

Muscles of Mastication Group

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Team: Jensen Weik - jweik@wisc.edu (Leader)

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Problem Statement

In veterinary anatomy education, there is a notable absence of interactive, hands-on models that illustrate the muscles of mastication for both carnivores and herbivores. This gap limits students' ability to engage in effective learning and understanding of the complex relationships between muscular and bony structures. Our goal is to develop two models that accurately replicate the anatomy of mastication muscles in two carnivores and herbivores allowing for the visualization of muscle function and clearly define individual muscles to enhance educational outcomes.

Brief Status Update

We have begun fabrication. Our goal is to be done by the start of next week in order to conduct testing before Thanksgiving.

Summary of Weekly Team Member Design Accomplishments

- Team:
 - Fabricating the skulls
- Jensen Weik:
 - Met with the team to begin fabricating the skulls by attaching hooks and springs
- Kaiya Merritt:
 - Met with the team and began to fabricate our skulls
 - Looked into Solidworks simulation testing on the skulls
- An Hua:
 - Helped fabricate the models
 - Updated materials and expenses sheet
- Noah Kalthoff:
 - Picked up fabrication materials from our client

- Began fabricating our final product by screwing in hooks and putting on spring
- Leah Nelson:
 - Looked over what the team had fabricated so far

Weekly/Ongoing Difficulties

None.

Upcoming Team and Individual Goals

- Team:
 - Finish skull fabrication
- Jensen Weik:
 - Finish skull fabrication
- Kaiya Merritt:
 - Finish skull fabrication entirely
 - Finish SolidWorks testing simulation and begin testing the model with the tensile test pull device
- An Hua:
 - Finish fabricating the models
 - Conduct testing
- Noah Kalthoff:
 - Find an effective way to put the elastic bands on
 - Finish fabricating
- Leah Nelson:
 - Finish fabrication with the team

Project Timeline

Project Goal	Deadline	Team Assigned	Progress	Completed
Meet with client	9/6	All	100%	9/13
Product Design Specification	9/19	All	100%	9/19 (ongoing with edits)
Preliminary Presentations	10/4	All	100%	10/4
Preliminary Report	10/9	All	100%	10/9
Show and Tell	11/1	All	100%	11/1
Poster Presentations	12/6	All		
Final Deliverables	12/11	All		

				0
Total:				13

Both				
Item	Location Purchased	Quantity	Cost Each	Total Cost
TPU	Makerspace	1	2.93	2.93
Elastic 50A	Makerspace	1	11.64	11.64
Hooks and Screws	Amazon	1	3.79	3.79
Springs	Amazon	1	10.99	10.99
Elastic Band	Amazon	1	12.99	12.99
Silicone	Amazon	1	6.69	6.69
				0
				0
				0
Total:				49.03