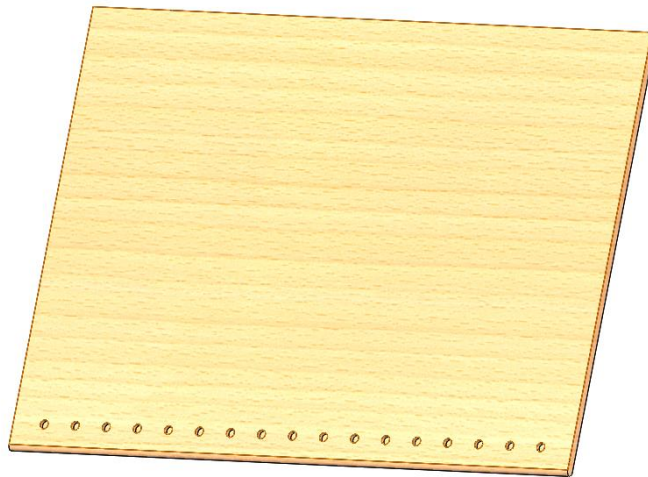
- Updates from Initial

- Initial legs were not adequate and had to be returned
 - Folding mechanism too stiff
 - Parts were rusted
 - Too many potential pinch points
 - No method for height adjustment



UPDATES – EASEL BASE ASSEMBLY

- Easel Base Progress:
 - Wood Cutting for Base: **Complete**
 - Wood Cutting for Easel Back: **Complete**
 - Paint-holder Divot: **Complete**
 - Stain and Polish of Wood: **Complete**
 - Canvas Support Bar: **In progress**



UPDATES – BRACKET/SAWTOOTH SYSTEM

- Sawtooth Progress:
 - Design: **Completed**
 - Metal Order: **Completed**
 - Metal Delivery: **In-Progress**
 - Machining Code: **Completed**
 - Bracket-support system: **In-Progress**
- Support Bar:
 - Design and Build: **Completed (modifications not-shown)**



MANUFACTURING - PLANS

- **Parts to be Manufactured/Built**
 - **Sawtooth System (Margaret/Logan)**
 - Sawtooth
 - Brackets
 - Additional Support on Easel Backing (if necessary)
 - **Easel Support Bar (Jeannette/Brittnee/Adam)**
 - Brackets/Support
 - **Additional Parts/Extras (Team)**
 - Saddle bag for supplies
 - Additional ergonomics
 - Elbow pads
 - Cushions



TESTING

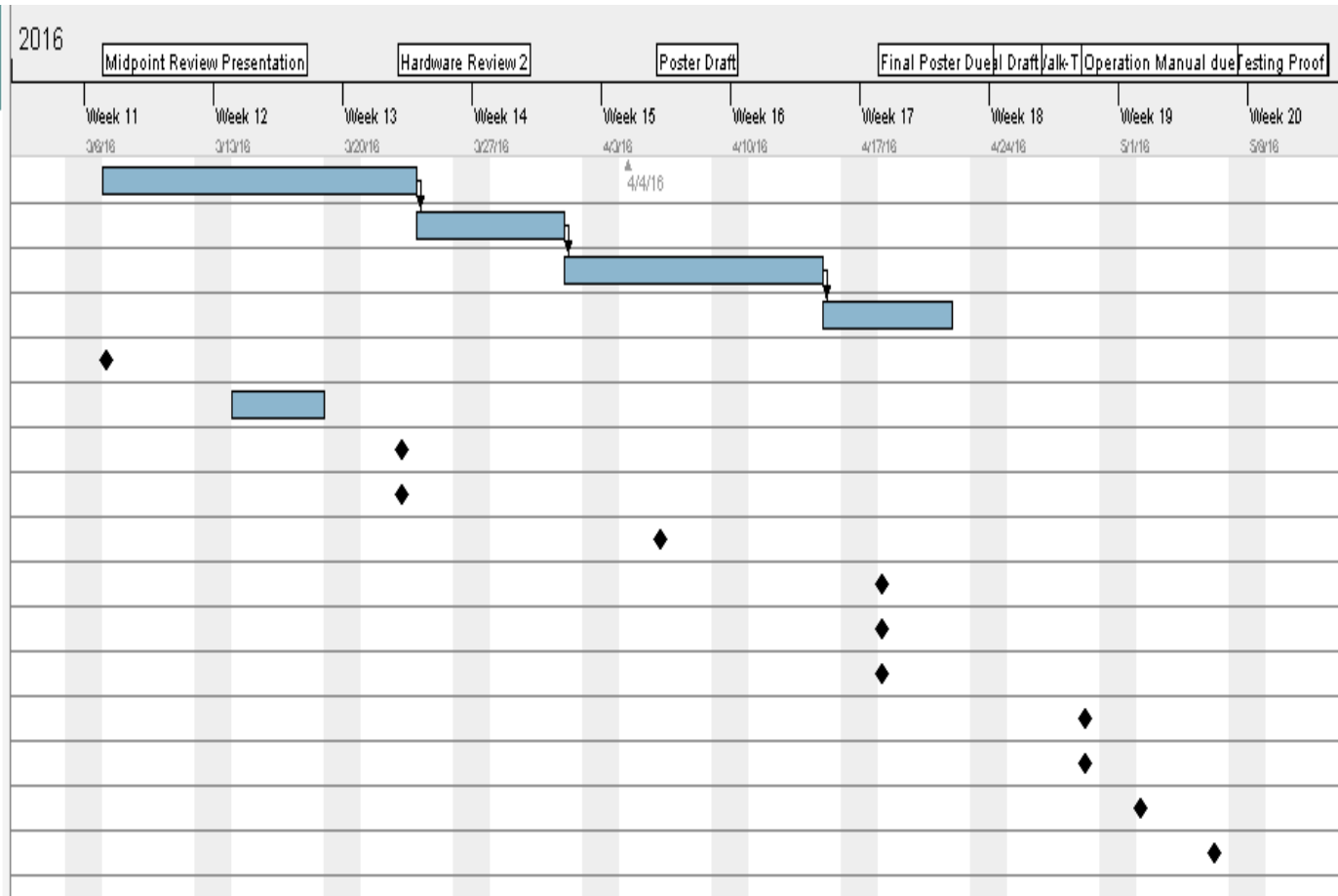
- Testing to be accomplished after Hardware Review 2
 - **If redesigns required:**
 - Remaining budget and time will be sufficient to schedule
- Testing procedures:
 - **Measurement:** Everything within tolerance and specification
 - Size
 - Weight
 - **Motion Tests:** Fluidity of setup/takedown/position change
 - **Repetition Tests:** Reliability and Durability
 - **Carry Tests:** Ability to be moved/stored
 - **Spill Tests:** Ability to withstand art supply contact
 - **Template Tests:** Ability to hold necessary canvases
 - **Push Tests:** Reliability and durability



SPRING SEMESTER SCHEDULE

Gantt project

Name	Begin date	End date
• Prototype Construction	3/7/16	3/23/16
• Prototype Testing	3/24/16	3/31/16
• Construct Final Design	4/1/16	4/14/16
• Final Design Testing	4/15/16	4/21/16
• Midpoint Review Presentation	3/7/16	3/7/16
• Spring Break	3/14/16	3/18/16
• Hardware Review 2	3/23/16	3/23/16
• Peer Evaluation 2	3/23/16	3/23/16
• Poster Draft	4/6/16	4/6/16
• UGRADS Presentation Walk-Through	4/18/16	4/18/16
• Operation Manual Draft	4/18/16	4/18/16
• Final Poster Due	4/18/16	4/18/16
• UGRADS Presentation	4/29/16	4/29/16
• Operation Manual due	4/29/16	4/29/16
• Final Product Testing Proof	5/2/16	5/2/16
• Final Report Due	5/6/16	5/6/16



BILL OF MATERIALS

Item No.	Description	Material	Quantity	Price (Total)	Purchased From
1	Folding Legs	Steel	1	\$124.00	Amazon
2	Table Top	Wood Board	1	\$44.79	1.5" thick, from Home Depot
3	Saw tooth Support	Aluminum	-	\$75.60	Metals Depot
4	Brackets/Bolts/Screws	-	-	\$15.90	Home Depot
5	Rod Support	Aluminum	1	-	Scrap from mechanic shop
6	Paint Brushes	-	4	\$26.68	Home Depot
7	Sandpaper	-	2	\$6.94	Home Depot
8	Stain	-	1	\$7.98	Home Depot

- Total Budget: **\$1500**
- Prototype Cost: **\$301.89**
- Remaining Budget: **\$1198.11**

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**THANK YOU
ANY QUESTIONS?**