

**Outdoor activity: Minds on! Test out seed fliers (~10 min)**

Students will create simple flying models, and test them outside if possible. They will learn that these paper helicopters work like maple keys.

With sheets of scrap or notebook paper, instruct students how to create their helicopter. Use [this short YouTube video](#) to help you.

Take them outside to test them, if possible.

Have them drop their fliers from their hands and observe what happens.

- a) Optional: Ask students to observe which way their flier spins, clockwise or counter-clockwise? Have them switch the fliers “wings” so that they are now on the opposite side they used to be. Ask them to predict what will happen when they throw it this time? (They should now spin the opposite way.)
- b) Have students test them outside, if possible. If students are at home, compare the flights of those with wind, and no wind.

*What does this remind you of in nature? Think maple keys, for example.*

Nature has inventive ways of making sure it can spread seeds. It uses this helicopter method to ensure that new trees grow in different areas. The shape of maple keys, specifically, helps the seed land vertically in the grass so that it can more easily embed itself into the grass to start growing.

Incorporate **Daily Physical Activity** by having them do [garden yoga poses](#) to reinforce their role as “tree” when they drop their fliers/”seeds.”

***Extend: What do Seeds and the mars helicopter have in common?***

Maple keys (as demonstrated by the fliers) operate like helicopters. Here is a link to a video on the mars helicopter:

<https://www.youtube.com/watch?v=qwdfdE6ruMw>

The following link explains the flight of maple keys:

<https://phys.org/news/2009-06-maple-seeds-animals-exploit-wvideo.html>

A very in-depth explanation of the physics, but very interesting. The spinning flight creates a vortex above the seed wing, lowering the air pressure above the seed and counteracting the force of gravity.