**Textures in the Garden for K and 1 Betty Darleen Horton**

**dhortonky@gmail.com**

**Kindergarten – 1st grade: How can we use texture to discover and observe patterns in the garden?**

***NGSS: Interdependent Relationships in Ecosystems: Animals, Plants, and their Environment***

***Crosscutting concepts: Patterns \* Patterns in the natural and human designed world can be observed and used as evidence. (K-LS1-1)***

***K-LSI – 1 (Directly compare two objects with a measurable attribute in common, to see which object has “more of” / “or less of” the attribute, and describe the difference.)***

**Pre assessment: Can students observe texture and patterns in a garden?**

**Pre garden experience- read Spiky, Slimy, Smooth: What Is Texture? By Jane Brocket, then discuss examples of the vocabulary words – especially applied to plants / fruits / vegetables. Also talk about patterns on leaves – show an example. At this point, it is enough to see that leaves have sections divided by veins – children will only need to see that the shape of the sections are the same for leaves on the same plant.**

* **Sitting in the open space in the center of the garden, explain the guidelines of the activity to the children and adults.**
* **Remind students that the object is not to actually pick the leaves or plants but to observe (look at) them closely and to touch the plants to see if they are smooth or rough (may call it fuzzy).**
* **Have a signal that tells children it is time to gather back in the center of the garden. Divide students into small groups of two or three students. Spread out adults to keep an eye on students to be sure they do not pull up the plants and to guide or model the activity.**
* **Tell children to: Find plants that are smooth and look at the leaves. Is there a pattern on the leaves?**
* **Find plants that are rough or fuzzy and look at the leaves. Is there a pattern on the leaves?**
* **When students gather back in the center, have each group join another group to share what they discovered.**
* **Have a supply of leaves on hand for students to make leaf rubbings. Clipboards would be very helpful for the young students to use to both secure their leaf under the paper and for a flat rubbing surface as well.**
* **Give each student a small piece of blank paper and a crayon without the paper covering (small pieces work best for small hands). Demonstrate how to make a simple leaf rubbing on the paper and have the children write their names on the paper. The leaf rubbing is a tangible way to see the patterns in the leaves and to have a product to take home.**
* **Post assessment: Students verbally describe the plants they touched using vocabulary words such as smooth or rough. Students verbally describe the patterns they saw on leaves – this will be in limited vocabulary such as “the same on both sides”. Students will use their leaf rubbings to show their pattern discoveries.**

**Math Extension – looking at size and number: How many leaves could be counted on a plant? Were all the leaves the same size? Were some leaves larger than others?**

**Science, Art, Math, Speaking and Listening**