



NINTH GRADE CURRICULUM SEMESTER TWO

Materials Needed Throughout the Semester

- Interactive Notebooks (one per student)

Unit 6 – Aviation Safety and Oversight

- 6A, Day 3-4 – Civil Aviation Time Travelers Activity (materials per team)
 - Rolled paper or poster board
 - Markers
 - Scissors
 - Glue sticks
 - Old magazines/newspapers (old aviation magazines would be great; a local flight school may have some to donate)

Unit 7 – Exploring Careers in Aviation and Aerospace

- 7B, Day 1-3 – Engineering Research Activity (materials per team)
 - Access to PowerPoint (or other presentation software) to create a slide presentation
- 7C, Day 1-2 – ATC Simulation Activity (materials per class)
 - Large flat area (parking lot, football field, gymnasium, wide hallway)
 - Sidewalk chalk, masking tape or spray paint
 - Measuring tape



Unit 8 – Aviation Innovation and Problem-Solving

- 8A, Day 1-3 – Word Wall Activity (materials per student)
 - 3-4 sticky notes
- 8B, Day 2-4 – Friday Night Drones Activity (materials per student)
 - Access to “Google Earth”
 - Graph paper
 - Colored pencils
- 8C, Day 1-3 – Measuring the Speed of Sound Activity (materials per class)
 - Two blocks of wood (we used two (2) 20-inch pieces of 2x4 boards)
 - Long tape measure
 - Multiple stopwatches (can use the stopwatch function on smartphones)
 - Clipboards
 - Calculators
 - Thermometer (to take outside temperature)
 - An open space several hundred feet from a building from which to bounce the sound
- 8C, Day 7-9 – Build Your Own Battery Activity (materials per team)
 - 7-10 test leads with alligator clips
[Elegoo Test Leads Set](#)
 - 4-6 lemons
 - Small electric motor with propeller
[Dcolor Coreless Motor with Propeller](#)
 - One AA battery
 - Small LED light
[Chanzon LED Diode Light Kit](#)
 - 4-6 galvanized nails/screws
 - 4-6 pieces of bare copper wire (about 2 inches long)
 - Ruler
 - 2-3 rubber bands
 - 4-6 drinking straws or small dowels
 - Safety glasses
 - Multimeter (shared among the class)
 - Wire cutters/strippers (shared among the class)
 - Digital scale (shared among the class)



- 8D, Day 1-3 – Welcome to Columbia Hills, Mars! Activity
 - Graph paper (per student)
 - Poster board or rolled paper (per team)
 - Markers (per team)

Unit 9 – “Peep Odyssey” Innovation Challenge

- 9A, Day 1-14 – Innovation Challenge (materials per team)
 - Three-ring binder and tabs
 - Rolled paper or poster board
 - Several markers
 - Several pieces of graph paper
 - 2-3 Peeps
 - One vacuum cylinder and pump (per class)
 - [ABLAZE 3 Quart Vacuum Chamber](#)
 - [ZENY Vacuum Pump](#)
 - Safety glasses
 - Suggested materials that a teacher may provide to assist with student brainstorming
 - Pieces of plastic or plexiglass
 - Pieces of metal
 - Caulk
 - Duct tape
 - Rubber plugs



Unit 10 – Thinking About a Career in Aviation

- 10A, Day 3-4 – Career Posters Activity (materials per team)
 - Rolled paper or poster board
 - Markers, crayons
 - Colored pencils
- 10A, Day 5 – Sample Job Application Activity (materials per student)
 - One highlighter
- 10C, Day 1-5 – Career Portfolio Activity (materials per student)
 - Three-ring binder
 - Tabs (as needed per student based on table of contents)
 - Plastic or vinyl sheet protectors

PROPRIETARY