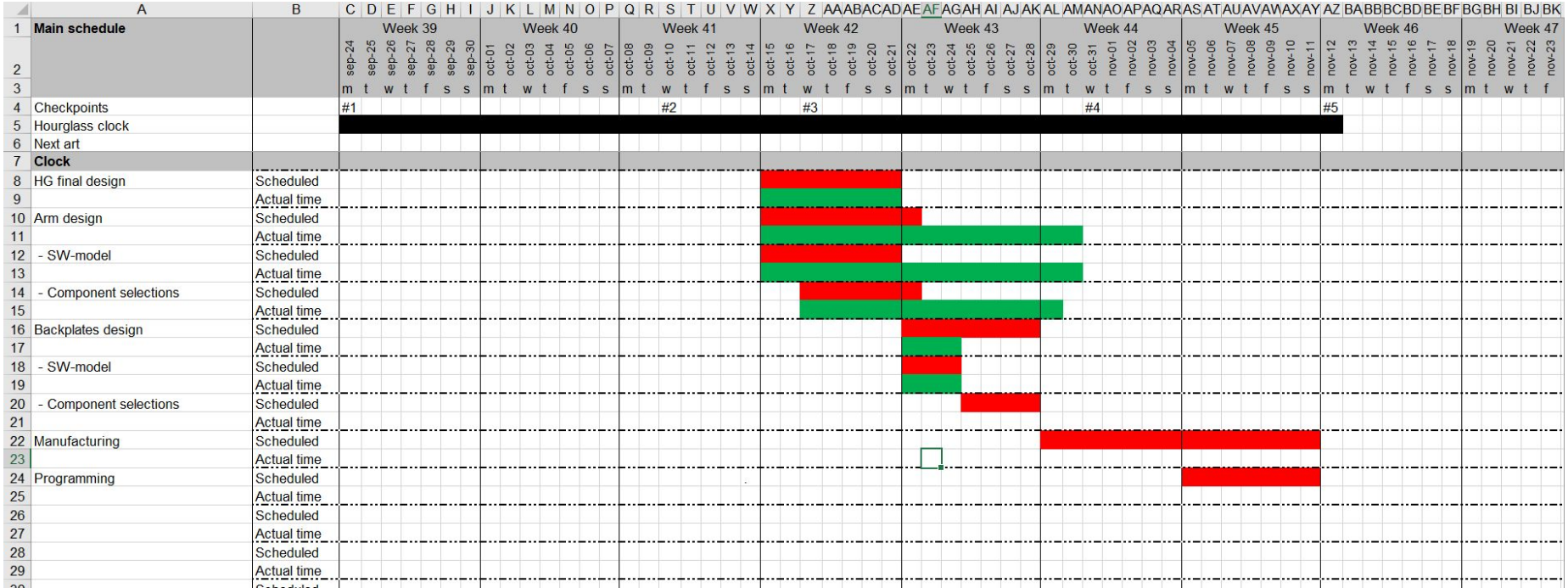
Checkpoint 4

Kinetic art

Planning



	Main schedule		Week 39							Week 40							Week 41							Week 42							Week 43							Week 44							Week 45							Week 46							Week 47				
			sep-24	sep-25	sep-26	sep-27	sep-28	sep-29	sep-30	oct-01	oct-02	oct-03	oct-04	oct-05	oct-06	oct-07	oct-08	oct-09	oct-10	oct-11	oct-12	oct-13	oct-14	oct-15	oct-16	oct-17	oct-18	oct-19	oct-20	oct-21	oct-22	oct-23	oct-24	oct-25	oct-26	oct-27	oct-28	oct-29	oct-30	oct-31	nov-01	nov-02	nov-03	nov-04	nov-05	nov-06	nov-07	nov-08	nov-09	nov-10	nov-11	nov-12	nov-13	nov-14	nov-15	nov-16	nov-17	nov-18	nov-19	nov-20	nov-21	nov-22	nov-23
			m	t	w	t	f	s	s	m	t	w	t	f	s	s	m	t	w	t	f	s	s	m	t	w	t	f	s	s	m	t	w	t	f	s	s	m	t	w	t	f	s	s	m	t	w	t	f	s	s	m	t	w	t	f	s	s	m	t	w	t	f
4	Checkpoints		#1																#2							#3													#4														#5												
5	Hourglass clock																																																																			
6	Next art																																																																		
7	**Clock**																																																																		
8	HG final design	Scheduled																																																																		
9		Actual time																																																																		
10	Arm design	Scheduled																																																																	
11		Actual time																																																																	
12	- SW-model	Scheduled																																																																	
13		Actual time																																																																	
14	- Component selections	Scheduled																																																																	
15		Actual time																																																																	
16	Backplates design	Scheduled																																																																	
17		Actual time																																																																	
18	- SW-model	Scheduled																																																																	
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20	- Component selections	Scheduled																																																																	
21		Actual time																																																																	
22	Manufacturing	Scheduled																																																																	
23		Actual time																																																																	
24	Programming	Scheduled																																																																	
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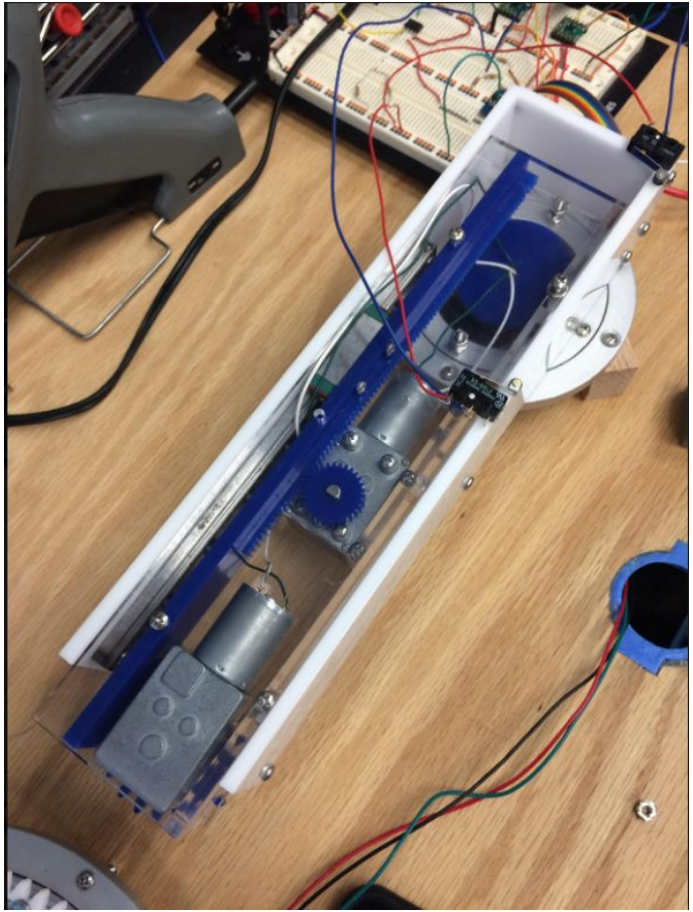
27		Actual time																																																																	
28		Scheduled																																																																	
29		Actual time																																																																	

Updates

- 30 hourglasses arrived +2 we had in stock, -1 Merrick Dropped = 31 Hourglasses
- 28 within reasonable range of 5 minutes
- Supply chain of LEDS has broken, along with wrong delivery
- Large bearings in transit
- Slip rings out of stock

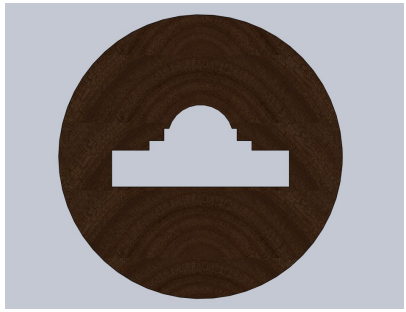
Arm-design

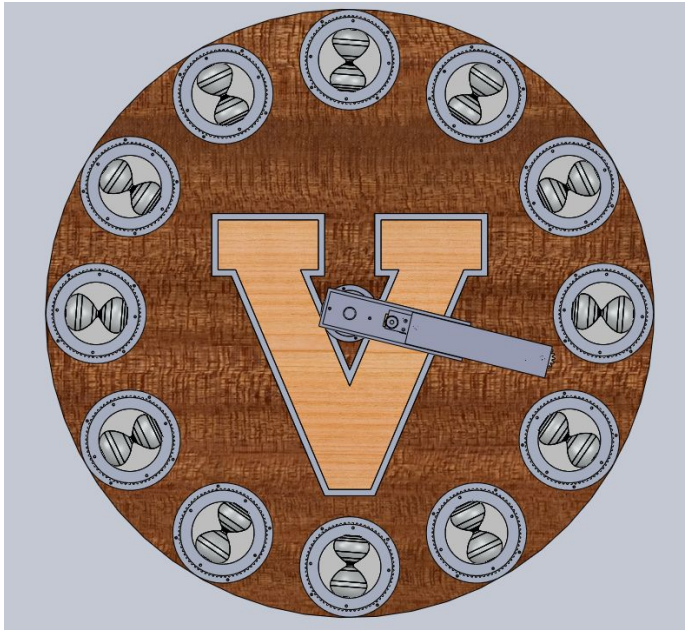
- Rack and Pinion system utilizing idler gear
- Linear Slip ring with brushes from DC motor
- Linear guide rail for smooth travel
- Still need mechanism for rotating main arm
- Spacing bricks temporary due to lack of hole saws
- Future gearing of motors to increase speed?
    - Arm Extension & HG Rotation



Backplate design

- Needs to accommodate all hourglass assemblies and center arm
- Plan to use a combination of stained wood, brushed aluminum, and copper to accent materials already in design
- Would consider a different design for the Science Museum, possibly incorporating their logo





Coding

- Dimmed LEDS to prevent overheating
- Created demo code loaded into EEPROM
- Motors temporarily controlled through open loop
- Must add limit switches, closed loop control to check mesh of gears

Moving Forward

- Source all final materials and components
- Finalize hour hand rotation system
- Test hourglass enclosure for fit across fleet of hourglasses
- Begin mass production
- Figure out how to mount to wall