Signs of Spring Fact Sheet

1. Deciduous trees lose their leaves in the winter. Coniferous trees are also called evergreens because they keep their “leaves”, or needles, throughout the year.

2. In early spring, deciduous trees will start to grow buds at the end of their branches. These buds are baby leaves getting ready to emerge. During April and May, you will notice your deciduous trees exploding with leaves. These leaves help the tree take in sunlight and produce food for itself through photosynthesis. With coniferous trees, you will see different kinds of buds. Since the needles stay throughout the year, conifers use early spring to start developing their cones. These cones are actually how these trees reproduce and create more trees.

3. Acorns, samaras, and pinecones are all seeds from local trees. Acorns come from oak trees, samaras come from maple trees, and pinecones come from pine trees. Different trees have different ways of distributing seeds. Acorns fall close to the parent tree, but they often grow elsewhere because squirrels move them. When preparing for winter, squirrels will bury acorns all over and sometimes forget about them – resulting in new oak trees. Samaras have a different approach. They are designed to fly in the wind. The wind will carry those seeds farther away from the parent tree to prevent competition. With pinecones, the seeds are hidden within the cone to protect them from predators while they mature. Once the conditions are right, the cones will open and release the seeds where they will be carried by the wind.

4. All plants will look, smell, and feel different because each plant is adapted to its own place, or niche, within an ecosystem. Think of an ecosystem as a neighborhood. Everyone in your neighborhood has an important job that they do that helps the community – mailmen, doctors, police officers, farmers, teachers, etc. Plants can develop different shapes and textures in order to help them do their job or survive. For example, some plants have large, flat leaves that are made to soak up as much sun as possible, while other plants have smaller, thicker leaves that are made to hold a lot of water. Some plants have grown defense systems that prevent animals from eating them, like poison ivy, rose bushes, and nettles. Other plants have evolved to create delicious fruits that they hide their seeds in. When these fruits are eaten by an animal, the animal will drop the seeds in their scat (poop) and the seeds will grow there.

5. When examining plants, it’s helpful to understand the purpose of the different parts of a plant. As described above, leaves are important for photosynthesis – the process by which plants make their own food from water, sunlight, and carbon dioxide. Leaves provide nutrients to help the plant grow. Stems bring water from the ground up to the leaves. The stems also grow taller to bring the leaves closer to the sun. The roots collect water and nutrients from the earth and send them up to the leaves through the stem. Roots also keep the plant steady in the ground. The stronger and larger the root system, the harder it is to pull the plant out. When thinking of trees, the root system often resembles the branching system. Flowers are the reproductive organs of the plant. Flowers rely on animals, water, or wind to pollinate them so they can produce seeds.

6. Botanists are plant scientists. They study plant structure, genetics, and ecology (how they fit within an ecosystem). When we study plants, we can understand how they grow, how their adaptations help them survive, and how they fit within their ecosystem. When you are studying your plant, make sure to watch to see if any animals interact with it. Plants and animals often rely on each other for food, protection, seed dispersal, pollination, and more. Watching 1 plant can open you up to a whole new world of exploration within your backyard.

7. After looking at and analyzing data, scientists often think about what questions they have. These questions then lead to new studies. You can make your own study like a botanist by asking a question about the observations on your data chart. Think about a question that you can answer just by watching a plant over time. It can be based on weather, animal interaction, or anything else you can think of. Think of a hypothesis (educated guess) and come up with a plan for how you will take data. This can be a chart like the one on the worksheet, or you can make your own method for data collection. Once you have your methods figured out, you should start collecting data. The longer you collect data, the better your results will be. When you finish with your data collection, look at your data and see if your hypothesis was correct. After scientists finish a study, they often repeat that study to see if they get the same results. This helps scientists make sure they are getting the best information possible.