

First Flight Glossary

(for secondary grades)

aeronautics

The study of flight and the science of building and operating an aircraft.

aircraft

A machine used for flying. Airplanes, helicopters, blimps and jets are all aircraft.

airfoil

An object with a special shape that is designed to produce lift efficiently when the object is moved through the air. For example, the cross-section of a wing is an airfoil.

airplane

An aircraft that uses the force of air on its wings (called lift) to fly.

altitude

The height of an object, like an airplane, above sea level or above the earth's surface.

aviation

The operation of aircraft. There are three types of aviation: general, commercial and military. .

biplane

An airplane with two sets of wings. The first airplane ever built had two sets of wings, one on top of the other.

canard

A tail configuration (two small horizontal surfaces on either side of the aircraft) mounted toward the front of the aircraft, rather than at the rear.

engine

A machine that uses combustion to create energy. An airplane will normally either have jet engines or engines that drive one or more propellers. In either case, the engines provide the thrust force that pushes the airplane through the air.

Flyer

The name of the Wright Brother's first powered airplane. It had a motor, propellers and two sets of wings.

glider

An aero plane that does not have a motor and propellers. A glider is essentially a large kite.

gravity

The natural force that pulls an object toward the earth. We experience gravity as weight. An airplane must generate enough lift to counteract the weight of the aircraft.

hydrogen

A gas used in large balloons to lift the balloon.

inventor

One who invents makes something new.

Kitty hawk

A beach on the North Carolina's Atlantic coast. This is where the first flight by the Wright Brothers took place.

landing gear

Another word for undercarriage. The landing gear is often retractable - it can be pulled into the fuselage of the aircraft to reduce drag.

machine

Any mechanical or electrical device that performs a task for people.

model

A copy of an object that is often times smaller than the original. Wind tunnel engineers create a model of an aircraft to put in a wind tunnel. The model is a precise replica of the outside of an aircraft.

patent

A document granting an inventor sole rights to an invention

pilot

A person who flies an aircraft.

propeller

A device that consists of blades that spin around a central hub, like a fan. An engine causes the blades to turn. When the blades turn, they create thrust by biting into the air and forcing it to move back. The amount of thrust can be controlled by changing the speed of the propellers.

rudder

The vertical part of the tail that is used to make the aircraft turn. The rudder is controlled by rudder pedals. Pushing the left rudder pedal will tilt the rudder to the left. This will cause the nose of the aircraft to turn to the left.

stabilizer

A surface that helps to provide stability for an aircraft. An airplane has two stabilizers: a vertical stabilizer and a horizontal stabilizer. Stabilizers are like the feathers on an arrow, which keep the arrow pointed in the right direction.

supersonic

Velocity greater than the speed of sound. The SR-71 is characterized as a supersonic aircraft because it travels from three to four times the speed of sound. A supersonic aircraft can fly from New York to London in less than two hours.

success

Achieving a goal. A win.

takeoff

The process of using the thrust of the engines to accelerate an airplane down a runway until enough lift is generated so that the aircraft begins to fly.

wind tunnel

A wind tunnel is a tube or cylinder in which a model of an airplane or part of an airplane is placed. Air is blown past the model so that it experiences the same forces as it would if it were actually flying. The struts that hold the model in place measure these forces.

wing

A part of an airplane that is attached to the fuselage. Wings are shaped like airfoils and are used to provide lift for the airplane.

Wright Brothers

The two brothers named Orville and Wilbur Wright who invented the first airplane.



The Wright Brothers

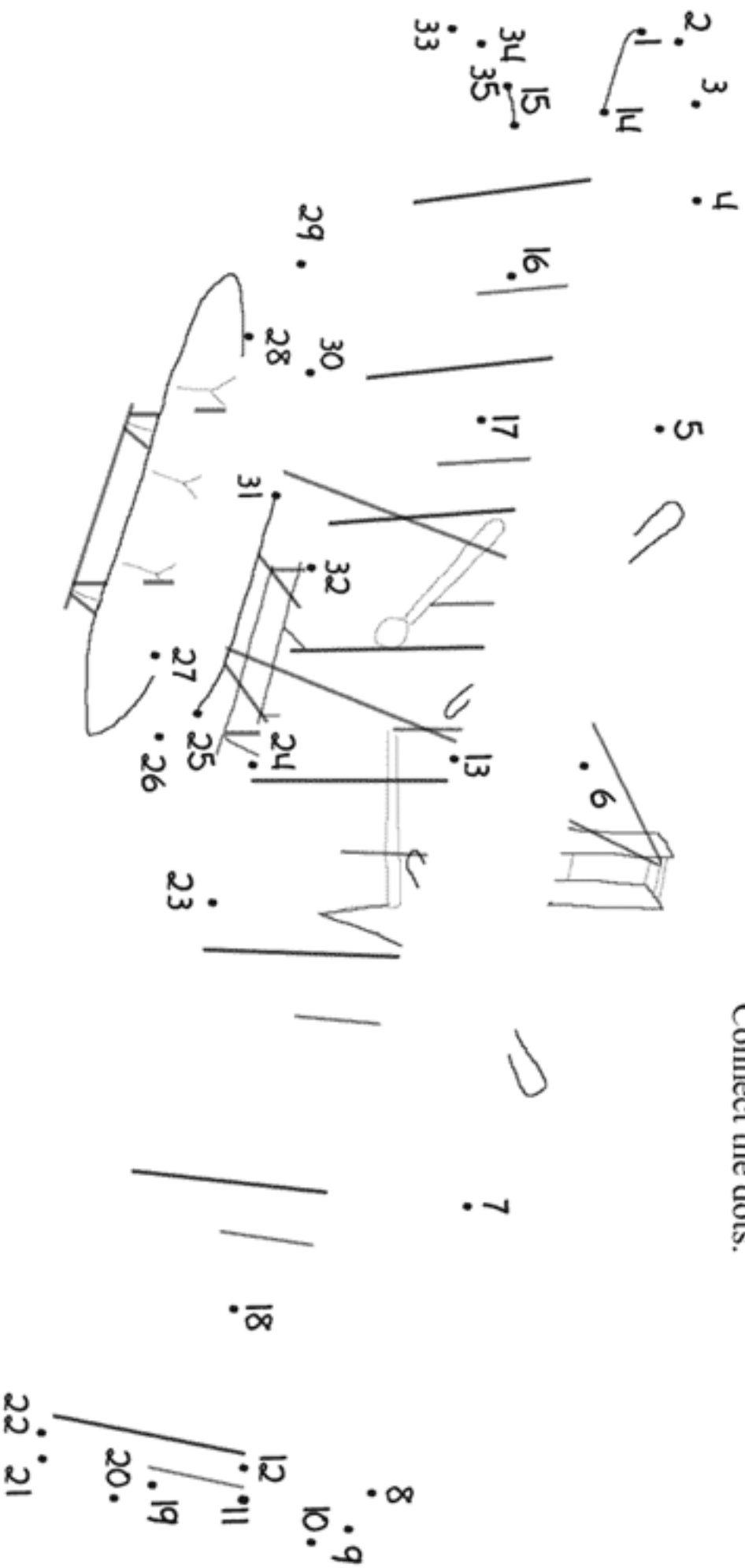
WORD SEARCH

TRY TO FIND words and names that remind us of the Wright Brothers and the first flight. Some words are hidden backward or diagonally, up and down, and some letters are used twice. See if you can find: WRIGHT, ORVILLE, WILBUR, BROTHERS, FLYER, AIRPLANE, KITTY, HAWK, KITE, KATHARINE, DAYTON, GLIDER, BIRDS, BICYCLE, INVENTIONS, TATE, AERIAL, GRAVITY, WING, MOTOR.

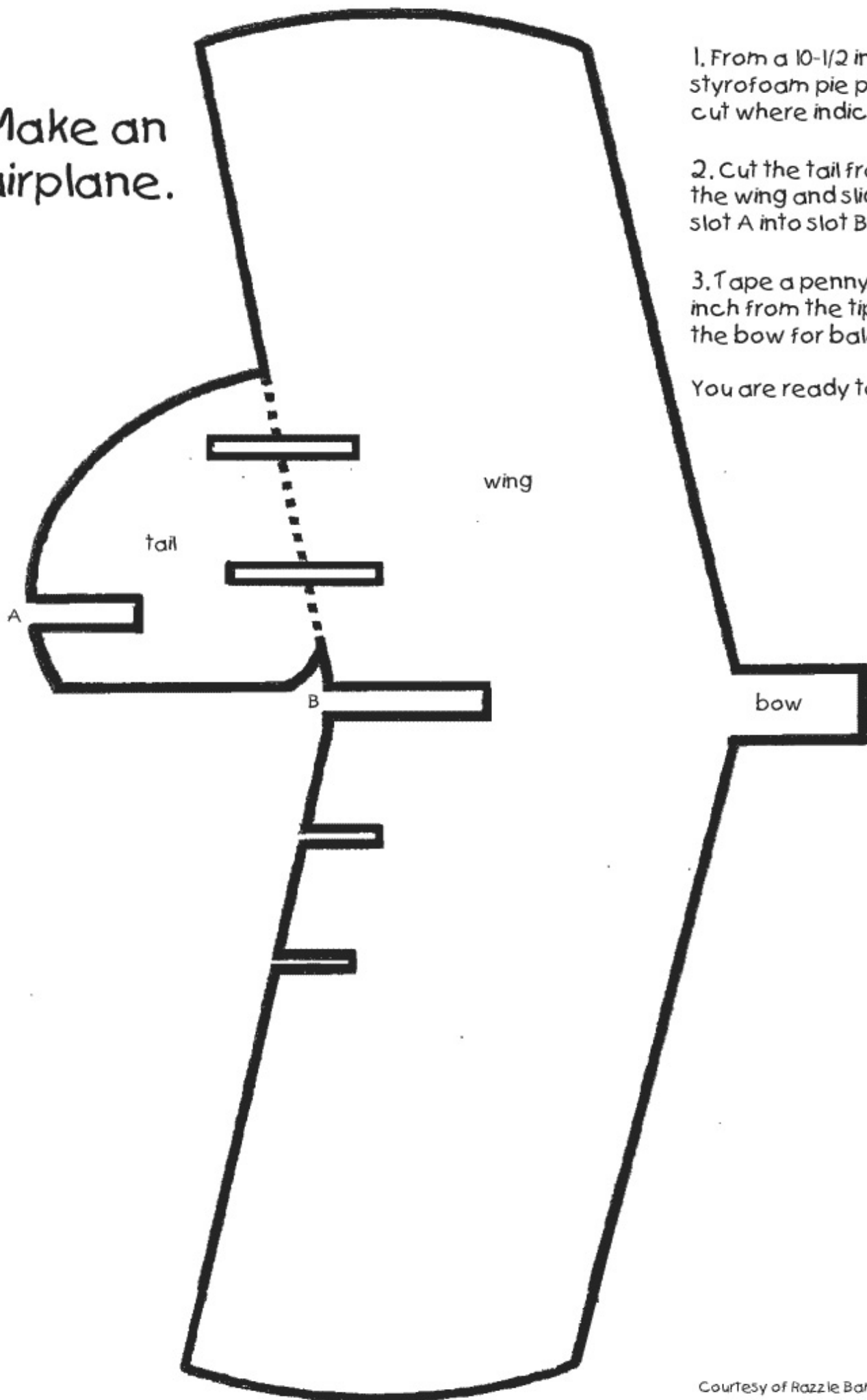
F B X Y B I R D S W F H A W K Y
G L I D E R G D K N I T U M A T
R K Y C O K O R V I L L E C T T
A P W E Y H W T W F T W B L H I
V R Y M R C Q S H R O E G U A K
I T A I R P L A N E T H G I R W
T D A Y T O N E F N R W G N I W
Y L I N V E N T I O N S B W N V
E T A T R M O T O R L A I R E A

The Wright Flyer

Connect the dots.



Make an airplane.



1. From a 10-1/2 inch styrofoam pie plate, cut where indicated.

2. Cut the tail from the wing and slide slot A into slot B.

3. Tape a penny 1/2 inch from the tip of the bow for balance.

You are ready to fly!