

POWER OF PLANTS!



Do It Yourself Museum Activity Kit Guide

**MUSEUM
OF NATURAL
AND CULTURAL
HISTORY**



UNIVERSITY OF
OREGON

Power of Plants

DIY Museum Activity Kit Guide

Overview

A museum adventure to go! In 2020-2021 we proudly distributed more than 26,000 pre-packaged Museum Connection Kits, helping families in every corner of the state access hands-on learning adventures, museum-style! The bilingual English-Spanish activities from those kits are now available for free to libraries to download and create their own take home activities. The online program videos can also be accessed and shared for free.

How to Use These Resources

This guide is designed to help you create your own Museum Take Home Activity Kit for your community. From supplying all the activities pages and materials, to doing an in-person event with the activities, to simply sharing some of the resources online, there are options for every need you might have.

Suggested ways to provide activities and materials to youth and families in your community:

- **Full Size Museum Activity Kits:** Print the full Museum Activity Kit guide and supporting materials. Provide the main activity supplies needed for all the activities.
- **Individual Activity Kits:** Print the activity pages individually to be used for packing smaller take home activity kits that include one or two activities and the necessary supplies.
- **Online:** Provide families with a link for visiting the program video and finding all or some of the activities online. Activities can be downloaded and posted so they are shareable from your website or social media channels.



The Power of Plants kit program is made possible with support from the [Institute for Museum and Library Services](#).

- **In-Person Program:** Choose a few activities to do in-person onsite at your library, show the program video, and distribute one or two activities as a take-home kit for families that attend.

Tips and tricks for packing kits:

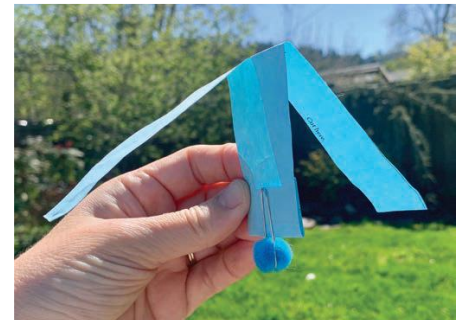
- Activity sheets and materials can be packed into 10"x13" flat paper bags or gallon size resealable bags.
- It's helpful to use smaller resealable bags for individual activity materials if you are including more than one activity in your kit.
- There are **printable bilingual bag labels** to attach to the take home activity kits. Download and print the [bilingual labels](#).
- If you want to include information about viewing the program video, the QR code fliers ([English](#) and [Spanish](#)) will direct participants to the specific video on the museum's Vimeo channel.

Activities

Listed below are the activities included in this program. Activities can be grouped together or done as stand-alone projects. The materials listed indicate what items participants will need to do the activity. You can include some of these materials in the take home activity bag and assume other items will be available for families at home. Tips and tricks for sourcing materials and packing are also listed below. All activities are available in English and Spanish.

1. Super Seeds!

When plants are too close together, they compete for sunlight water, and nutrients. How do plants spread their seeds? In this activity participants will create their own seeds to meet the four different challenges.



Materials and Notes:

- Activity sheets: 2 pages. Download and print. ([English](#)) ([Spanish](#))
- Small pom-poms ("seeds"): small pom-poms work best.
- Helicopter template: Download and print. ([bilingual](#))
- Paperclip
- Velcro: provide a couple small pieces of peel and stick Velcro (the hard, hook side only). It can be purchased in "dots" or you can cut 1 inch sections from a roll of sticky-back Velcro.
- Balloon
- Ruler
- Paper
- Scissors

- Toilet paper tube
- Optional: other craft of recyclable materials

Tips and Tricks: If doing this activity in-person at the library make sure to have room to test the seeds (outside is best). Use these design ideas as a springboard to encourage participants to create other designs that allow seeds to travel in different ways. Provide the pom-poms, a variety of craft and recyclable materials, and testing space.

2. Flower Power!

What are the different parts of a flower? In this activity participants will dissect flowers to discover their different parts.

Materials and Notes:

- Activity sheet: Download and print. ([English](#)) ([Spanish](#))
- Flower dissection sheets: Download and print. ([English](#)) ([Spanish](#))
- Poster: Download and print. ([English](#)) ([Spanish](#))
- Flowers: lilies, tulips, daffodils, gladiolus, and alstroemerias (look like mini lilies) are good flowers for easy dissection. Avoid using roses, daisies, or carnations because those are harder to discern the different flower parts.
- Pencil
- Blank paper
- Magnifying glass (optional)
- Tweezers (optional)



Tips and Tricks: If doing this activity in-person at the library you can purchase flowers to dissect. If participants are outside gathering flowers be sure to remind them to only pick one or two from each plant so it can stay healthy and have flowers for others to enjoy. Tweezers are also a great tool to add to this activity if some are available.

3. Attracting Attention

Why are plants so colorful? Pigments are the substances that make color. Plant pigments are beneficial for plants and animals. In this activity participants will experiment with dying fabric with plants.

Materials and Notes:

- Activity sheet: Download and print. ([English](#)) ([Spanish](#))
- Light colored bandana or cloth: Can purchase white cotton material and cut into bandana size pieces.
- Leaves, flowers, and berries
- Plastic trash bag
- Cardboard to protect work surface
- Rolling pin (recommended)

Tips and Tricks: Participants will discover that some plants do not transfer any color while others do. It will take some experimentation and it does help to crush up the plants by hand before placing them onto the cloth. Berries will transfer the most color. Colors will fade and run if washed. When needed, hand wash separately and hang to dry.



4. Defying Gravity!

Humans get nutrients from what we eat and drink. How do plants get the nutrients they need? In this activity participants will do an experiment to better understand capillary action, how plants move water and nutrients from their roots up through the plant.

Materials and Notes:

- Activity sheet: Download and print. ([English](#)) ([Spanish](#))
- Tea bag or food coloring: Use a red or dark colored tea, such as hibiscus.
- 2 Paper towels
- Hot water: The water only needs to be hot for bringing out the tea color. Otherwise, cold water can be used.
- 2 similar sized cups, jars, or bowls
- Clock or stopwatch, camera (optional)



Tips and Tricks: The experiment works best when the ends of paper towels are just resting on the bottom of containers, rather than being bunched up. You can trim the ends if that is necessary to better fit the container. Participants will immediately see the water start to travel up the paper towel, but it may take a few hours for the water to fully transfer into the other container until the water levels are close to equal.

5. Growing Strong!

How does a plant's environment affect how it grows? All plants need water, sunlight, and nutrients to live. But, over millions of years, plants have adapted to different environments. In this activity participants will conduct an experiment to see what variables might affect how plants grow.



Materials and Notes:

- Activity sheet: Download and print. ([English](#)) ([Spanish](#))
- Bean seeds: 8-10 seeds per kit, beans grow quickly and are easy to observe, but other types of seeds could work too.
- Experiment sheets: 2 pages. Download and print. ([English](#)) ([Spanish](#))
- [Ruler](#): optional to provide paper ruler or small purchased ruler. Download and print. Be sure to do a test print and measure to make sure the rulers are truly 6 inches long. You may need to adjust your printer to the “actual size” setting.
- Small containers: 3 per kit or participant, like cups, egg cartons, yogurt containers, etc.
- Soil
- Water
- Pencil
- Plate
- Material to test a variable (optional)

Tips and Tricks: This activity could be started at the library with participants taking the seeds home to watch them grow over the next two weeks. The plants may even produce beans after 2 months!

6. How Do You Use Plants? – part of the “Keep on Exploring!” page

Plants are an important part of our everyday life. In this activity participants will use the scavenger hunt page to explore their home or the library and find all the ways that plants are used, from food to fun!

Materials and Notes:

- Activity sheet (Keep on Exploring page): Download and print. ([English](#)) ([Spanish](#))



- Scavenger hunt: Download and print. ([bilingual](#))
- Pencil

Tips and Tricks: If doing this activity at the library it would be helpful to provide pencils and clipboards.

7. Building with Nature – part of the “Keep on Exploring!” page

Can you build a miniature home made only from plants? In this activity participants can explore their yard, a park, or other natural area to collect sticks, leaves, bark, and other plant materials and use them to construct a tiny house.



Materials and Notes:

- Activity Sheet (Keep on Exploring page): Download and print. ([English](#)) ([Spanish](#))
- Natural materials gathered from outside

Tips and Tricks: Provide materials during an in-person program to make a little forest fairy or animal and challenge participants to construct a home for it in a natural area.

8. Plant Observations – part of the “Keep on Exploring!” page

Scientists make observations every day and use words or drawings to document their discoveries. In this activity participants can find a plant to observe closely and write or draw what they notice about it, what they wonder about it, and what it reminds them of. They can return to the plant in different seasons and observe how it changes.



Materials and Notes:

- Activity Sheet (Keep on Exploring page): Download and print. ([English](#)) ([Spanish](#))
- Blank paper
- Pencil
- Camera (optional)

Tips and Tricks: This can be done as a group “Observation Walk” through a park or natural area.

Full Activity Guide

Includes all activity pages in one document ready to print as a full packet.
Additional material pages will need to be downloaded as well.

- Download and print. ([English](#)) ([Spanish](#))



Program Video

The Oregon's Amazing Animals activities can be accompanied by a lively video presentation featuring interviews with scientists or other experts plus an introduction to the hands-on activities.

[Power of Plants!](#) (19 minutes)



Note: the videos were originally made to go with the take-and-make activity kits and describe the pre-packaged kits. If you are showing the video live, feel free to stop the videos at the activity kit intro part if you are not supplying the full activity kits. Also, you can make all the activities accessible to your audience by downloading and posting the activities onto your website. Families can be directed to those resources in your program announcement.

Publicity Toolkit

The Power of Plants! publicity toolkit includes resources you can use to promote and publicize your event, including posters, fliers, photos, videos, and more.

These downloadable resources can also be found online on the [Publicity Toolkit: Power of Plants](#) page.

Fillable Fliers

Add your event times and location, then print and post! (Found in the Power of Plants Toolkit)

- [Download the English flyer](#)
- [Download the Spanish flyer](#)



QR Code Fliers

If you plan on sharing the program video with your community as an optional at-home experience, use the QR code fliers for ease of finding the video online. (Found in the Power of Plants Toolkit)

- [Download the English flyer](#)
- [Download the Spanish flyer](#)



Social Media Templates

Use these customizable social media posts, along with any of the photos, art, or videos below, to promote your program. Feel free to add language about how and when families can pick up the take-and-make activity kits.

FACEBOOK AND INSTAGRAM

We're excited to partner with @oregonnaturalhistory to bring you the Power of Plants—a family program that will inspire learning and tons of hands-on fun. Join us on **YOUR PROGRAM DATE** to celebrate plants through experiments, crafts, and more! **YOUR EVENT LINK**

TWITTER

We're partnering with @UO_MNCH to bring you the Power of Plants—a family program that will inspire learning and tons of hands-on fun. Join us on **YOUR PROGRAM DATE** for plant-focused experiments, crafts, and more! **YOUR EVENT LINK**

After your program, share the following message along with a photo of someone in your community trying out the activities. You can also use one of the images in the photo gallery below. Either way, we appreciate your help spreading the word about the museum's many family resources!

FACEBOOK AND INSTAGRAM

Thanks for joining us for the Power of Plants! We hope you enjoyed learning about the many plant heroes that call the Earth home. Want to explore more family-friendly science and culture activities? Visit the Museum of Natural and Cultural History at mnch.uoregon.edu/museum-home. #StayConnectedStayCurious #MuseumFromHome

TWITTER

Thanks for joining us for the Power of Plants! We hope you enjoyed learning about our biggest plant heroes. Want to explore more science and culture activities? Visit @UO_MNCH at mnch.uoregon.edu/museum-home. #StayConnectedStayCurious #MuseumFromHome

Video Promos



HOW DOES A SEED BECOME A TREE?

Entice your audience by sharing this 10-second video about how big plants can grow.

[Download the video](#) and post it to your social media accounts.



CAN PLANTS EAT PIZZA?

Share this 12-second video that asks a key question about plant nutrition.

[Download the video](#) and post it to your social media accounts.

Art and Photos

Use our original artwork to promote the program in your newsletters, on your website, and on social media. You can download the artwork, as well as publicity photos of the program activities, directly from the gallery online. A few examples are included below and more available [online](#).



Additional Resources

The Museum of Natural and Cultural History's [Explore From Home / Explora desde casa](#) pages feature hands-on science and culture activities, crafts, games, and more! Pages include a variety of topics such as Ice Age animals, Oregon basketry, plants, and the Civil Rights Movement.

The Museum of Natural and Cultural History's [Little Wonders online](#) is designed for preschoolers and their adults. Together they can download activities including crafts, games, and stories.

Visit the Museum of Natural and Cultural History's collections galleries to view photos of [Native Plants in Oregon Basketry](#).