BME Design: Progress reports

VET Stand: Adjustable bite block assembly for radiation therapy for pet

Date: October 22, 2026 - October 29, 2026
Client: Dr. James Sohn
Advisor: Prof. Randy Bartels
Team Members:
Norah Greer (njgreer2@wisc.edu) - Co-Leader
Cole Hwang (nahwang@wisc.edu) - Co-Leader
Zhien Luo (zluo244@wisc.edu) - Communicator
Bridget Jensen - (bcjensen2@wisc.edu) - BSAC
Ethan Abitz - (eabitz@wisc.edu) - BWIG
Isabel Hillwalker - (hillwalker@wisc.edu) - BPAG

Problem statement

Veterinary radiation oncology requires dogs and cats to undergo sedation during every treatment session. A common tool used to secure an anesthesia delivery hose and hold the animal's head still is a bite block, however, common bite blocks are cumbersome and lack adjustability. This project aims to create an adaptable bite block with a wide range of widths and heights, allowing technicians to precisely and repeatedly position the block for each patient over multiple treatment sessions.

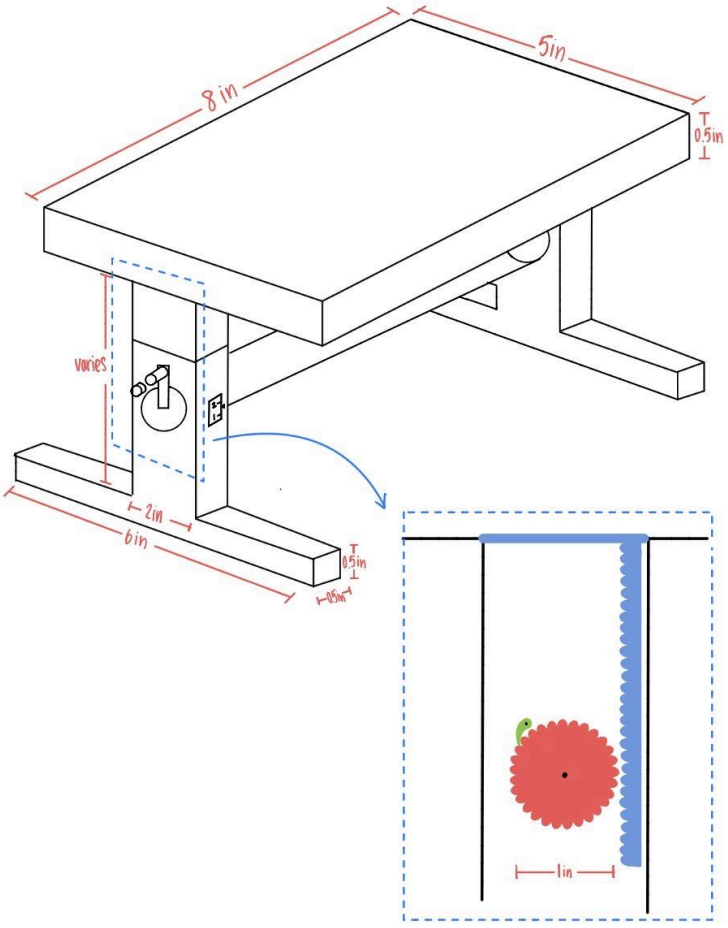
Brief status update

The team continued working on the bite block design matrix as well as the CAD model of the stand. An initial prototype was 3D printed.

Difficulties / advice requests

None at this time

Current design



Materials and expenses

Item	Description	Manufac-turer	Mft Pt#	Vendor	Vendor Cat#	Date	#	Cost Each	Total	Link
Category 1										
PLA	Used for 3D printing			UW-Makerspace		10/21			$4.51	
PLA	Used for 3D printing			UW-Makerspace		10/22			$4.50	
Category 2										
									$0.00	
									$0.00	
								TOTAL:	**$0.00**	

Goals

Major team goals for the next week

1. Finalize Bite Block design
2. Finalize Stand Prototype
3. Purchase or Print Gears

Next week's individual goals

- Norah Greer
  - Start testing on updated prototype
- Cole Hwang
  - Make gears in different filaments, find a way to connect the bite block and stand top.
- Zhien Luo
  - Continue working on bite block.
- Bridget Jensen
  - Print the bite block and work on connecting the bite block to the stand
- Ethan Abitz
  - Start testing
- Isabel Hillwalker
  - Print bite block, help test gear filaments

Timeline

Task	Aug	Sep				Oct				Nov					Dec	
	31	7	14	21	28	5	12	19	26	2	9	16	23	30	3	10
Project R&D																
Empathize																
Background…																
Prototyping																
Testings																
Deliverables																
Progress Reports																
Prelim presentation																
Final Poster																
Meetings																
Client																
Advisor																
Website																
Update																

Filled boxes = projected timeline
X = task was worked on or completed

Detailed accomplishments

Previous week's goals and accomplishments

- Norah Greer
    - Make edits to CAD model if needed based on the initial prototype. Add pawl and height markings. Get feedback during show and tell on the design.
- Cole Hwang
    - Work on 3D printing the bite block design, prepare for show and tell.
- Zhien Luo
    - Test the 3D-printed prototype.
- Bridget Jensen
    - Start 3D modeling the bite block design and do more research on materials
- Ethan Abitz
    - Prepare elevator pitch for show and tell, test prototype
- Isabel Hillwalker
    - Finish Bite block designs, help 3-D print

Activities

Name	Date	Activity	Time (h)	Week Total (h)	Sem. Total (h)
Cole Hwang	10/28/26 10/29/26	Team meeting CAD bite block	.5 2.5	3	21.5
Norah Greer	10/28/26 10/29/26	Updated CAD model to fix issues and add pawl Printed initial bite block and updated stand elements Team Meeting	1 0.5 1	2.5	27
Ethan Abitz	10/28/26	Team Meeting	0.5	0.5	20
Zhien Luo	10/27 10/29	Meeting CAD for bite block	0.5 2	2.5	22.5
Bridget Jensen	10/23 10/23	BSAC Meeting Team Meeting	1 1	2	22.5
Isabel Hillwalker	10/23 10/28 10/26	Team meeting Update lab archive Team meeting	1 0.5 0.5	2	21