

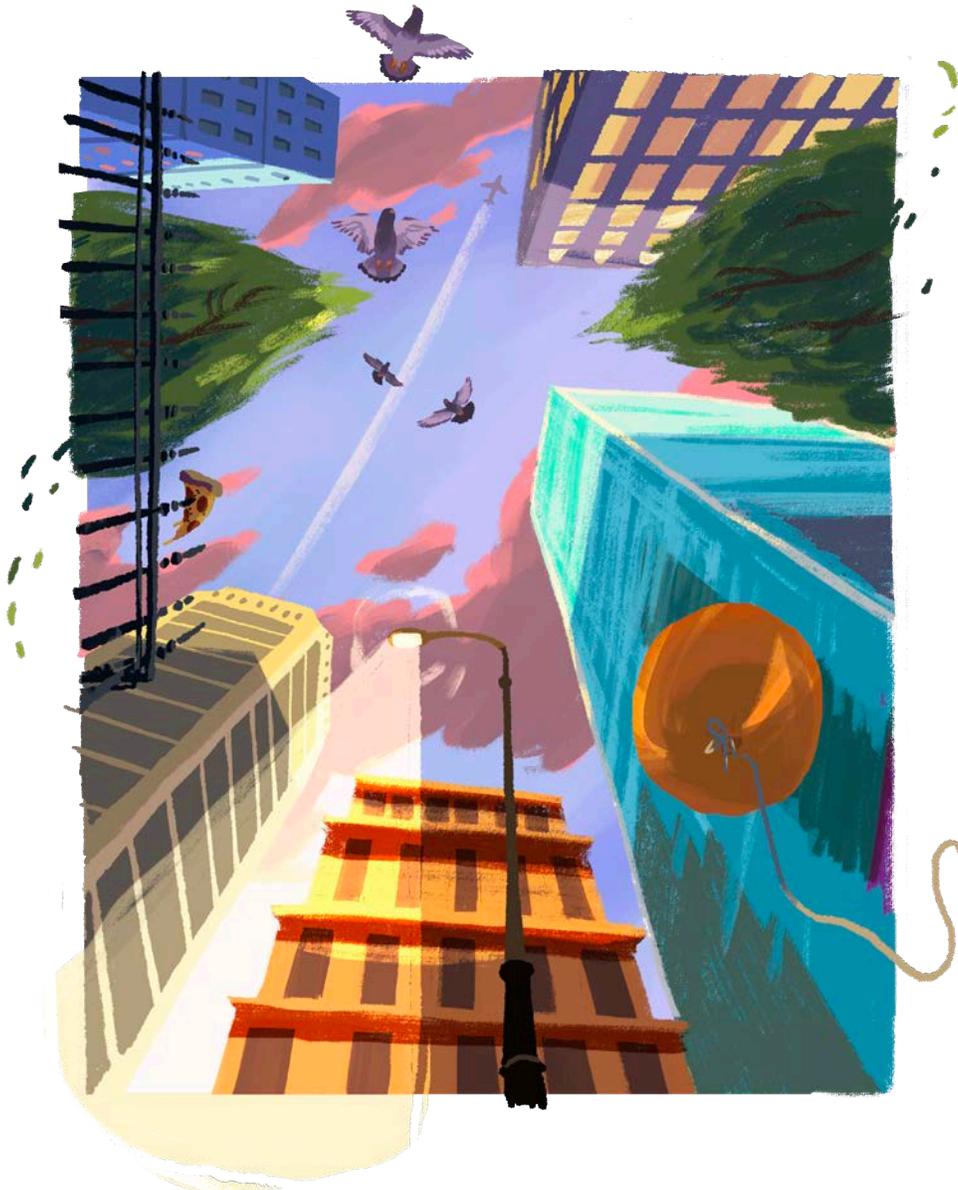


Art Sphere Inc.  
Transforming Lives Through Art

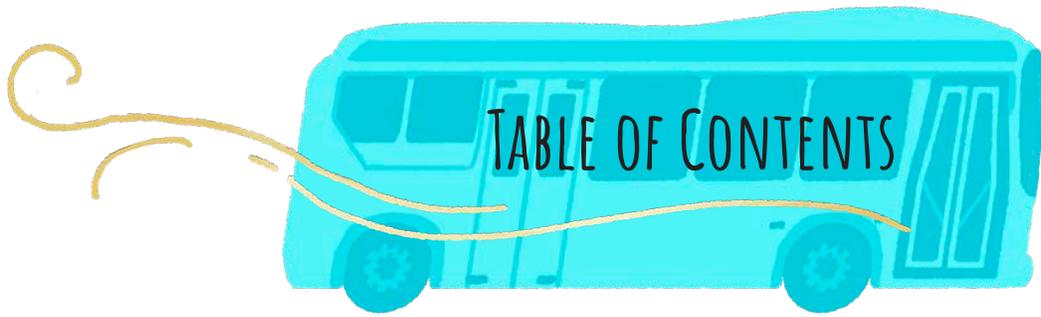
STRENGTHENING OUR COMMUNITIES SINCE 1998

# THE CITY AND YOU

*for ages: 10-14*



Lessons by Julia Fucci  
Illustrations by Blair Nakamoto



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# CREATING JOURNEYS THROUGH THE ARTS

*Follow your creativity and go beyond where the path leads so you can leave a trail to inspire others to express themselves, too!*

## Preface

We are pleased to present *The City and You* to take you on a path to transform everyday materials into art, to explore the intersections of art with nature, literacy, technology, theater, music, mindfulness and STEAM, and to learn how to use the arts to express your core values. Throughout this journey, we invite you to reflect on the legacy that can be created through the arts.

## How to Use Our Online Materials and This Book

Not everyone learns the same way. Some people are more visual, some more musical, some more mathematical<sup>1</sup>. Our lessons include symbols at the top of each page that indicate the different learning styles to be found in each project. By pointing out the different ways that a project can be approached, parents and teachers can guide their children to their individual paths to artistic success and ways to express their unique creative voices. The different learning styles and the symbols used to represent them in this book include:



**Literacy and Verbal-Linguistic**  
(using words effectively)



**Recycling and Naturalistic**  
(responding to nature)



**Technology and Logical-Mathematical**  
(reasoning, calculating)



**Health and Intra-personal**  
(understanding one's own interests, goals)



**Theatre and Bodily-Kinesthetic**  
(using the body effectively and creatively)



**Musical-Rhythmic**  
(sensitivity to rhythm and sound)



**Multicultural and Interpersonal**  
(understanding, interacting with others)

<sup>1</sup> These learning styles are based on Howard Gardner's discussion of types of intelligences. For more detail, see: Howard Gardner, *Frames of Mind: The Theory of Multiple Intelligences* (New York: Basic Books, 1983).



The lesson plans are more than just making art objects. They incorporate ideas such as compassion, mindfulness, respect for nature, healthy eating, cooperation, and other ideas for living in a way that contributes to a civil society. The pages are laid out as if you and the class are taking a journey:

- **Your Destination:** summarizes the outcome of the project
- **Travel Kit:** list of materials you will need for the project
- **On the Path:** ideas and directions for each child to make an art object, and ideas to explore
- **Group Tour:** how to transform the individual process into an interactive and collaborative group experience
- **Extend your Journey:** vocabulary, helpful references, and links to explore additional ideas

*Find ways to express yourself - it's okay to think outside the box!*

Knowing that links sometimes become inactive or are changed is beyond our control, and we apologize for the inconvenience. Please check our blog and Instagram:

<https://artsphere.org/free-resources/curriculum/>  
<https://instagram.com/artsphereinc/>

for more suggestions on creative art projects. All the referenced links in this book have been checked for accuracy.





**Air pollution** The presence in or introduction into the air of a substance which has harmful or poisonous effects.

**Annual** A plant that completes its life cycle in one season, must be planted each year.

**Aroma** A smell, or the quality of the atmosphere.

**Asterism** A prominent grouping of stars smaller than a constellation

**Astrology** The interpretation of stars as having a meaning in human life, namely the zodiac signs.

**Astronomy** Science that deals with celestial objects and space.

**Atlantic sturgeon** Considered a living fossil, a species of north American fish.

**Atmosphere** The gases surrounding Earth.

**Biannual** A plant that seeds its second year of growth.

**Bird** A flying, feathered, egg-laying vertebrate.

**Bird migration** The seasonal movement of birds from one location to another.

**Bumblebee** One of the species in the bee family, hairy and large.

**Carbon dioxide** A gas that makes up about .04% of the atmosphere, which we breath out.

**Carpenter bee** A family of bees that nest in wood.

**Carpool** The sharing of car drives to reduce car usage.

**Caterpillar** A fuzzy worm like insect that is the before stage of a butterfly.

**Chrysalis** A hard shell a caterpillar enters to transition to a butterfly.

**Community garden** A piece of land that a community of people work on together.

**Compost** Decayed organic matter that is used as plant fertilizer.

**Constellations** A group of stars forming a pattern.

**Earthquake** A sudden shaking of the ground due to plate tectonics or volcanic action.

**Farmers market** A market that sells products directly from farmers to customers.

**Fault line** A line in the ground that represents a geological fault or plate line.

**Fertilizer** A substance added to soil to increase fertility.

**Fish ladder** A structure around man-made barriers such as dams that enable fish to move around them.

**Flock** A group of birds.

**Freshwater lake** A large, still body of water surrounded by land that has almost no salt.

**Fruit** The seed-bearing structures in plants, the means by which plants spread seeds.

**Forest** An area of land dominated by trees.

**Germination** The process of a seed becoming a plant, the time it takes between planting and emerging from the soil.

**Grassland** A biome in which land is dominated by grass, found on all continents except Antarctica. Often located between temperate forests at high latitude and deserts at subtropical latitudes.



**Gratitude** The quality of being thankful.

**Habitat** The total resources, physical, living, and non-living elements in an area to support survival.

**Hornet** A large wasp that lives in shrubs and trees.

**Hydropower** Water power; the use of water to produce electricity and power.

**Invasive species** An organism in a non-native environment that alters the new one, causing damage to the species and environment.

**Landscaping** Activity that changes the visible assets of a land or lawn through plants or similar things, likened to gardening.

**Lanternfly** An insect native to Asia that is an invasive species in the United States.

**Larvae** The stage between an egg and a caterpillar.

**Light-year** A unit of distance equal to that which light travels in a year.

**Lumber** Timber or logs ready for use.

**Migration** Seasonal movement of animals from one place to another.

**Monarch butterfly** A north American migratory insect.

**Mussel** A type of mollusk that lives in freshwater habitats.

**Natural predator** A relationship in nature where one animal (predator) goes after the other.

**Nature art** Simple art done in nature to show the beauty of the world.

**Nest** A structure made by birds for laying eggs.

**Nitrogen** A colorless gas that forms about 78% of the earth's atmosphere.

**Northern lights** Another name for the aurora borealis, a natural phenomenon of red and green light in the sky.

**Nuclear energy** The use of nuclear reactions to produce electricity.

**Offspring** A creature's child or children.

**Orbit** The curved path of a space body around a planet or star.

**Oxygen** Element that is 21% of the Earth's atmosphere, the gas we breathe.

**Photosynthesis** The process by which plants use sunlight to convert carbon dioxide, sunlight, and water, to create food.

**Pollination** The transfer of pollen from the male to the female flower that allows for seed production

**Pollinators** An animal that moves pollen from the male of a flower to a female flower

**Pruning** Process of cutting off parts of a plant to encourage healthy growth.

**Renewable energy** Energy collected from natural resources that are replenished on a human timescale.

**River** A flowing water body usually heading toward an ocean or another river.

**Roof Garden** A garden on the roof of a building to provide environmental benefit.

**Runoff** The draining of water from the surface of an area of land, building, or structure, etc.



**Seasonal fruit** Fruits and vegetables that are grown in certain growing seasons.

**Seismograph** An instrument that measures and records earthquakes.

**Smog** A fog caused by our pollution.

**Solar power** The conversion of sunlight to electricity.

**Star-nosed mole** A small mole in northern North America with a hypersensitive nose.

**Stars** A large, remote, and fiery body like the Sun.

**Supercell** A giant thunderstorm with strong winds and a persistent updraft called a mesocyclone.

**Sustainability** Making things with the capacity to endure or renew, maintaining change.

**Terrain** A stretch of land, with attention to its physical features, e.g., Mountainous terrain, or sand, or wet.

**Thrift store** A store that sells used things, in most cases to raise money for charity.

**Tides** The alternating rise and fall of the sea level.

**Upcycle** The creative reuse of produces into new or better-quality material.

**Vegetable** The part of plants consumed by humans, all edible plant matter.

**Water cycle** A cycle describing the movement of water above and below Earth's surface.

**Water treatment plant** Treatment systems that improve the quality of water and make it appropriate for use.

**Waning** When the visible moon gets smaller, between a full moon and new moon.

**Waxing moon** The moon after a new moon and before a new moon.

**Weather** The state of the atmosphere at a place or time, with respect to temperature, dryness, sun, wind, rain, etc.

**Wetland** An ecosystem full of water either permanently or seasonally.

**Yellow jacket** A type of predatory wasps found in the United States.

**Zodiac signs** The 360 degrees of the sky are split into twelve parts, each one containing constellations and given a name, which we call the zodiac. They are Sagittarius, Aquarius, Capricorn, Aries, Taurus, Virgo, Libra, Gemini, Scorpio, Pisces, Leo, and Cancer.



## Your Destination:

Create a sustainable, all-natural clay imprint decoration to honor the trees around you and spruce up your garden. Nature has so many resources we often forget about and they are easy to overlook because we can buy everything from the store. Take time to reflect on nature around you, and after learning all about the trees around you, use their leaves to decorate your space.

## On the Path:

**Step 1** There are two ways to make homemade clay: Common kitchen ingredients or from soil. To make it from kitchen ingredients: one cup flour, one and a half cups of salt, and a cup of water. Mix the salt and flour in a bowl, adding  $\frac{1}{4}$  cup water at a time until it forms a hard ball (firm but able to be pulled). If desired, you can put food coloring in and make patterns or solid colors.

**Step 2** Mold the clay into whatever shapes you like. Collect leaves from trees, flowers, or whatever plant debris you like. Place it on top of the clay and roll it in using a full water bottle or rolling pin. The plants will leave imprints in the clay that will make it look cool and unique. Pull the plants out when you are satisfied with the shape.

**Step 3** Air dry or bake the clay for approximately twenty minutes at 250 degrees to make it harder. You'll want to make imprints before baking. If you are unable to make homemade clay using these kitchen ingredients use the provided instructional video to learn how to make clay from soil.

## Group Tour:

Create a museum of clay artwork and have you and your fellow classmates display their clay masterpieces. Walk around and examine all the created artwork.

## Extend the Journey:

Learn about more detailed anatomy of trees here:  
<https://www.arboday.org/trees/treeguide/anatomy.cfm>

**Learn New Vocabulary:** carbon dioxide, photosynthesis, runoff

**Resources and Visual Aids:** Use this guide to identify types of leaves and the trees they might come from <https://leafyplace.com/types-of-tree-leaves/>

**Access Our Instructional Video:** <https://www.youtube.com/watch?v=O8l6doGF8q4>

**Watch the Entire Video Series:**  
<https://artsphere.org/interactive-programs/classes/the-city-and-you-2/>



## 2. CITIES AND THE WEATHER



### Your Destination:

Weather in cities can be different from weather in rural areas. But why? Learn about the weather and basic water cycle in this lesson, and then build a real-life example of it. You will make a mini bottle ecosystem, where you will be able to see the water cycle in real time. It's a nice reminder of the complexity of nature that is always going on around us, and how we as humans impact it.

### On the Path:

**Step 1** Add small rocks to the bottom of your jar. You can find rocks around trees or bushes. Once you have placed all your rocks in the jar, cover them with a layer of soil.

**Step 2** Place the moss over everything else; dip each piece of moss in water and squeeze out excess before placing in.

**Step 3** Make an airtight seal over the bottle/jar when done. If you don't have the lid, you can use plastic wrap and a rubber band to make a seal.

### Group Tour:

No ecosystem in the world is exactly like any other. Every forest or desert is different from every other in some way. Monitor your ecosystems process and compare it with your friends. How is your ecosystem different from your friends ecosystem?

### Extend the Journey:

Learn more about the wind that drives the worlds weather in this article:

<https://www.nationalgeographic.org/encyclopedia/wind/>

**Learn New Vocabulary:** supercell, terrain, water cycle, weather

**Resources and Visual Aids:** Looking for more information about the weather? Check out NASA's website: <https://climatekids.nasa.gov/menu/weather-and-climate/>

For another ecosystem bottle example, see here:

<https://mildlyindian.com/self-sustaining-terrarium/>

**Access Our Instructional Video:** <https://www.youtube.com/watch?v=kzJh-zrFVtk>



## Your Destination:

Explore green energy in this lesson and see how we can leave a less harmful impact on the world. Instead of just flicking a switch and getting light, take the time to think about where that energy comes from and how we can make it cleaner for Earth. Then, try to make sustainable energy on your own by making a Solar Pizza Oven.

## On the Path:

**Step 1** On the lid of the box you are using, draw a square smaller than the lid so that there are a couple inches of space between the box and the edges of your drawn square. Then, cut along three sides so it can fold back like a flap.

**Step 2** Tape aluminum foil to both sides of the flap and wax paper on the bottom side of the hole in the lid. Tape black construction paper to the bottom of the box.

**Step 3** Put in your smores. They should take no more than an hour. If the steps in this lesson are not clear, look at the link provided in the "Resources and Visual Aids" section for additional assistance.

## Group Tour:

See how Costa Rica uses and runs on 100% renewable energy:  
<https://www.youtube.com/watch?v=48dZw79266s>

## Extend the Journey:

Learn about more detailed anatomy of trees here:  
<https://www.arborday.org/trees/treeguide/anatomy.cfm>

**Learn New Vocabulary:** hydropower, nuclear energy, renewable energy, solar power

**Resources and Visual Aids:** A visual guide on how to make a solar oven:  
<https://www.youtube.com/watch?v=xbwliZJiHe8>

**Access Our Instructional Video:** <https://www.youtube.com/watch?v=ZgSgKo04-70>



## Your Destination:

What is in the air around us? Learn all about the Earth's atmosphere in this lesson, including how we can better take care of it and how we get phenomena like the Northern lights. Celebrate the beauty of Earth with a northern lights craft with optional DIY paint.

## On the Path:

**Step 1** Cut multicolored tissue paper into long strips. If you don't have multiple colors, you can use paint to create multiple colors. Use the link provided in the "Resources and Visual Aids" section to learn how to make your own paint.

**Step 2** Using a paintbrush, spread water across your paper. Do not use too much water because we want the paper to be damp, not completely soaked. Lay down the tissue paper over the damp paper, and then wet the top of the tissue paper using the paintbrush.

**Step 3** Layer your tissue paper, wetting each layer as you go. When the paper is covered, leave it to dry. Once it is completely dry, peel back the strips to reveal the color imprints left on the paper. If you would like, you can use watercolor paints to embellish the finished design.

## Group Tour:

Ask if anyone in your family has seen the northern lights and show them your picture! Teach them about how and why they happen.

## Extend the Journey:

Interested about the atmosphere of other planets? Learn about them here:  
<https://solarsystem.nasa.gov/news/436/10-things-planetary-atmospheres/>

**Learn New Vocabulary:** air pollution, atmosphere, nitrogen, northern lights, oxygen, smog

**Resources and Visual Aids:** Make your own paint: <https://bit.ly/3SKBXEO>

Guide on how to do this activity with visual aids: <https://bit.ly/3K3oCDF>

**Access Our Instructional Video:** <https://www.youtube.com/watch?v=kFMUXhvxpk>



## 5. NATIVE HABITATS AND ECOSYSTEMS



### Travel Kit:

glue, cotton balls, construction paper, markers, cardboard box, scissors, tape

### Your Destination:

For those of us who live in the city, getting out to see the rest of the state can be difficult. Explore the habitats of PA, including the plants and animals that live there and some must-see places in the state. Learn about different biomes and what it takes to survive in each. Create a forest diorama to establish a sense of wonder about the forest, and when you visit, see what you got right.

### On the Path:

**Step 1** Think about what you want your forest to look like and start planning out your landscape. Trace basic shapes onto construction paper. To make trees, draw the top leafy part of the trees onto construction paper. You'll want to trace four of the same shape for each tree to make it 3D. For rivers, trace out a river shape onto blue paper. Grass should go on green paper too, as well as any other plants you like. The sun should go on yellow construction paper.

**Step 2** Next, set up the background. Tape together (can be duct tape or regular tape) three pieces of cardboard so that they stand up like a trifold. After the three pieces are taped together, take a fourth piece of cardboard and place it underneath your trifold. This will act as the bottom of the landscape. Glue your rivers onto this layer.

**Step 3** For the background, glue blue construction paper onto the trifold to create the sky. Clouds can be made out of slightly pulled apart cotton balls. To demonstrate trees far in the distance, trace tree silhouettes including the trunks in darker green and glue to the sky. For far-away mountains, do the same on blue construction paper that is darker than the sky. Glue on the sun made of yellow construction paper wherever you want the sun to be.

**Step 4** Draw grass onto construction paper and cut, then glue it standing up onto the ground surface. To support your grass and other cutouts, you can use an accordion folded piece of paper and glue onto the back of the cutout, and the other shapes to the ground surface. To make the trees, roll brown construction paper into a long cylinder to make the trunk, and then glue the tree cutouts you traced earlier on top.

### Group Tour:

In a large group, create a fictional continent with a variety of biomes within. Have everyone contribute something unique and special to this new location. Then, break up into smaller teams and create dioramas of some of the biomes you described so they can come to life!

*[Continued on next page.]*



## 5. NATIVE HABITATS AND ECOSYSTEMS

### Extend the Journey:

What other habitats exist that aren't in Pennsylvania? What kind of animals live there? Read about them here: <https://ucmp.berkeley.edu/exhibits/biomes/>

**Learn New Vocabulary:** freshwater lake, forest, grassland, lakes, lumber, wetland

**Resources and Visual Aids:** Use this guide to identify types of leaves and the trees they might come from: <https://leafyplace.com/types-of-tree-leaves/>

How climate change affects different biomes:  
<https://bit.ly/2MHeVAu>

**Access Our Instructional Video:** <https://www.youtube.com/watch?v=DvuJhu5W-C8>





## 6. THE SCHUYLKILL



### Your Destination:

The Schuylkill River is the best-known river in Philadelphia. But how much do you really know about it? Learn all about the river and its fun features in this lesson, and take time to reflect on how much it does for us, and how important water is to our wellbeing and survival as a species. Create an ecosphere jar to have a mini water ecosystem wherever you go and see what happens in water on a smaller scale.

### On the Path:

**Step 1** Use your garden trowel to put sediment into the bottom of your jar, and then add water until it is as full as you would like.

**Step 2** Pull plants and some small rocks from the river and add them to the jar.

**Step 3** If you find a snail, add it into the jar! Do not add anything like an insect or a fish because it will not survive. However, the snail will not only survive, but thrive in the environment and clarify the water by filtration. Keep your jar in sunlight for the best experience.

### Group Tour:

Practice water conservation with your family. Take shorter showers, turn off the water when you're not using it, and only run full loads of the dishwasher and dryer.

### Extend the Journey:

Rivers can be found all over the globe. But, how do rivers form? Learn about the formation by rivers by watching this video: <https://www.youtube.com/watch?v=JPqxoZQt3YI>

**Learn New Vocabulary:** fish ladder, mussels, river, water treatment plant

**Resources and Visual Aids:** Did you know that you can harvest your own rainwater? Save and get 100% safe water by collecting your own:

<https://www.treehugger.com/beginners-guide-to-rainwater-harvesting-5089884>

**Access Our Instructional Video:** <https://www.youtube.com/watch?v=gHHppN4wEx0>



## 7. ANIMALS IN THE CITY



### Travel Kit:

socks (preferably long), markers, scissors, rice/beans or cotton balls, rubber band, ribbon or an old clothing/sock scrap, staples, stapler



Master Larry, USFWS  
Pixnio CC0

### Your Destination:

Everyone has seen birds and insects around the city. But what other animals are there, just out of sight? It turns out... some pretty cool ones. Learn about the unseen inhabitants of the city and their history. Make a sock snake as a fun, sustainable stress toy to reflect one of the cities animals. Take some time to think about how your life impacts those of the animals around you.

### On the Path:

**Step 1** Fill the sock with the filling of your choice, rice or beans or cotton balls. Don't tie it or seal it off. Then, from old clothing scraps, a sock, or a ribbon, cut out a tongue for the snake, any shape you want.

**Step 2** Place the tongue into the opening of the sock, then staple the mouth closed. When you staple the mouth closed, make sure that you put at least one staple through the tongue itself, so it doesn't slide out of the mouth.

**Step 3** Using a marker, draw on eyes, and then any other markings you like. You could make your snake look realistic or use any crazy color combination you would like.

### Group Tour:

Walk outside with friends and family and see what animals you can identify. How might they have adapted to live in the city?

### Extend the Journey:

Are city animals smarter? <https://bit.ly/3JYtzh2>

**Learn New Vocabulary:** Atlantic sturgeon, habitat, star-nosed mole

**Resources and Visual Aids:** What did animals evolve from? Scientists think they have found the common ancestor for all animal life today.

<https://earthsky.org/earth/ancestor-all-animals-australian-fossils/>

**Access Our Instructional Video:** [https://www.youtube.com/watch?v=G\\_KE7PsFKvw](https://www.youtube.com/watch?v=G_KE7PsFKvw)



### Your Destination:

Monarch butterflies migrate every year. Why do they do this, and what is their process? Why are they in such a decline? Learn about where, why, and how these butterflies live, and how we can protect them in this lesson. Create your own flying monarch butterfly art to honor their beauty and uniqueness within our ecosystem.

### On the Path:

**Step 1** Cut your cardstock or construction paper to 4" x 12" and cut partway down from the top in strips to create a grass effect. You can create more than one of these if you want thicker grass. Wrap your grass around the toilet paper tube and staple it together.

**Step 2** On the base of the grass, spread some glue and then add green tissue paper. Add the orange and pink tissue paper to represent flowers.

**Step 3** Draw and cut out five butterfly shapes on the orange paper, and then use the black marker to create the design on the wings.

**Step 4** Glue one of the butterflies to the base of the grass, and then glue/staple the straws so that they stick out of the grass. Glue the butterflies to the ends of the straws.

### Group Tour:

Make butterfly food with your family using sugar and water! Mix one cup of sugar with four cups of water in a pot and bring to boil. Boil until all the sugar is dissolved and let cool before putting out for butterflies.

### Extend the Journey:

Create your own butterfly feeder with this helpful article with ten DIY butterfly feeders: <https://www.constellation-guide.com/constellation-map/zodiac-constellations/>

**Learn New Vocabulary:** caterpillar, chrysalis, larva, migration, milkweed, monarch butterfly

**Resources and Visual Aids:** There are over 18000 butterfly species worldwide! See pictures and learn about butterflies in different countries: <https://www.learnaboutbutterflies.com/Species%20index.htm>



## Your Destination:

What are invasive species, and why does it matter? Where do lanternflies come from, and why are they here? Learn about some well-known and frequently seen plants and animals that don't actually belong here. Create art with weeds to help you identify plants that are invasive, as well as help to reduce their numbers.

## On the Path:

**Step 1** Go outside and pick some weeds and leaves of your choosing. Make sure that they look interesting because you will be using these weeds and leaves to create art.

**Step 2** Pull out a piece of paper and any drawing utensil you like. Place the weeds on the paper. Do you see any shapes in them? Can you arrange the weeds in a visually interesting way?

**Step 3** Draw on the paper in a way that incorporates the weeds. Maybe a leaf is a dress, or the door to a house. Could you make something entirely out of them?

## Group Tour:

Grab a friend and work together to make one giant piece of art using plants you've gathered.

## Extend the Journey:

This lesson focuses on invasive species in the US from other countries, but what about the other way around? Learn about species from the United States that are invasive in other countries:

<https://blog.nature.org/science/2019/06/03/seven-us-species-invading-other-countries/>

**Learn New Vocabulary:** invasive species, lanternfly, natural predator

**Resources and Visual Aids:** Humans are perhaps the largest invasive species in the world. Read about how we impact the Earth here, with activities and articles: <https://bit.ly/3c21XLt>



### Your Destination:

Walking your neighborhood, you might see things like old sidewalks, abandoned parking lots, or just empty areas of lawn. What can you do to make these areas greener? Learn about how to make your neighborhood greener and some environmentally friendly habits you can incorporate into your everyday life in this lesson, as well as sustainable alternatives to everyday houses. Create seed bombs so when you come across those empty grass areas, you can just throw in some seeds.

### On the Path:

**Step 1** In a large bowl, combine five cups clay, three cups soil, and one cup seeds. Instructions to make clay are in lesson 1. Mix, and add water as needed to make a paste. Press the mixture into any mold you like so it takes shape.

**Step 2** Let dry overnight. When ready to use, throw into a garden somewhere.

### Group Tour:

With a group of friends, take your seed bombs to somewhere in your neighborhood you think could use some plants!

### Extend the Journey:

How to convert empty parking lots into something fun: <https://bit.ly/3PsDo80>

**Learn New Vocabulary:** carpool, landscaping, roof garden

**Resources and Visual Aids:** What is an ecovillage? <https://bit.ly/3QmVMR3>



## Your Destination:

Pollinators play an important role in nature. Whether they be bees or butterflies or anything in between, pollinators ensure that we have growing, flourishing plants. Explore the inner workings of pollinators and how they do what they do and learn how to protect them. It's important now more than ever to be welcoming to these creatures, as natural habitats decline, and climate change is on the rise. Build a resting stop for bees in your garden or backyard to let them know they are welcome there.

## On the Path:

**Step 1** Find a bowl that you can paint and decorate to your hearts content. If there is no bowl you are allowed to paint, you can make a bowl out of clay. Instructions on how to create the clay paste are detailed in lesson 10, and the clay recipe is in lesson 1.

**Step 2** One way to attract bees to your rest stop is with the color purple. Bees love the color purple. If you don't have purple acrylic paint, blue acrylic paint will work as well. Decorate your bowl with acrylic paint to attract bees. Feel free to get creative with the purple paint and design the bowl to look however you would like.

**Step 3** After the paint has dried, place your bowl outside and fill it with water.

**Step 4** Place rocks in the bowl so that the bees have something to land on. If the bees' wings get too wet, they won't be able to fly so make sure the rocks are sticking out of the water.

## Group Tour:

Watch your bowls and see if bees like them. Is there anyone else you know who might like one? Make a bowl for them. Make some with friends for a garden and watch bees together.

## Extend the Journey:

If you are interested in bees and the danger they are in, learn about bee threats and conservation: <https://www.xerces.org/bumblebees/conservation-efforts>

**Learn New Vocabulary:** bee, pollination, pollinator

**Resources and Visual Aids:** Interested in learning more about pollination? Check this website: [https://www.fs.fed.us/wildflowers/pollinators/Plant\\_Strategies/index.shtml](https://www.fs.fed.us/wildflowers/pollinators/Plant_Strategies/index.shtml)



## Your Destination:

Community gardens are great spaces for those of us with limited yard space. They are important places for people to grow food, plants, and more importantly come together as a community. In this lesson, learn about the community gardens near you and how you can take part in them. Create a bird feeder that you can bring to a community garden.

## On the Path:

**Step 1** Place an ice cream cone on a plate so that the pointy side is up, and the cone is able to stand on its own. Just a cone, we do not want or need any ice cream for this activity.

**Step 2** Cover the ice cream cone in peanut butter. Press sunflower seeds onto the peanut butter covered cone so that only the seeds are visible. The seeds are the bird's food source and the peanut butter will help keep them in place for birds to eat.

**Step 3** If you want your bird feeder to hang from the ceiling, you can glue a string to the tiny hole at the top of the cone, so it hangs straight down. Alternatively, you can pull the string through the entire cone and hang it from both sides so that it hangs sideways.

## Group Tour:

Create a dragonfly garden with your friends. Follow the tutorial here:  
<https://www.treehugger.com/how-create-dragonfly-garden-4863982>

## Extend the Journey:

Make an indoor mini water garden. You'll need a glass container (wide cup or jar), a water plant (ex: lettuce) in a small pot, rocks, potting soil, pure water, and charcoal bits. Put the plant in your pot and add soil, press it down and cover with rocks. Take a handful of charcoal and line your glass container, then cover with pebbles. Fill the glass container with water and place the potted plant in the container. That's it, leave it to grow. If you need to get rid of the plant, please don't plant it in a pond, as these plants can be destructive to the ones already living there. Compost it instead.

**Learn New Vocabulary:** annual, biannual community garden, germination, pruning

**Resources and Visual Aids:** Looking for plant recommendations for Pennsylvania? This website has ideas of food you can grow in your garden: <https://bit.ly/3zXgC2x>



## Your Destination:

Buying local is great not only for the environment, but for the community. Farmers' markets offer a range of environmentally friendly, sustainable, and locally made products created by people in your neighborhood. Learn about what farmers' markets offer and how to create a product for your own stand: homemade deodorant.

## On the Path:

**Step 1** Into the glass jar, melt  $\frac{1}{2}$  a cup of coconut oil or more depending on how much you want. If you decide to make more than specified, make sure you adjust the recipe accordingly.

**Step 2** Add in  $\frac{3}{4}$  of a cup of baking soda. If adding an essential oil, add twenty-five drops. Good oils to use are tea tree, peppermint, lavender, or lemon. Mix, and chill for around twenty minutes. When it feels solid, it's done.

**Step 3** Personalize your product. What's its name? How would you package it? Would you paint the jar?

## Group Tour:

Work with a group to make your own farmers' market stand. Make a sign to attract customers and show off your homemade deodorants to see if anyone will buy them.

## Extend the Journey:

Make your own peanut butter. All you need is two cups of peanuts, two tablespoons of honey or sugar, and salt. First, put the peanuts in a food processor and let it run for five minutes. Then, stir in additional ingredients to make your peanut butter unique and special. The additional ingredients can be whatever you want. Once you're done adding your extra ingredients, your peanut butter is ready to be stored, sold, and eaten.

**Learn New Vocabulary:** farmers market, fruit, vegetable

**Resources and Visual Aids:** Tips for a successful farmers market booth:  
<https://www.merchantmaverick.com/how-to-sell-farmers-market/>

**Food Disclaimer:** We hope you enjoy the inspired and fun recipe featured in our workbook. Art Sphere Inc. is not responsible for the outcome of any recipe you try from the website or any website linked to or from this site. You may not achieve desired results due to variations in elements such as ingredients, cooking temperatures, typos, errors, omissions, or individual cooking ability. Recipes may not have been formally tested by us or for us and we do not provide any assurances nor accept any responsibility or liability with regard to their originality, quality, nutritional value, or safety. Please review all ingredients prior to trying a recipe in order to be fully aware of the presence of substances that might cause an adverse reaction in some users.



## Your Destination:

Clothes come and go, but the impact they leave stays for a long time. It is important now more than ever, as clothes become so available, to learn the impact our clothes have, and how we can re-use and re-vamp old clothes. Learn how to become more sustainable with your clothing and other daily products and how you can turn something old into something new. For example, turn an old t-shirt into a tote bag for shopping or whatever else you may need it for.

## On the Path:

**Step 1** Cut the sleeves off an old t-shirt, then cut the neckline so it's a low half circle. The hole you cut will serve as the opening to the bag and we need to make it bigger so the contents within are easily accessible.

**Step 2** Cut slits into the bottom of the shirt, about  $\frac{3}{4}$  of an inch wide and an inch long. When you cut the shirt make sure that you are cutting both sides. Tie a pair of strands (one strand from the front of the shirt and the other from the back) together in a knot. Repeat this two more times. You should now have three knots.

**Step 3** Take the left strand from the middle knot and tie it with a strand from the left knot, and then the right string from the middle knot and tie with a strand from the right knot. Continue this process until all strands are tied. If this is confusing, click on the link in the "Find Resources and visual aids" section for assistance.

**Step 4** Flip the shirt inside out to show the finished bag. If you want to, you can decorate the bag however you like.

## Group Tour:

Work with a group of people to create a custom bag. Repurpose a blank white t-shirt and once you create the bag, work together to give it a unique design.

## Extend the Journey:

Read the following article to find new ways to upcycle your old clothes and give old furniture new life: <https://www.apartmenttherapy.com/7-creative-ways-to-give-new-life-to-old-furniture-224117>

**Learn New Vocabulary:** sustainability, thrift store, upcycle

**Resources and Visual Aids:** T-shirt into bag tutorial:  
<https://mommypotamus.com/no-sew-t-shirt-tote-bag-tutorial/>  
Some more DIY clothes ideas here: <https://bit.ly/3pnQIFF>



## Your Destination:

Do you want to make a garden with some personality? One with tons of cool insects, pollinators, and flowers? Learn how to in this lesson. Every creature has its preferred habitat, and you have the power to bring them to you by recreating that habitat. Diversity in gardens is the best way to preserve and protect our habitats, so let's get started. Learn how to build a bee hotel to house all the guests you will attract.

## On the Path:

**Step 1** Take three cardboard tubes and cut them so they are three inches in length. Line them up or stack on top of each other and make a rectangle around them using the cardstock/old box, leaving both ends of the tubes exposed.

**Step 2** Place paper straws inside the cardboard tube; they should stack on top of each other easily. Trim them if needed, and you can glue them in if they are too flimsy. If you are using hot glue, with a parent or legal guardian present, seal off one end of the paper straws with the hot glue. This provides a backing to the habitat so the bees can sit inside protected from one end.

**Step 3** Alternative to hot glue: Find a large piece of cardboard that will cover the back of your bee hotel. Cut it into the shape of your hotel, and then glue it to the back so that all holes are covered.

**Step 4** Fold a piece of cardboard/cardstock in half and glue it on top to make a sloped roof. Punch a hole in the center of the cardboard/cardstock to thread a string through so you can hang your bee hotel.

## Group Tour:

Before you hang your bee hotel in your garden, show it off to your classmates and compare bee hotels. What did they do that is interesting? What would you do differently?

## Extend the Journey:

Collect seeds and grow a pollinator wildflower garden. This includes seeds like purple lupine, white yarrow, ferns, shrubs, and berry plants. The following guide has all you need to know in order to get started: <https://www.bobvila.com/articles/wildflower-garden/>

**Learn New Vocabulary:** bumblebee, carpenter bee, hornet, yellow jacket

**Resources and Visual Aids:** Why do bees dance? Read why: <https://schoolofbees.com/why-do-bees-dance/>



### Your Destination:

Where does our food come from? Have you ever noticed that there is food at the grocery store all year long, even when it's not in season? How does it get there, and why does that happen? Also learn how to grow your own food, and what will grow near you. Growing your own food is a great experience and will save you some last minute trips to the grocery store. Plant a small vegetable garden to kickstart your food journey.

### On the Path:

**Step 1** Gather seeds for vegetables and berries (blueberries, cherry tomatoes, strawberries) or tiny starter plants (succulent and cacti).

**Step 2** Carefully read and follow the instructions on the seed packets. Make sure you are planting them in a place that gives them the sun they need and is somewhere they can be easily watered. Lay down soil for the plants and put in compost/fertilizer.

**Step 3** Place your seeds or starter plants in the soil and watch them grow.

### Group Tour:

Share the food you grow with your classmates. Have everyone bring in their homegrown fruits and vegetables and share them with each other.

### Extend the Journey:

Learn how to compost! Read the following step-by-step guide to learn how to create compost that will help your plants grow.

<https://www.bhg.com/gardening/yard/compost/how-to-compost/>

**Learn New Vocabulary:** compost, fertilizer, seasonal fruit

**Resources and Visual Aids:** How are herbs you can grow used around the world? Read about it here: <https://wisdom.thealchemistskitchen.com/introduction-to-herbalism/>



## Your Destination:

Earthquakes might not be super common in Pennsylvania, but they still happen. Learn all about where and how earthquakes happen, and what's really under Earth's surface. Create your very own earthquake detector so that you will be prepared if it does.

## On the Path:

**Step 1** Cut a cardboard box so the top is completely open and it looks like a sandbox (no top and no flaps). Flip the box on one of its sides and cut two holes in the top side to thread string through.

**Step 2** Tie string around the top of a cup. Make sure you have a lot of excess string so you can thread the string through the holes you put in the top of the box, and let the cup hang. The cup should be hanging with its base closest to the ground.

**Step 3** Poke a hole in the bottom of the cup approximately the size of a marker, and place the marker in the hole so it reaches the bottom of the box. Add coins, rocks, or any small weights to the cup to help weigh it down and make it easier for the marker to record movements.

**Step 4** Cut a paper into four inch strips, and then cut slots through the bottom side of the box. Thread the paper through the slots.

## Group Tour:

Have someone create an 'earthquake' and see how different movements are recorded on your seismograph.

## Extend the Journey:

Learn about the biggest fault lines in the United States by reading this article: <https://www.wired.com/2008/10/five-us-earthqu/>

**Learn New Vocabulary:** earthquake, fault line, seismograph

**Resources and Visual Aids:** Visual project tutorial:

<https://www.youtube.com/watch?v=41RzGwZINOK>

How did ancient cultures explain earthquakes? Read about it here:

<https://milford.lib.de.us/2020/07/25/fantastic-folklore-earthquake-myths/>



## Your Destination:

Taking time to sit and connect with nature is a great way to unwind and grow spiritually. Nature can be something some of us take for granted or something others can't get enough of. Either way, learn how to appreciate, connect to, and spend time with the world around you. Earth is a beautiful, complicated place that we have the privilege of exploring. Learn how to create art from nature in a way that draws from your creativity without permanently altering the landscape.

## On the Path:

**Step 1** Go into the forest and collect materials that are either on the ground or about to fall. Really look and pick up pieces that you connect with. For example, pinecones, leaves, and rocks. Avoid using anything manmade like plastic wrappers or glass bottles.

**Step 2** Lay down the materials and make any design you want. Maybe you have a ton of leaves and want to make concentric circles. Or you have a ton of rocks and want to make rock towers. Be free with it.

**Step 3** Admire your art and leave it with nature. Don't do anything permanent.

## Group Tour:

Take a moment and reflect with others about what you saw on your art journey. Any plants, insects, etc. that you hadn't noticed before? Anything that stood out to you? How did you feel about seeing your art in nature, did you feel more connected?

## Extend the Journey:

Look at one of the most famous artists making art from nature, Andy Goldsworthy:  
<https://www.liveenhanced.com/andy-goldsworthy-art-and-images/>

**Learn New Vocabulary:** aroma, gratitude, nature art

**Resources and Visual Aids:** Learn about the need for indigenous people in sustainability and nature: <https://bit.ly/3S543cD>



## Your Destination:

The Moon is a comforting presence in the night sky. It does a lot for us, and in many cultures has many different, interesting stories and beliefs. Learn a little bit about the stories behind our very own moon, as well as how it interacts with the Earth and affects our everyday lives. Make your own telescope so you can better observe the moon.

## On the Path:

**Step 1** Cut one of your tubes lengthwise up the side. On one end, pull the sides so they slightly overlap. Holding it in place, put this tube into your other tube. Once in, let go.

**Step 2** Use tape to put one of the lenses/glasses to the outer edge of the inside tube, the curved side should face the inside. Then tape the second lens to the outer side of the second tube, with the curve pointing outward.

**Step 3** When you look through, place your eye on the lens on the inner tube. To focus, slide the inner tube in and out.

## Group Tour:

With a group, research stories about the moon from a culture we didn't go over in the lesson. If that culture doesn't have any stories about the Moon, find some fun facts about the Moon's relationship with Earth.

## Extend the Journey:

Make a light-up moon. You'll need toilet paper, glue, battery candles (if you don't have those, any battery light will work), a balloon, a small bowl, and paintbrushes.

<https://simplytodaylife.com/3-d-light-moon-craft-scott-tissue-scottvalue-sponsored/>

**Learn New Vocabulary:** gibbous, moon, orbit, tides, waning, waxing

**Resources and Visual Aids:** What is an ecovillage? <https://bit.ly/3QmVMR3>

Learn about the moons of other planets in our Solar System here:  
<https://www.go-astronomy.com/planets/planet-moons.htm>



## Your Destination:

The stars have been with us for as long as the world has existed. We see them every night and create constellations and stories to tell the tale of great sky warriors. Learn about some of the most famous constellations, their lore, and astrology, as well as what stars are and how they work. Learn which constellations you can see in the sky every night and when they will be there. Create your very own constellation wall hanging to bring the stars with you everywhere you go.

## On the Path:

**Step 1** Paint your background a solid color (like black or dark blue) to make the constellation visible.

**Step 2** Paint the safety pins/toothpicks white to represent the stars.

**Step 3** Using a picture of your chosen constellation, place in your pins/toothpicks accordingly. Tie your white string to the first pin in your constellation, and then wrap around each pin until you have the constellation shape clearly. Tie off the string and cut any extra string length.

## Group Tour:

Compare constellations with a friend. Which constellations did you choose? Why?

## Extend the Journey:

Learn about the zodiac constellations and astrology:

<https://www.constellation-guide.com/constellation-map/zodiac-constellations/>

**Learn New Vocabulary:** asterism, astrology, astronomy, constellations, stars, zodiac signs

**Resources and Visual Aids:** The Hubble telescope is a giant telescope made by NASA that can see to the furthest ends of the galaxy. It takes pictures every day. What did it see on your birthday? Check here:

<https://www.nasa.gov/content/goddard/what-did-hubble-see-on-your-birthday>

## ABOUT US



Art Sphere Inc. (ASI), founded in 1998, provides meaningful free arts programs for underserved populations in an effort to engage the creativity in communities, empower neighborhoods, explore the positives in peoples' lives, and heal the mind, body, and spirit through the arts.

Working with hundreds of volunteers every year and partnering with numerous civic, academic and governmental organizations, our grassroots events help support inner-city neighborhoods. ASI's in-school, after-school, in-person and online workshops lay the framework for the arts to nourish the character and development of youth, open up a new world of social engagement and reinforce the school curriculum.

We appreciate the generous support of Penn Treaty Special Services District and other foundations and institutions who among our other supporters have paved the way for Art Sphere Inc. to continue to serve the public through on-site and online education programs.



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