

## Introduction to the Plant Arc



### Indigenous Storywork – Opening Stories

We ground our learning by opening with story. As Indigenous peoples, our stories tell of our observations and hold vast amounts of scientific knowledge as well as traditional teachings and values. Here we offer two plant stories -- one Anishinaabe story from the Great Lakes and one Samish story from the Pacific Northwest. As you engage in these activities, you might refer back to these stories to inform your understanding. We also encourage you to draw on other stories that you know.

- ◇ [Anishinaabe maple sugar story](#) (first 7 minutes)
- ◇ [Samish Story: Grandmother Cedar](#)

### Indigenous Science - Overview

Since time immemorial, Indigenous peoples have learned about the world through our relationships. Plant knowledge in particular has always been central to Indigenous lifeways. We learn from plants through our experiences with them whether it be harvesting medicines, growing food in a garden, or simply paying attention to what grows around us. The plant activities are meant to support this kind of experiential and relational learning. You will be prompted to look closely, reflect using all of your senses, and wonder about big ideas as a family.

### Arc Gifts and Teachings

ISTEAM is firmly grounded in the teaching that plants are our first teachers. Paying close attention to plant life helps us build stronger relationships with lands and waters, and deepens our place-based knowledge. Plants play important roles within ecosystems so learning from plants teaches us about the many beings that plants are in relation to and about the ecosystems as a whole. Plants can also teach us how to live a good life in harmony with our environment, such as how to care for and respect those around us or how to thrive in difficult conditions.

### Our Gift – Our Indigenous Pedagogy

- ◇ We hope these plant activities help you and your family:
  - ◇ Strengthen your **relations** with plant relatives and gain a deeper understanding of the web of relations around you. Consider how you are connected to that web. What are different relations that you have? What does it mean to be in relation with someone or something?
  - ◇ Think deeply about the **roles** you have in this place and how they are interdependent with the roles of other living beings. What would happen if someone forgot their role? How might these roles shift over time?
  - ◇ Reflect on what **responsibilities** you and others have to plant relatives and the place you're in. What are everyday decisions that you and others can

make to support health and wellbeing for others? Why are these responsibilities important?

- ◇ Learn more about **gifts** you have to offer others and also what gifts plant relatives bring to this place. Cycles of gift giving and receiving are present throughout the natural world. What gifts do you have to offer plants? What gifts do they have to offer you and other animals?

### **Indigenous Observing and Activities by Season**

Indigenous peoples have always adapted their living to the changing of the seasons. While ISTEAM typically takes place in the summer, the majority of these activities can be done in any season. We hope that you engage with these activities over the course of the year. Observing changes throughout the seasons can deepen your relationships with and understanding of the place around you. This is especially true for plant life. You might start paying attention to a plant in the Summer and learn how it adapts going into the Fall, Winter and Spring. In addition to seasonal changes we also encourage you to think about and observe changes from year to year. Ask children to consider what this place was like 100 years ago, and what it will be like 100 years in the future.

### **Relationships with Other Arcs**

An important component of Indigenous science is the understanding that all things are related. Nothing exists in isolation and so we hope that you engage with these different activities holistically rather than viewing them as separate from each other. As you engage in the plant activities, think of them in relation to water, birds, and food activities. You might combine multiple activities.

- ◇ **Water:** Plant relatives have special relationships with water as the health of one is tied to the health of the other. Plants depend on the right water conditions and are made up of water. Conversely, many bodies of water depend on plants as food for inhabitants, filtration and plant roots to keep embankments in place.
- ◇ **Plant and bird relatives** are dependent on one another. Birds rely on plants for things such as food, nesting and cover from predators while plants rely on birds for spreading seeds, eating insects and limiting the spread of other plants.
- ◇ **Food Sovereignty:** Plant relatives are vital to food sovereignty across communities. Not only are plants important staples to any Indigenous diet (corn, wild rice, berries, camas etc.) they also support healthy ecosystems for fish and game. As plants nourish humans and other beings what are things that we can do to nourish them?

### **Visioning our futures**

How might climate change bring about new sets of relations for our food, plant, bird and water relatives? Because plants have always been our first teachers, it makes sense to look to them when thinking about our futures. Consider how plant relatives support other plant and animal communities. For example, strawberries offer fruit to birds, deer, bears, humans and other animals. The recipients of these gifts help spread seeds so that strawberries continue to grow. What do plants teach us about how to be in relation with other communities? Black and Indigenous communities both have gifts to offer and

contribute to each other's thriving. Our relationships with invasive species, introduced species and migrating native species can tell us a lot about how we can adapt to our rapidly changing world. According to people of the Salish Sea, Nettle taught us how to be strong and resilient in times of fear and change. Practicing deep and meaningful observations of our plant relatives and their relationships with other species and kinds will give us guidance. It is also our responsibility to develop an understanding of our changing ecosystems and listen closely to what our relatives need. It may be that sometimes they need us to help them thrive and adapt.

### **Activities**

Plant activities can be completed in any order and in many different places. If your family is particularly interested in an activity, do it again in another place or at another time! We encourage you to involve the whole family in the activities and share what you've done with family and friends nearby or in other communities.