Dave Socha - 8th Grade Science

Remote Learning Plan: Newton's Laws

Time Duration: 5-6 Days (Ideally, day 5 is after a weekend.)

Learning Target(s):

- (8.MS-PS2-2.) **I will be able to:** Provide evidence that the change in an object's speed depends on the sum of the forces on the object (the net force) and the mass of the object… **When I am able to:** define force, mass and acceleration, and provide *that* evidence.
- (8.MS-PS2-1.) **I will be able to:** Develop a model that demonstrates Newton's third law involving the motion of two colliding objects… **When I am able to:** develop *that* model.

These Learning Targets model the style my district uses across the board.
I have re-worded the standards to fit the "I will be able to:" sentence frame.

Pre Assessment: Google Form Quiz

Summative Assessment: (2) Flip Grid Posts

Engagement activities:

-Music to introduce Google Meets… different selection each day.

Students will rate the song on a scale of 1/10 in the chat function of the Google Meet.

-Day 3: Secondary Google Meet.

Students will briefly attend this small group Meet once they have completed the Formative Assessment Google Form. This will allow for an extra opportunity to meet with students in an informal space.

-Applications: Google Suite: (Meet, Forms, Classroom, Docs)
ScienceWorld Magazine article scans
Flip Grid
Nearpod

(Nearpod is an application that allows me to synchronously control the lesson across all of my students' devices. It begins by me sharing a code that students enter in order to sync their device to mine and each other. I am able to evaluate student responses live, individually or as a class, and generate reports.)

Daily Agendas a.k.a. "Stepping Stones" :

-Prior to Day 1: Pre Assessment completed.

-Day 1:

- All students will join the large-group **Google Meet**.
- Review of Pre Assessment.
  - I will utilize the graphs generated by the **Google Form**, and share my screen through Google Meet.
- Learning Target Introduced.
  - Shared via a **Google Doc** in **Google Classroom.**
- Preview of Standards-Based **FlipGrid** Summative Assessments.
  - One for each standard.
- Assign HW: - Second Google Form Pre Assessment.
  -The 15 questions on this Form are the 5 summary questions from each of the three Nearpods.
  -Students will learn their score, and aim to improve it after completing the Nearpod lessons.
- 5 Minute Break.
- 2 Column Notes to break down the two Learning Targets.
  - Completed on the same document as the Learning Target .

-Day 2:

- All students will join the large-group **Google Meet.**
- Review of 8.MS-PS 2-2.
- Newton's 1st Law **Nearpod.**
- 5 Minute Break.
- Newton's 2nd Law **Nearpod.**

-Day 3:

- All students will join the large-group **Google Meet.**
- Class review of 8.MS-PS 2-1.
- Newton's 3rd Law **Nearpod.**
- Retake Second **Google Form.**
  -Students will learn their score, and whether or not they were able to improve it after completing the Nearpod lessons.
- Upon completing second google form, students will join a second **Google Meet,** thus allowing me to see them face-to-face and say hello as they sprinkle in. This will be an opportunity for them to quickly ask questions in more of a small group setting (particularly if their Google Form score did not improve), and again, just to say hello.

-Day 4:

-All students will join the large-group **Google Meet.**

-Review of Summative Assessment of -8.MS-PS 2-2 & 8.MS-PS 2-1 using **Flipgrid.**

-Introduce 2 **ScienceWorld Articles.**

-Students will break into 12 groups of 5. (I'm expecting one cohort to be 60 students.)

Cohort A and B. Each Cohort will have 4 classes.

Each class will have 3 colors. (green, yellow, red)

Each class will have 5 shapes. (triangle, circle, square, star, heart)

Johnny might be "A1GreenTriangle." Jill might be "A3YellowCirle."

-All groups read the same three ScienceWorld article scans.

-Each individual will get a copy of the Google Doc with all the focus questions.

-Focus Questions: How does Law 1 apply to these 3 articles?
How does Law 2 apply to these 3 articles?
How does Law 3 apply to these 3 articles?

-Each COLOR group will be assigned one focus question. (15+ minutes)

-After reading the articles and together completing the focus question, one member from each color group will re-assemble with a member from each of the other groups, ACCORDING TO SHAPE, to make 5 new groups.

-Before breaking, students will be encouraged to practice sharing their answer to the group. This will understandably become redundant by the 4th and 5th share, but it is necessary so that everyone is prepared for the next step.

-Students will share out focus questions and answers. (5+ Minutes)

-All students will reconvene to the original Google Meet at a predetermined time to go over successes and failures.

*** I will create a Google Sheet with all of the student's names on it.

That Sheet will identify their cohort, class, color, and shape.

I suspect that there will be time during remote teaching where I meet virtually with the entire grade (120 students), other times where I meet with an entire cohort (60 students), times where I meet with individual classes (15 students), and times when those classes will work in small groups like in the scenario above. Each of those group combinations will need to be able to create and join their own Google Meets. Therefore, by sharing this sheet, students will know how to name the Meets that they create and who to expect in those Meets.

*** I will remain in the original Google Meet for students to rejoin throughout the class should problems arise. I also plan on using a secondary laptop so that I can more easily attend more than one Google Meet at a time. (My school issued chromebook and my personal MacBook.)

-Day 5

-All students will join the large-group **Google Meet.**

-As a large group (60+ students), students will share out focus questions and answers.

Note 1: At the end of the previous class, students only shared successes and failures, coverage of the actual application and analysis of the articles has not happened yet in the large group. While not ideal with 60+ students, small groups is not time efficient.

Note 2: As referenced at the beginning under "duration," I will try and position Day 4 on a Friday. I learned that students are willing to participate in 8:00pm meetings on Fridays for socialization. I will plan to hold an *optional* Google Meet on Friday at 8:00 where I will take 5 minutes to review Day 4's analysis. After that we will play a **Kahoot** and/or **Quizziz** on a topic that the students choose.

-FlipGrid Summative Assessment

-Students that are willing will be encouraged to share their Summative Assessments, where they were tasked with providing evidence and developing a model of the two learning target standards, respectively.

Flip Grid Rubric:

	Excellent 4	Proficient / Average 3	Needs Improvement 2	Nonexistent 1
Content Goal: **Demonstration of 8MS-PS 2-2**	Evidence provided was above and beyond basic comprehension.	Comprehension of 2-2 was expressed through defined terms and provided evidence.	2-2 *referenced.* However, an understanding of the standard was not expressed.	2-2 was never referenced.
Content Goal: **Demonstration of 8MS-PS 2-1**	The model that was developed was above and beyond basic comprehension.	Comprehension of 2-1 was expressed using a model that made sense.	2-2 *referenced.* However, an understanding of the standard was not expressed.	2-1 was never referenced.
Technology Goal: **Appropriate use of FlipGrid**	Thorough understanding of FlipGrid	Basic understanding of Flipgrid. (Late but Thorough.)	(Late & Basic.)	Your FlipGrid did not work.
Skill Goal: **Newton's Laws were presented with enthusiasm and sincerity.**	Your audience was captivated and learned as a result of your presentation.	Eye contact and/or enthusiasm lacking… You understood your content but were under prepared.	YourFlipGrid lacked enthusiasm and sincerity	----------