

The Great Seed Flight

The Seed Dispersal Glider Challenge: A Bio-Mimicry Project.

THE ENGINEERING CHALLENGE: THE GREAT SEED FLIGHT

Suggested Materials

One dried lima bean or a paperclip
The "Seed"

copy paper, tissue paper, cardstock
The "Wings"

Tape or a small dab of glue, Straws or toothpicks (optional)

Step 1: Study the "Natural Engineers"

The Helicopter (Maple Seed)
Uses a single "wing" to create spinning motion.

The Parachute (Dandelion)
Uses tiny hairs to catch the air and drift.

The Glider (Javan Cucumber)
Has large, thin wings to catch a breeze and sail.

Step 2: The Design Process

The Spinner
Materials used: Copy paper, Emue paper, tissue paper, cardstock

The Floater
Materials used: Copy paper, Emue paper, tissue paper, cardstock

The Sailor
Materials used: Fold wide, flat wings, Attach paperclip to the 'nose'

Step 3: The Flight Test & Collection

Drop Zone

Trial	Time in Air (Seconds)	Distance from Drop Point	Observations (Did it spin? Did it dive?)
Trial 1			
Trial 2			

The Mission: Design and build a seed pod that uses wind dispersal to stay in the air as long as possible.

Suggested Materials

- The "Seed": One dried lima bean or a paperclip.
- The "Wings": Paper (copy paper, tissue paper, or cardstock).
- The "Glue": Tape or a small dab of glue.
- Structural Support: Straws or toothpicks (optional).



Name: _____

Step 1: Study the "Natural Engineers"

- Before building, show students three types of wind-travelers found in nature:
- The Helicopter (Maple Seed): Uses a single "wing" that creates a spinning motion (autorotation) to slow its fall.
- The Parachute (Dandelion): Uses tiny hairs to catch the air and drift over long distances.
- The Glider (Javan Cucumber): Has large, thin wings that allow it to catch a breeze and sail away from the parent tree.

Step 2: The Design Process

- Have students choose one "style" to build.
- The Spinner: Cut a strip of paper and fold the top into two "propeller" blades. Attach the "seed" (paperclip) to the bottom.
- The Floater: Create a "cone" or "cup" shape out of tissue paper. Attach the seed to the center with string so it hangs like a parachute.
- The Sailor: Create wide, flat wings (like a paper airplane) and tape the seed to the "nose" of the glider.

Step 3: The Flight Test & Data Collection

Set up a "Drop Zone" (using a safe high point). Have students record the time aloft and the distance traveled.

	Trial 1	Trial 2
Time in Air		
Distance Traveled		

Observations:
