The Cornerstone

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Letter From the Historian

Welcome back! I hope you are all making it through midterm season and also working on your electing requirement. Luckily, spring break is right around the corner, so I hope you all get a real break next week.

In other news, thank you to Braden for submitting a one minute read! As usual, please send me one minute reads or anything else you would like to be included in the Cornerstone using the form at tbpmi.ga/cstone-contrib!

Good luck!

"One Minute Reads" (written by Braden)

Radioactive decay is one of the only truly random processes in nature. Computers may simulate randomness by generating random numbers via chaotic algorithms, but radioactive decay is truly random. Ultimately it's a matter of the Heisenberg uncertainty principle establishing a intrinsic uncertainty to how long a nucleus can stay in an energy state. Each atom has a small probability of decaying per unit time, but multiplied by millions of millions of millions of atoms, a measurable amount of radioactivity can be seen. Each atom will either decay or not decay in the time interval, you can model this using a binomial distribution. I like to think about it like this. Whether I receive mail in a day is a low probability of success. This is binomially distributed. If you look at the number of people who receive mail in my apartment every day, this will be Poisson distributed and is analogous to looking at multiple atoms at the same time. If you look at the number of people who receive mail everyday in my apartment building, this might have a higher mean and thus be Gaussian distributed. This is analogous to measuring a much larger sample. Each of these models can simplify into the next both mathematically and experimentally. Statistics is fun!

Lastly, I will leave you with random numbers I generated from the number of counts detected from a Th-232 source, measured for in 1 second successive measurements: 64, 81, 58, 65, 54, 72, 74, 79, 71, 77, 64, 74, 63, 75, 67, 61, 67, 64, 70, 70, 65, 51, 72, 56 81, 67, 67, 76, 80

3rd General Agenda

- Officer Updates
- Electee Team Game

Upcoming Events

- Virtual Amazon Scavenger Hunt (Social)
    - 2/23, 7-8:30pm
- Virtual Game night with oSTEM (Social)
    - 2/25, 5-6:30pm
- Nature Area Preservation Stewardship Day (Service)
    - 3/6, 1-4pm
- New Initiatives 3 (Service)
    - 3/8, 6:30-7:30pm

Initiation Requirements

- All 5 General Meetings, Elections, and Initiation
  - 1/18 (done!), 2/1 (done!), 2/22 (done!), 3/22, 3/29, 4/5, and 4/16
- Service Hours
  - Undergrads: 16 service hours total
    - At least 1 hour of tutoring
    - At least 3 hours of K12
    - Finish 8 hours total by 3/15
  - Grads: 10 service hours total
    - Finish 5 by 3/15
- Social and Professional Development Events
  - Undergrads: 2 Social and 2 PD events
  - Grads: 3 Social Events
    - At least 1 must be a grad social
- 2 Electee Team meetings (more about electee teams at 2nd general!)
- 2 Meetings with your TBPals group
- Character Evaluation
  - Complete the electee questionnaire on the website
  - Upload your resume
  - Sign up for an interview (by 1/24)
- Paperwork
  - $100 Membership dues (let us know if this is an issue)
  - See electee packet for other forms

Game Corner

Enjoy some Sudoku!

Puzzle 1 (Medium, difficulty rating 0.45)

2		9	7		8	5		6
	5	7			2			
				5			2	
			1	6				4
4								5
6			2	7				
	1		3					
			4			6	8	
3		4	6		9	7		1

Puzzle 1 (Hard, difficulty rating 0.60)

		6		8			9	
					3	2		
		3			6		1	8
		4		2	7			9
1			3		4			2
7			8	9		4		
9	1		4			6		
		2	6					
	5			1		8		