

Because Young Minds Matter

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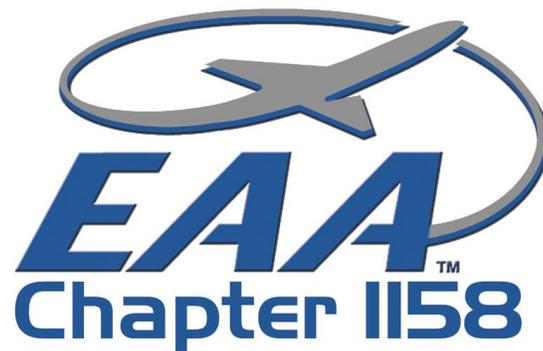
Located at the West Bend Airport

(Suggested reading level Grade 4 and above, lower with parental assistance)

Seeds That Fly



www.1158.eaachapter.org



Why Nature invented the Helicopter and Parachute

Everyone knows that all living things need certain things to stay alive. Plants need water, sunshine, warmth, nutrition from the soil, etc. Animals too, need food, water, air, protection from the cold and heat, etc.

First, a few Terms

Environment means the surroundings that suit certain plants and animals. Fish need to live in water to survive. Birds use the air to travel, find food, escape danger, etc. Different plants need special environments. A cactus plant would not do well in a wet jungle and a banana tree would die in the desert.

Unfortunately, sometimes environments change. A forest fire can wipe out the cool shade where many tender plants grow.



Or, if a group of animals grows too quickly the animals can starve because there are too many animals eating from the limited food supply.



Seeds that don't Fly

When plants make seeds, nature gave plants the ability to find a new home if necessary.

Often seeds can hitchhike a ride to a new location. Many birds love to eat seeds because seeds contain lots of energy. When we eat bread or oatmeal we are eating the seeds of wheat or oats!

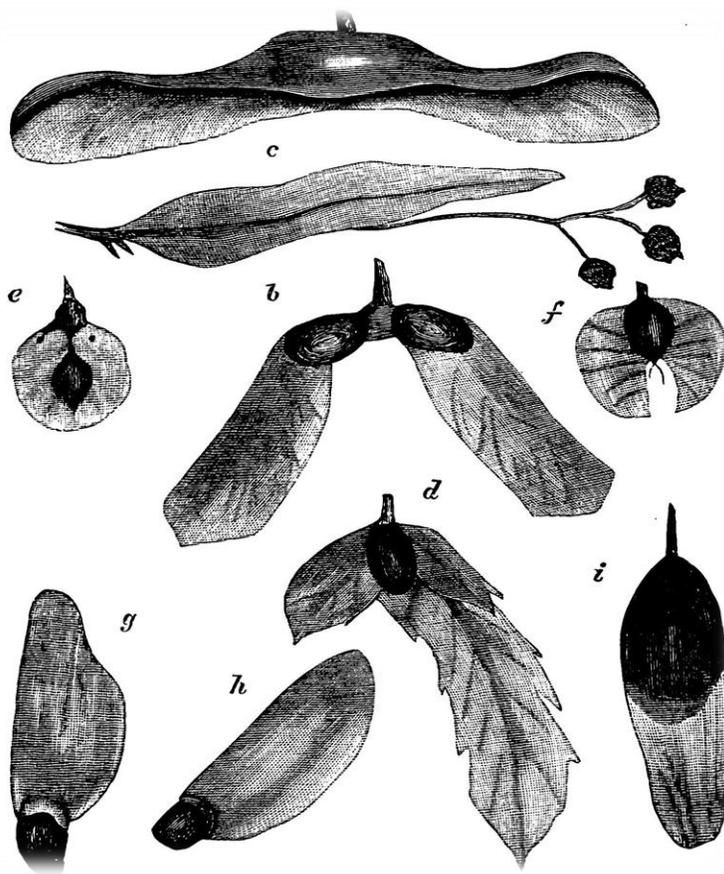
So, how do seeds hitchhike a ride??? A simple way is the seed has tiny hooks that catch on the fur of an animal. When the seeds fall off they may be miles from home! When birds eat the seeds some of the seeds may pass through the bird and become miniature “seed bombs” that find new homes far from the parent plant. Clever, hey?

Seeds that do Fly

What if the plant has few animals or birds to help with the job of finding new homes for the seeds? Nature thinks of almost everything! By giving the seed wings like a bird a seed can fly!!! Tall trees release their seeds high in the air. Some seeds land near the tree but others, carried by the wind, may sail a long distance. The Maple tree is a great example of seeds that twirl like a helicopter and slowly fall to the ground thus allowing strong winds to plant a new tree far from the parent tree.

What about those parachutes like seeds??? Just as a person wearing a parachute can safely jump out of an airplane high in the sky certain plants give their seeds their own personal parachute. Even though the plant may

be near the ground when the plant releases the seed, winds can pick the seed up and carry it high in the air for long distances before returning to earth and starting a new plant just like the parent plant. Dandelions thistles and milkweed are examples of plants that can release thousands of seeds per plant!





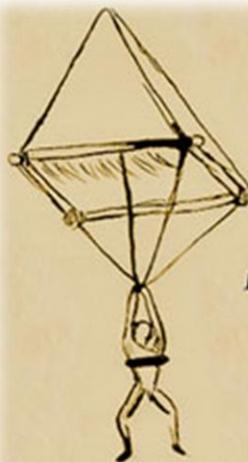
The common Maple tree is one of many trees that have invented its own version of a helicopter. A mature tree can produce thousands of seeds! Here are several variations used by other trees. In addition to gliding to a new home squirrels and other animals often help by hiding and “forgetting” a seed sometimes a great distance from the parent.

Thistles, Milkweed, and other plants release their seeds much the same as dandelions. The wind does the work finding a new home for the seeds.

A few words about human made Parachutes and Helicopters

The idea of a parachute goes a long way back. Leonardo Da Vinci thought of the idea in 1485.

The term “parachute” comes from the French language. “Para” means “along with”, as in a “*paramedic*” may come along with a doctor, *parallel* lines are always found together. “Chute” means “a fall”. You may have a laundry “*chute*” in your house where laundry “falls” to the laundry area.



Leonardo sketched this design for a parachute in 1485. He suggested what size would be needed to allow a person to fall safely from a great height. No one knows whether he ever tested a full scale model.

Soldiers with parachutes are a familiar war scene. In parts of the U.S. with frequent forest fires “Smoke Jumpers” can drop in on fire areas that would be hard to reach by ground vehicles.



The science behind the parachute is fairly simple. If you are under water and you try to quickly wave your arms you will find it much harder than waving your arms when you are on the shore. Even though air has less resistance than water it has enough that it can slow the fall of an object if the parachute is large enough.

Helicopters are a much more modern invention. Balloons and airplanes came first. Igor Sikorsky a Russian born American is regarded as the “Father of the Helicopter”. His first successful flight was in 1939.



The word “helicopter” comes from two Greek words: “helix” meaning spiral, and “pteron” meaning wing. Today helicopters are found throughout the world for rescue missions. Helicopters do not need airports. They can land on water or drop a rescue line into a forest! They are used for Police work and agricultural chores. You may have even taken a sightseeing ride in a helicopter. Drones are a modern invention that are actually miniature helicopters.



Other programs by EAA 1158:

EAA 1158 at the West Bend Airport hopes you enjoyed our parachute and helicopter launch area. We hope too when you see seeds flying through the air you will think about how Nature invented the parachute and helicopter long before humans ever flew!

Other youth programs by EAA 1158 at the West Bend Airport: Check our website: eaa1158.org.

Young Eagle Flights: Free airplane rides for kids from 8 to 17. Check our website for dates.

Air Camp for youth 13 to 16. A nine-day intensive aviation summer program. Annually in June. Limited enrollment, financial aid available.