

Amazing Aircraft

Hiller Aviation Museum
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1. Types of Aircraft
 - a. Airplanes (Wing + Engine)
 - b. Gliders (Wing Only)
 - c. Helicopters (Rotor)
 - d. Lighter Than Air (Buoyant Gas)
 - e. Powered Lift (Engine Lift)

2. Airplanes/Gliders
 - a. Parts of an Airplane/Glider (Identify With Coloring Sheet)
 - i. Fuselage: Main Body of Aircraft
 - ii. Wings: Generate Force of Lift
 - iii. Stabilizers: Keep Aircraft Straight
 - iv. Propeller: Provides Force of Thrust
 - b. Four Forces: Lift, Weight, Thrust and Drag
 - c. Airplane Control (Apply Post-It Notes to Airplane/Glider)
 - i. Roll (Wings Tip Side-to-Side: Ailerons)
 - ii. Pitch (Nose Nods Up-and-Down: Elevator)
 - iii. Yaw (Nose Turns Left-and-Right: Rudder)

3. Activities
 - a. Gliders
 - i. Parts of Airplane/Glider
 - ii. Flight Control w/Post-It Notes
 - b. Helicopters
 - i. Paper Helicopters
 - ii. Puddle Jumpers
 - iii. Balloon Helicopters

4. Resources
 - a. Gliders/Airplanes
 - i. Wooden Gliders: Paul K. Guillows (Eagle or Sky Streak)
 - ii. Mini Glider: Hiller Aviation Museum
 - iii. Paper Gliders: Oriental Trading, Rhode Island Novelty, US Toy
 - b. Helicopters
 - i. Free Paper Helicopter Pattern:
<http://quest.nasa.gov/space/teachers/rockets/act11ws2.html>
 - ii. Inexpensive Puddle Jumpers: Oriental Trading Flying Dragonfly (IN-16/164), \$4/dz. NOTE: may require clay at bottom of shaft to balance properly.
 - iii. Aero Props: Rudy's Toys, \$0.80/ea
 - iv. Balloon Helicopters: Rhode Island Novelty (intermittent), Steve Spangler Science (expensive). Should be \$0.50/each.