STEM Takes Flight Professional Development Workshop

Post workshop practices

Topic: Case Study Scenario (SPB) and Power Point Presentation

Presenter(s): Londo Andrews

Date: November 2018

Lesson Timeframe: *(Does this activity take place during one class period or over a series of class periods?)*

2 Days (1 class to go over scenario, next class to create presentation and present)

One class period will be done to do Case Study Scenario from STEM Takes Flight (Balloon Program Office –Wanaka Campaign). The next class they will create a Power Point to present about their findings and decision. Takes place during one class period. Each class period is 1 hour and 15 minutes.

STEM Takes Flight Workshop Resources Used: *(List any NASA websites, missions, or other resources that you gained from the workshop that you may have used in your lesson. Describe any strategies from the Paper Sat activity that you used in your lesson– communication protocols, team management strategies, or other strategies.)*

Materials:

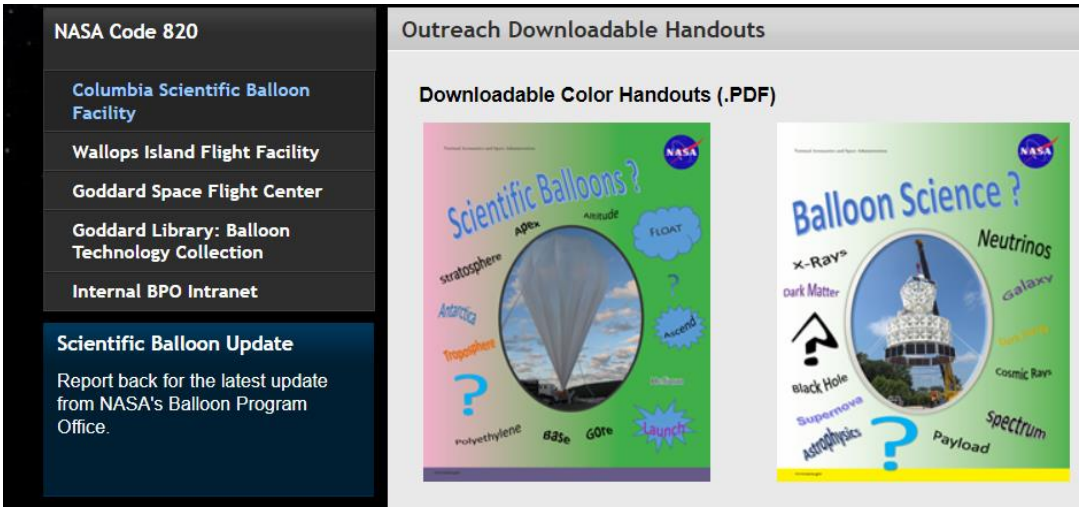
Websites:

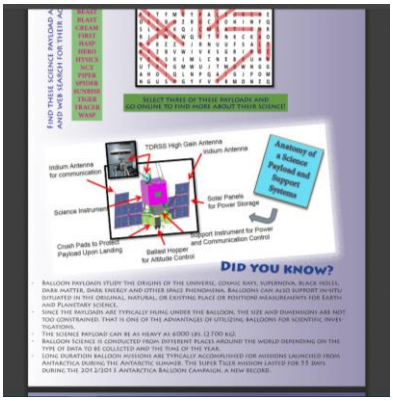
https://sites.wff.nasa.gov/code820/spb.html

https://sites.wff.nasa.gov/code820/spb_background_development.html

Scientific Balloons .pdf Handout from:

https://sites.wff.nasa.gov/code820/outreach_downloads.html





Document on Super Pressure Balloons at:

https://sites.wff.nasa.gov/code820/docs/outreach/The%20Super%20Pressure%20Balloon.pdf

Quick into to HASP

The High Altitude Student Platform

http://laspace.lsu.edu/hasp/

Each handout will be quickly explained to give them an idea about SPB science and technology in general.

PowerPoint presentation will be shared and briefly explained to give the students an understanding of why the activity.

Please explain why these workshop materials were used in this lesson:

These materials were used to give students a basic background on SPBs, before they are required to make decisions about a mock scenario dealing with SPBs.

Teacher level: (*If this activity were to be presented by another faculty member, what knowledge would the faculty member need to know?)*

The teacher would have to know how about SPBs, group/team dynamics and MS Power Point.

Student level: *(What prior knowledge do students need to have in order to be successful with this activity?)*

No prior knowledge, accept MS Power Point usage.

Learning styles/intelligences supported:

Any student in course, Ability to work in teams/groups. Working in teams and better understanding how to analyze and make decision based upon hypothesis, projected outcomes or segmented facts.

Overview of the lesson:

Lesson Objectives:

Learn about SPBs, decision making and put together clear, concise and competent findings in a power point presentation.

Lesson Content *(Warm-up activities/review; Instructions; Follow-up activities*):

This is to be a simple project for first semester students in an IT course. Why I chose to do this plan. I wanted to do something that would expose my class to NASA work and how common skills they already have or could learn are necessary at NASA. Doing this will hopefully let them see that it is very possible that they could get a job and do well at NASA. I also wanted them to see that Math, Science etc… are very important and have their place, but NASA needs expertise in many fields, like tech, analysis.

Most of my students need more experience in analysis and decision-making. This scenario will allow them that skill practice. Also as a requirement already in the course, I break them into groups and they must develop a presentation in Power Point. Since I already break them into groups and they must develop a Power Point presentation, why not have them do the scenario then bring together what they learned from the NASA scenario with what they are supposed to be learning in Power Point and apply it in a presentation.

My procedure in doing this project is to:

- First - We will talk about NASA it's mission, the various needs of NASA. Using resources from NASA.
- Let students know that careers at NASA are reachable.
- Discuss project and goal of project. Go over Scenario with class, who have already been broken into groups. Each group will select the various roles. Using hand-outs, NASA resources above and websites etc…
- Proceed with Scenario and Case Study.
- Before end of class give them 20 minutes to come up with a final decision and talk about it amongst their group members.
  Next class:
- Discuss their findings, thoughts decision and prepare a power point on it.
- Present Group Power Point.
- Discuss findings and NASA's official decision on the issue.
- Wrap up jobs at NASA etc…

Assessment (*How will you know the lesson was successful?*):

I will grade their group Power Point presentation per usual and give the final decision made by NASA on the Wanaka Campaign.

Approximately how many students do you anticipate this activity impacted?

Approx. 20 per class and 3 classes.

Additional comments: