

The History of Flight Unit Sample

Week 2: Basic Aerodynamics and Principles of Flight

Words of the Week

Aerodynamic
Lift (as it applies to flight)
Gravity
Rudder
Elevator
Stabilizer
Cockpit
Propeller
Flight engineer

Day One

- 1) Read some illustrated accounts of “how planes fly” – (Finding Out About Everyday Things – pgs 42-51)
- 2) Do a simple experiment to demonstrate the principle of “lift” – Hold a piece of paper near your mouth and blow hard over the top of the paper. Note how the paper rises because the air on top is going faster, which creates an area of low pressure above the paper, allowing the pressure of the air under it to lift it.
- 3) Demonstrate air pressure by placing an empty balloon under a book at the edge of a table. Blow air into the balloon to raise the book. It will be difficult at first and then become easier as the air pressure rises to support the book.
- 4) Look up “lift” and “gravity” and write out their definitions as they apply to flight.

Day Two

- 1) Have child read “How Do Airplanes Fly?” by Melvin and Gilda Berger.
- 2) Do a simple experiment to demonstrate jet propulsion – Blow up a balloon and then let it go. The balloon will fly away from the air being expelled, similarly to air being propelled through a jet engine.
- 3) Create a collage or mobile of various things that fly. Cut pictures out of magazines, print off of the internet or draw pictures. Don’t forget things that are not machines, such as birds, balloons, kites and other things.
- 4) Look up the Words of the Week in a dictionary.
- 5) Find a picture of an airplane (or use the one in the appendix) and label the following parts:
 - a. Wing
 - b. Cockpit
 - c. Rudder
 - d. Flaps
 - e. Propeller or engine
 - f. Fuselage
 - g. Stabilizer