SPARK 101: Fruit Fly Surveillance
10-15 minute video to share your passion and expertise with millions of students!

Video Segment I
Problem/Motivation
(5-8 min.)
• Introduction to ISS research
• Jane introduces self and Sanjoy at Ames
• Sanjoy introduces lab and how engineering must meet the scientific constraints
• Sanjoy then goes through the constraints
• Problem as a question solvable in 45-90 minutes (How would you design the experiment?)
• 6 constraints described
• Students challenged to solve the problem

Video Segment II
Solving the Problem
(3-4 min.)
• Jane explains we’ll go over the solution
• Sanjoy does chalk talk going over the solution
• Jane asks them how their solution compares

Video Segment III
Future Impact/ Meaning
(2-3 min.)
• Jane interviews Sanjoy about his educational background
• She asks him about advice for students wanting to pursue engineering and for those who want to work at NASA
• Jane then encourages students to participate in other engineering design challenges with NASA

Introduction
- Provided by Spark 101
- Start of every video
- 10-20 seconds

Making Connections
Prior to start of video:
• Connecting to prior student knowledge
• Teachers will have the Fruit fly lab Fact sheet and will be encouraged to go through it with students to give them background

Problem Solving/ Processing
• Video paused
• Strategies focused on solving the presented problem/challenge
• Students engage in problem solving using engineering design process

Evaluating/ Processing
• Video paused
• Strategies focused on evaluating the solutions and comparing them to the presenter(s) solutions.
• Students engage in critical thinking

Reflecting/ Decision Making
• Video end
• Strategies focused on what students will do differently (college majors, course selection, career development and planning)
• Discuss other engineering design challenges students can get involved with.

Inspired Students and Educators

Sparking student interest in Science, Technology, Engineering, Mathematics (STEM)