

English Transcript
Desert Stories 2nd Grade
Design a Seed
Asombro Institute for Science Education

Welcome back everybody, it's Dr. H from the Asombro Institute for Science Education. I'm here at the Chihuahuan Desert Nature Park in Las Cruces NM looking for evidence about how plant seeds move.

At the end of this video you are going to design and make your own seed!

Sometimes big changes happen to the environment around us. This photo shows a grassland hillside after a wildfire. Scientists Dr. Laura Goodman and John Weir took this photo in March 2016.

Here is a photo of the same location but 5 months later.

What do you notice?

Let's look at the photos side by side. The burned area and the same area 5 months later. See the same tree in both photos?

What do you notice?

Did you notice the many new plants in the photo after the fire?

You already know that plants grow from seeds. But how did the seeds find their way to the burned area? Seeds can't fly or walk, right?

Let's review! How do seeds disperse?

Do you remember the definition of disperse from the first video you watched?

Appears on screen: Disperse: move to a new area

Here are some seeds.

How do you think these seeds move?

These are seeds from a maple tree and when it falls off the tree the wind catches it and twirls it to the ground.

This seed disperses by wind.

Here's another seed.

How do you think it moves?

An acorn is a seed from an oak tree. And when it falls off the tree, animals like squirrels bury them to eat later. Some seeds don't get eaten.

This seed disperses by animals.

Let's look at some examples of seeds here at the Chihuahuan Desert Nature Park.

Remember at the end of this video you are going to design your own seed so keep an eye out for structures that help seeds move.

Here's a plant called the apache plume. Its seeds are right here. They are really fuzzy.

The word plume means feather, do they kind of remind you of feathers? What do you think would happen if it was really windy? I think you know the answer to that.

The hairy seed blows in the wind.

The adjective hairy is describing the noun seed.

Here's a plant called the fourwing saltbush.

It was used by native people from the southwest for medicine, food, and as a yellow dye. The seeds of the fourwing saltbush have flattened wing-like structures. These wing-like structures help the seeds disperse in the wind.

The winged seed lifts up in the wind.

The adjective winged is describing the noun seed.

You should remember this seed from the experiment you did earlier. It's a seed from the yucca. You'll see the yucca plant all over New Mexico. Ancestral Pueblo people used yucca roots, leaf fibers, and the flower and seeds were harvested for food. The seeds are light and their shape is flat. This flat design helps the seed disperse in the wind?

The flat seed is moved by the wind.

The adjective flat is describing the noun seed.

Let's Review!

The white cottonwood seeds can be seen in this video floating through the air.

What adjective describes this seed?

Flat

Hairy

Winged

(Students answer question in Edpuzzle).

Great job with your review of seed structures that help seeds move in the wind. Remember – at the end of this video you are going to design your own seed so keep those structures in mind.

Now wind is not the only way that seeds disperse. Another way is by animals. Some seeds are really tasty! So, animals eat them. Let's take a look at some examples from southern New Mexico.

Desert rodents like packrats and kangaroo rats eat a lot of seeds! Packrats live in underground nests sometimes at the base of a cactus like this nest.

They go hunting for seeds, mostly at night, and bring some of them back to their underground nest. They will eat some and store the rest for later.

Here's another example of a desert animal eating seeds. This is a curved-bill thrasher eating the fruit of a prickly pear cactus. Birds and other animals like to eat the juicy fruit of plants like the cactus. But look inside ... there are a lot of seeds in this cactus fruit and as the bird eats the sweet fleshy part of the fruit it will also eat some seeds.

This next part might be a little gross but it's a really cool kind of gross! Let's take a look at animal poop... Wait a minute, stop! We're scientists here. Let's use a proper term. Let's use the word scat. Scat means animal waste or excrement.

Appears on screen: Scat- animal waste

This is fox scat. Let's see what that fox has been eating. When I look under the microscope, I can see lots of seeds, and some feathers. Wow! This is really cool.

By looking at the scat of an animal, we can sometimes tell what the animal has been eating.

Here we see mesquite seeds in coyote scat.

For some seeds, when an animal eats the seed, the seed takes a wild ride through the gut of the animal. Along the way the seed changes a little and when it comes out the other end... The seed is ready to grow in a new place! The scat often provides nutrients that help the seeds sprout and grow.

Let's look at one more example of an animal that helps seeds move. This is an ant nest. These ants leave the nest to look for plant seeds and other food to bring back to the nest. Can you spot the seeds the ants are bringing back? In the Chihuahuan desert, ants help plant seeds move.

Do you remember the experiment you did with a sock? You were exploring how seeds can stick to an animal by wearing a sock on your shoe and walking around outside.

Seeds stuck to your sock, right?

The sock is like animal fur and some seeds hitch a ride on animals by sticking to their fur or feathers. Eventually the seed falls off in a new place and might grow there.

Let's review!

This dog has goathead seeds stuck in their paw.

What adjective describes the seed and helps it disperse by animal?

Hooked Pointy Sweet

(Students answer question in Edpuzzle).

Now it's your turn to design a seed. Imagine there was a large area where the plants died or were removed. Imagine there was a wildfire. Your job is to design a seed that uses wind or animals to disperse to this disturbed area so plants can grow here again.

In your Asombro kit you have a container with some playdough in it. You are going to use this to design your seed. You also have a museum card. And we want you to use this to write down information about your seed so you can share your design with people in your family. And so to do that you're going to need a pencil.

You're going to take your playdough and you're going to use it to design and create your own seed. Decide whether your seed is dispersed by animal or by the wind. Come up with three adjectives that describe your seed and write those on your museum card. Make sure you put your name on your museum card, give your seed a name, and tell somebody about it.