

STEM Engineering Challenge: Seed Dispersal



Have you ever wondered how plants move around? Well, they grow seeds to make new plants right? But they don't have legs or wings or flippers! If a plant drops its seeds on the ground where it grows, there will not be much space for many seedlings (baby plants) to survive—too much competition for resources! For a short introduction to seed dispersal, watch the following videos (you might see a few plants you recognize) and then try out the activity below to see if you can build the perfect seed.

- ◆ Seeds and Seed Dispersal—BBC Bitesize: <https://vimeo.com/218127343>
- ◆ Why Do Tumbleweeds Tumble?: <https://thekidshouldseethis.com/post/why-do-tumbleweeds-tumble>
- ◆ Exploding seeds: https://www.youtube.com/watch?v=OB0P3mx_lxY

Step 1: Make a list of some seeds that you know and how they move around. Think about what special features help them to move that way. For example, a dandelion or a milkweed seed moves by wind and has lots of light, fluffy strands to help the seeds float for miles.

Step 2: Now design your own seed and dispersal features with materials you have around the house. See if you can create a seed that moves with **wind, water, or by sticking to something**. Think about the features your seed will need to have and then make a sketch of your design.

Step 3: Gather your materials and **build** a seed. Start by finding something to use as a seed. Consider using a leftover seed from a seed packet, a dried bean, a marble, or anything small and seed-like. For a wind-dispersed seed, use a fan (or a windy day.)

Seeds are dispersed by

- ◆ Wind
- ◆ Water
- ◆ Gravity
- ◆ Animals
- ◆ Explosion

Seed Building Material Ideas:

Dried bean, sunflower seed, marble, fan, tub of water, tape, paper, scissors or glue, tissue paper, bubble wrap, foil, cotton balls, cotton swabs, or anything else you can think to use—get creative!

Step 4: Test your design! Measure how far your seed can travel, how long it can float or how well it can stick to something. You decide what you are measuring! Use a ruler or a stopwatch or anything else that will help you tell how successful your seed is at moving.

Step 5: Look back at your design and **improve or redesign** anything that might help your seed disperse farther, faster, etc. Then test your seed again. Continue the process of redesigning and testing until you have the perfect seed!

FUN FACT: Did you know that a seed contains its own stored food to feed itself as it starts to grow? When this maple seed lands, it will already have food inside of it to give it energy to start growing!

