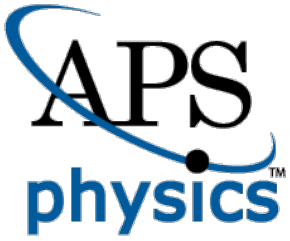
American Physical Society x Snapchat: Modern Outreach Methods

August 12, 2016

Isabel Binamira – APS Outreach Intern



Motivation for applying to the APS Outreach Internship

Previous Experience

- Marketing
- Consulting
- Photography

Internship Description

- Freedom to construct my own project
- Encouraged creativity

Current Interests

- Research a broad range of topics
- Art and graphic design
- Science communication

Deciding the project type

Current outreach

- Spectra and PhysicsQuest
- PhysicsCentral
  - Website and blog
  - Facebook page
  - Twitter

Demographics

- Middleschoolers
  - Comics and kits
- Adults
  - Website
  - At least a high school level education

Trends for accessing information

- 63% of Facebook and Twitter users get news from these platforms[1]
- More than 56% of adult Americans accessed the news via cellphone[2]
- 30% of smartphone owners used their mobile for educational purposes[3]

Expand to mobile platforms that are popular among students aged 16-20 years old

Platform benchmarking

	YouTube[4]	Instagram[5]	Snapchat[6]
Number of active users	> 1 billion monthly	> 500 million monthly	> 100 million daily
Average Age Range	18 - 29	25-34	18-24
Content Type	Video	Photo	Photo and Video
Content Type	Long or shortform	Shortform	Shortform with longform capacity
Average Length of Engagement	40 minutes (mobile)	21 minutes	25-30 minutes
Web/Mobile	Both	Both	Mobile
Scientific societies on platform	Yes	Yes	No
Previously attempted by APS	Yes	Yes	No

Services offered by Snapchat

Snapchat

- Photo-sharing and messaging app
- Entirely mobile
- Informal and direct interaction
- NASA and Taco Bell have successful accounts

Personal Story

A personal story is only viewable by contacts

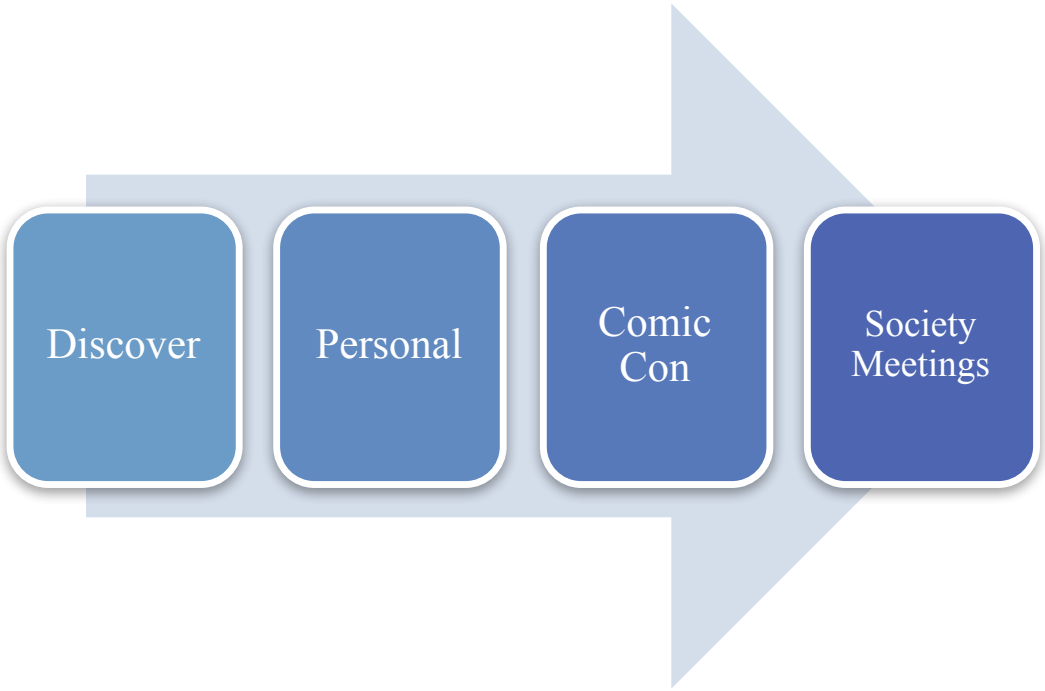
- Limited range
- No built-in editorial capability
- All shortform style content

Discover Story

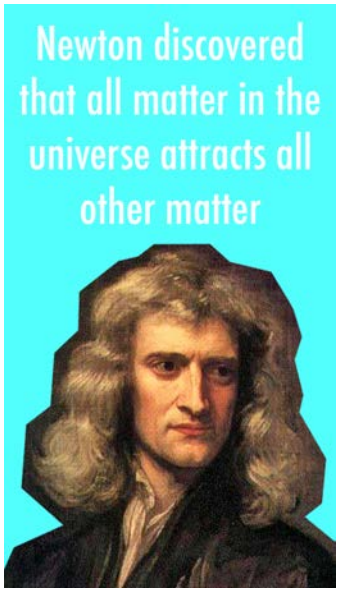
A public story viewable by all of the platform's users

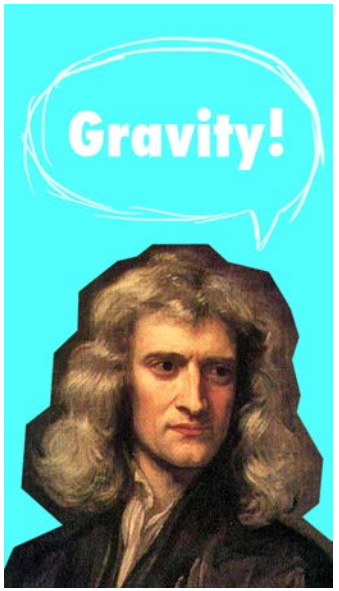
- Short and longform capabilities
- Wider audience
- Editorial capability, easy blog tie-ins

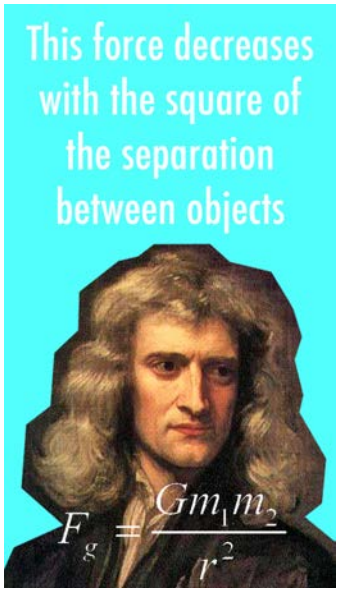
Communication with Snapchat HQ



Final project: Personal story updated twice a week, with possible partnership opportunities between Snapchat HQ and APS for events and conferences







1.

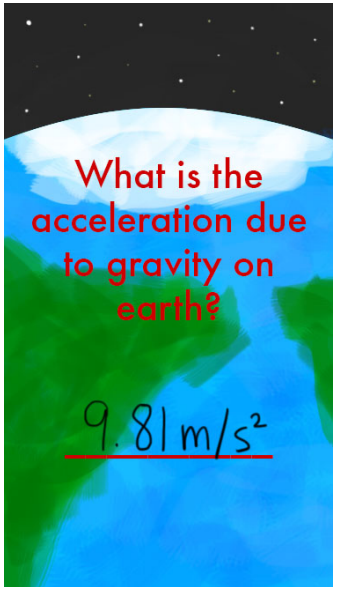
An object at rest will remain at rest unless acted upon by an unbalanced force.

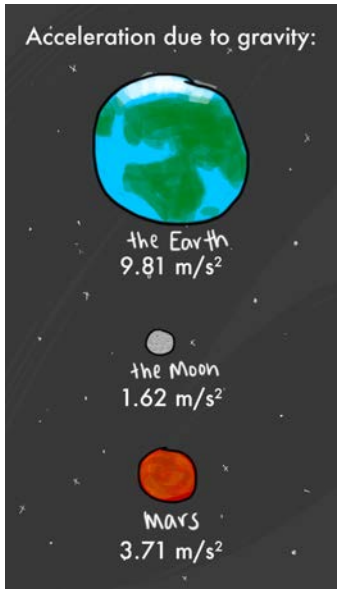
2.

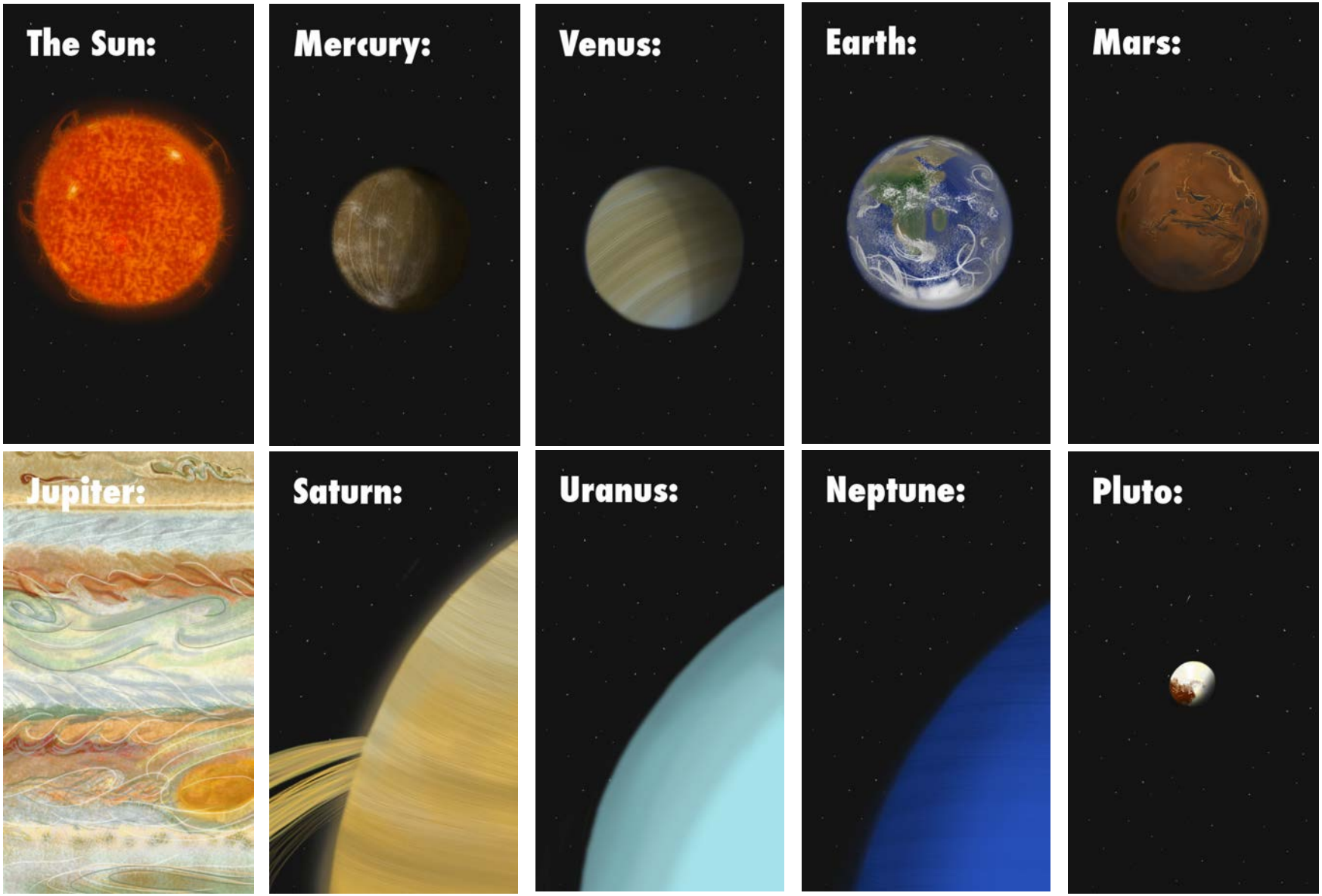
The relationship between an object's mass, acceleration, and applied force is:
$F = ma$

3.

For every action, there is an equal and opposite reaction






The Sun:
Mercury:
Venus:
Earth:
Mars:
Jupiter:
Saturn:
Uranus:
Neptune:
Pluto:


On the accompanying Physics Quest kits
SAN DIEGO
COMIC

Editorial timeline

AUGUST, 2016						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3 Spacetime intro	4	5	6
7	8 Optics intro	9	10	11	12 Fluid dynamics videos	13
14	15	16 Waves and sound intro	17	18	19 Alternate Energy: Solar	20
21	22 Stars intro	23	24	25 Solar system intro	26	27
28	29 Lasers intro	30	31 Banana radiation			

Content outline

Date	Story Theme	Panel	Text	Art Description
	Space-time/Relativity Intro	Opening	<none>	Drawing of flat spacetime, panning into an area with a massive body in it
		Whose theory is it?	The idea of spacetime has evolved over the centuries, it started with the idea of three dimensional space with time as a fourth dimension	Background of Euclidean coordinates with time running along somehow
			Einstein then introdiced the idea of relativity, and the concept of spacetime as one single interwoven continuum	Drawing of space axis and time axis
			The relativistic concept of spacetime describes the fabric of the universe	Grid of spacetime with stars background
		What does it describe?	The relationship between space and time, particularly useful when describing relativity problems	Video
		Basic concepts	Events: a unique location in both space and time	Place an event on a spacetime diagram
			Spacetime interval: the separation between events, which determines whether they could have a cause-effect relationship or not	Draw this in
			Time-like: enough time passes between then such that there could be a cause-effect relationship between events	Draw an example
			Light-like: space and time differences are exactly balanced, these define an interval of zero.	Example
			Space-like: Not enough time passes between the events for there to exist a causal relationship crossing the spatial difference at the speed of light or slower.	Example
		Space-time graph	<none>	Voiceover of video of an object moving in space and time, along the classic spacetime axis
		Resulting phenomena?	The concept of spacetime provides explanations for natural phenomena that we have observed and theorized	
			Some examples of these phenomena are black holes, gravitational lensing, and gravitational waves	Photo of black hole, gravitational lensing, and sound of gravitational waves
		End card	We'll go into those topics in the future... we hope you see you then!	Text and background
			Let us know what your favorite part of today's story was!	Text and background

Acknowledgments

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Society of Physics Students
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Matthew Payne

2016 Society of Physics Students Interns

Background Research Sources

[1]Shearer, Elisa. "5 Key Takeaways about Twitter, Facebook and News Use." *Pew Research Center*, 14 July 2015. Web.
[2]"How Americans Get Their News." *American Press Institute*, 17 Mar. 2014. Web.
[3]Smith, Aaron. "U.S. Smartphone Use in 2015." *Pew Research Center*, 01 Apr. 2015. Web.
[4]"Statistics." *YouTube*. Web.
[5]"Press Page." *Instagram*. Web.
[6]"Ads." *Snapchat*. Web.