Innovation Nation

Be an Engineer

Engineers rarely build just one of anything. Engineers design and test many versions of their ideas to find the best one. Using sheets of paper and the directions below, build a basic paper airplane and test it. Build a second plane with weight, thrust, and lift in mind and test one of the following modifications: tilt the wings, add some weight (a paper clip or pieces of tape), or change the shape of the tail. You can test different materials—aluminum foil or card stock, for example—to see if your planes fly faster and farther.

Paper Airplane Steps

1. Fold an 8 ½-inch by 11-inch sheet of paper in half the long way to form a crease. Unfold.

2. Fold down the top corners toward the centerline to form a triangle at the top.

3. Fold the two edges in toward the centerline.

4. Fold the paper in half along the original center crease to form a valley. Rotate the paper 90 degrees.

5. Create a wing crease that begins at the nose.

Helpful Hint: Bend up the trailing edge of the wings for lift if the plane dives nose first.

Directions: Answer the questions below and sketch a design on your own paper.

1. What is the problem?

2. How will you solve it?

3. List the resources (human, natural, capital) you will need.

4. What name will you give your innovation?

5. What could go wrong?

6. Important! Did you solve the problem? How?

Key Terms

Capital resources
Buildings, tools, machines, and money that businesses use to make products.

Entrepreneur
A person who takes a risk to start a business with the intent of earning a profit.

Entrepreneurship
The innovative thinking needed to start and operate a business.

Human resources
People who do the work a business needs.

Innovation
An improvement of an existing product or method.

Natural resources
Things a business needs that occur naturally, such as air, water, minerals, and trees.

Resources
Things businesses use to produce goods and services.

Skill
The ability to do something well.

Our Innovation Is the Best!

Name ________________________________