

# STUNT PLANES AND GLIDERS

*Fly through flight and aerodynamics basics! Discover the four forces that affect flight. Make and test various plane designs to see these forces in action! Build the **Sky Hawk Foam Plane** glider and fling it forward!*

## **SUMMARY:**

Fantastic Fliers flies children through flight and aerodynamics basics. Children discover the four forces that affect flight: lift, thrust, gravity, and drag. They make and test various plane designs to see these forces in action. Children fold and fly the Delta Dart plane. Shooting the Stunt Flier plane straight up makes it loop back! They make a Rotor Kite twist and an airship twirl. A fast-flying, spinning cylinder gets launched into a tough target. Children build the Sky Hawk Foam Plane Take-Home and fling it forward!

## **EDUCATIONAL VALUE:**

Fantastic Fliers provides children with a combination of practical experiences and theoretical knowledge in aerodynamics. They learn that lift, thrust, gravity, and drag affect an aircraft's flight. Children construct various paper airplanes to observe these forces at work. The Delta Dart, Rotor Kite and Twirling Dirigible are a few designs children fold, fling, and drop. Adjusting the Stunt Flier's control surfaces allows children to send the planes flying in different directions. Children make, test, and take home a rubber band powered plane that cuts through air with ease.

## **TAKE-HOME MESSAGE:**

- 1 Lift and thrust forces push up and move aircraft forward.
- 2 Gravity and drag forces slow and pull down aircraft.
- 3 Control surfaces change an aircraft's direction.

## **TAKE-HOME PRODUCT:**

Sky Hawk Foam Plane

## **NORTH CAROLINA ESSENTIAL STANDARDS:**

- 1.P.1.1 Explain the importance of a push or pull to changing the motion of an object.
- 1.P.1.3 Predict the effect of a given force on the motion of an object, including balanced forces.
- 3.P.1 Understand motion and factors that affect motion.
- 3.P.2.1 Recognize that air is a substance that surrounds us, takes up space and has mass.
- 5.P.1 Understand force, motion and the relationship between them.

