

The Rio Grande Farm Park presents



Educating at Home



**Fun educational activities to help teach
future stewards of all ages!**

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Introduction

Below you will find Rio Grande Farm Park approved environmental education activities to try at home.

These activities are inspired to get your youngsters outdoors, and can to be adapted for students of all ages!

For each activity older students can complete a worksheet found at the end of the guide about what they already know, want to know, and have learned. As well as follow up resources.



We would love to see your work! Share photos of your kids completing the activities or their completed activities with us on Facebook

<https://www.facebook.com/rgfarmpark>

Online Resources:

- <https://climatekids.nasa.gov/>
- <https://pbskids.org/>
- <https://ed.ted.com/>
- <https://www.youngvoicesfortheplanet.com/>
- <https://www.inaturalist.org/observations>

These resources have activities of their own and can also be helpful supplements for activities we have suggested!



Additional activity resources can be found at the end of the guide



Thank You Trees



Students will understand the importance of trees

Supplies: clipboard, writing utensil, tablet if accesable

- Start by asking students: what is the importance of trees?
- *Answer:* They provide oxygen we breathe, filter the air, offer shade on a sunny day and so much more!
- Go on a nature walk to look at all of the beautiful trees in the area
- If tablets are available have students use the “What Tree Is That?” resource to identify tree species
- Have students take notes on the various types of leaves and trees in the area
- Discuss the difference between various tree species and what makes their adaptations beneficial
- What kind of trees don't exist in our area? Why not?
- End with having students draw their favorite tree and write a thank you letter to the trees

"What Tree Is That?" Online Resource

Arbor Day Foundation has an easy and fun tree identification website you can reach on a tablet or phone.

<https://www.arborday.org/trees/whattree/>



Nature Explorers

Students will take a closer look at their surrounding environment

Supplies: small container

- Give students each their own small container
- Tell the student that we will become nature explorers today
- Take students on a hike and make observations while picking up things that interest or intrigue them while on the hike
- After the hike have the student open their container and discuss questions that were raised and what they picked

Suggested discussion: Seed Dispersal

There are various ways that plants disperse seeds based on their given adaptations. Helicopter seeds are a special adaptation for the **Maple Tree**. Their seeds are designed to spread out tree sites. Maple trees need space, and want their seeds to have the best chance for successful growth!

[Seed Dispersal Worksheet](#)

[Seed Dispersal Video](#)

Worm Exploration

Students will understand the importance of decomposters

Supplies: shovel, magnifying glass



- Tell students that worms are crucial creatures in ecosystems as they help things decompose and convert food waste into soil
- Ask students where they predict worms would live, and leave it to them to find their own worms. (Worms can be found in healthy soil near water, look in places where there is a lot of biodiversity)
- Put worms on plates or a surface
- Ask students to look closely at the worms and to make observations.
- Some leading questions can be: Identifying body parts. Where is the head? How does it move? How many rings does the worm have?
- Now have students put leaves next to the worm, how does the worm react?
- Give students rulers and ask how long the worms are
- For older students: have them average the lengths

Suggested discussion: Vermicompost

Vermicompost is a method of composting that uses worms to break down organic matter. This method transforms food and yard scraps into compost faster by using worms as composters.

[Digging Deeper Online Resource](#)

Dirty Water Experiment

Students will understand how human systems mimic natural systems



Supplies: Styrofoam cup, water, bowl



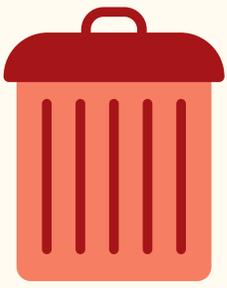
- Fill the bowl with water, add dirt and mix it well to create dirty water
- Ask students if they have any ideas on how we could clean the now dirty water
- Tell students that nature can do this!
- Older students can create a hypothesis for what will happen to the dirty water. Will the color change? What will happen to sediments?
- Tell students that by mixing different dirty grain sizes the things found outside can create a natural water filter (the water will NOT be drinking safe after this activity)
- The most effective filter will have varying grain sizes with a sand type on the bottom
- Cut small holes into the bottom of the cups and give cups to students
- Once their filter is created, dump the dirty water in and see how well their filters work

Suggested discussion: Water Pollution

Water pollution can happen naturally but is usually caused by human interference with natural systems. While humans have filtration methods to remove these pollutants, animals do not. It is important to remember how human activities can affect wildlife.

[Water Contamination Video](#)

[When is Water Safe? Video](#)



Litter We Know



Students will understand how littering effects wildlife

Supplies: Poster board, glue, markers

- Take a walk and collect trash you find in your community
- Have students glue the trash to their assigned poster board
- Ask students to discuss the effects of litter on wildlife
- On the students poster boards have them give numeric values to each type of trash based on how much harm it could cause wildlife
- 10 being the most harm 0 being no harm
- Have students present their reasoning behind the score
- Discuss if there is any type of litter that wasn't discussed that could be potentially harmful to wildlife
- What are some ways we could prevent litter

Suggested discussion: Problem with Plastics

Plastics can take over 1000 years to break down or decompose. On average 2 million plastic bags are used per minute around the world. We can individually try to limit our plastic usage and work to remind family and friends of the negative effects of plastic use.

[How Much Plastic is on the Earth? Video](#)

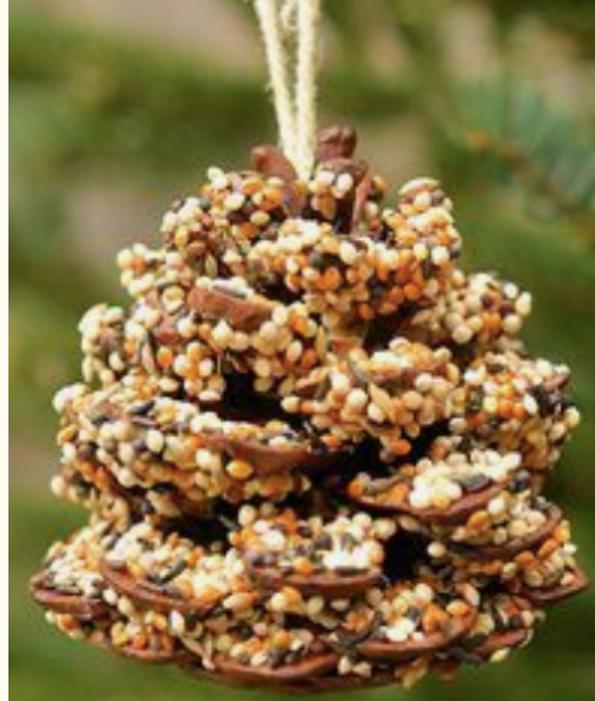
[Kids Vs. Plastic Resource](#)

Make Your Own Bird Feeder

Students will create their own bird feeders

Supplies: Empty toilet paper roll, pine cone, nut butter, bird seed

- Either use an empty toilet paper roll or a pine cone
- For the toilet paper roll use a hole puncher for string or twine OR for the pine cone tie the string around the top
- Coat it in peanut butter or a nut butter you have on hand
- Roll the bird feeder in a seed variety



Scavenger Hunt



Students will become nature explorers

See how many items you can find in your area!

- | | |
|--|---|
| <input type="checkbox"/> Green leaf | <input type="checkbox"/> Dandelion |
| <input type="checkbox"/> Pine cone | <input type="checkbox"/> Pine tree |
| <input type="checkbox"/> Bug | <input type="checkbox"/> Moss |
| <input type="checkbox"/> Animal tracks | <input type="checkbox"/> An animal making noise |
| <input type="checkbox"/> Squirrel | <input type="checkbox"/> An acorn |
| <input type="checkbox"/> Feather | <input type="checkbox"/> Yellow flower |
| <input type="checkbox"/> Bird nest | <input type="checkbox"/> Tree bark |
| <input type="checkbox"/> Bee | <input type="checkbox"/> Lady Bug |
| <input type="checkbox"/> Pine needles | <input type="checkbox"/> Spider |
| <input type="checkbox"/> Round rock | <input type="checkbox"/> Edible Plant |
| <input type="checkbox"/> Water | <input type="checkbox"/> Fish |

Suggested discussion: Biodiversity

Biodiversity is important to all ecosystems. We depend on the planet for many ecosystem services. Some services can be prevention of natural disasters, reduction of pests, regulation of pollution and of course the enjoyment of nature!

Battle of the Beaks

Students will understand various adaptations of bird beaks



Supplies: Items found around the house

- Birds use their beaks to gather food
- Birds have different beak adaptations to prevent competition for food
- By using different things found at home create challenges for students to be birds
- **Ideas to try: pick up rice with a tooth pick, use chopsticks to pick up Swedish fish in a bowl of water, hide gummy worms in a bowl of rice, use a slotted spoon to collect pieces of rice in a bowl of water**
- Have student to complete all the challenges
- Then time students to see how long it take them
- Discuss other animals that might have similar adaptations

Suggested discussion: Adaptations

All animals have adaptations to survive best in their environments. Adaptations can help camouflage from predators, live in a certain climates and much more!

DIY Hydroponics!



Students will create their own hydroponics

Supplies: Seeds, 2 liter bottle, growing media, water, wick material, aluminum foil, nutrients

A good growing media is coconut coir and can be found online!

Wick material can be either a felt or cotton towel

Suggested seeds are any lettuce or basil seed (they're fast growing and leafy!)

A good suggested nutrient is General Hydroponics Flora Grow

- Watch this informative youtube video of how to construct your at home Hydroponics!
- https://www.youtube.com/watch?time_continue=3&v=BUUpUfxqULXA&feature=emb_logo

Suggested discussion: Photosynthesis

Normally plants need to be in soil for plants to grow. While there are important things in soil to help a plant grow healthy and strong the only things that a plant needs are sunlight and water. Plants use sunlight to convert energy (the sun) into food.

[How to Make Your Hydroponics Website](#)
[Farming Methods Website](#)

Answer the following questions for your given topic.

What do you know about this topic?

Topic:

What do you want to know about this topic?

What did you learn?

Additional Resources

Nature Explorers:

https://www.fishwildlife.org/application/files/7715/2944/3147/Seed_Investigation_Sheet.pdf

https://www.youtube.com/watch?time_continue=2&v=06sbmWAzoy&feature=emb_logo

Worm Exploration:

<https://kids.nationalgeographic.com/animals/invertebrates/earthworm/>

Dirty Water Experiment:

<https://www.youtube.com/watch?v=Om42Lppkd9w>

<https://www.youtube.com/watch?v=G244Q4AGJ7U>

Litter We Know:

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

<https://kids.nationalgeographic.com/explore/nature/kids-vs-plastic/>

Battle of the Beaks:

https://www.youtube.com/watch?v=8vL_2rF8JHU

DIY Hydroponics:

<https://kids.britannica.com/kids/article/agriculture/352715>