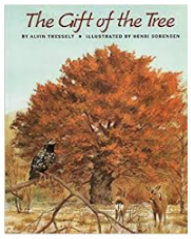
WEEK 4, Day 1



Math Center: Scenes from *The Gift of a Tree*

Children use geoblocks and flat shapes to recreate the stages of the tree's life cycle.

Big Ideas	Children will: ● communicate mathematically through multiple forms of expression. ● persevere in solving questions with a growth mindset. ● solve mathematical problems using a variety of strategies. ● make sense of the world around them through mathematics. ● connect math to other learning and real-world examples. A strong, interdependent math community has qualities, such as: ● shared responsibility, collaboration and support for each other.
Guiding Questions	What does it mean to be a member of a math community? How do you use math tools? How do you most effectively communicate your mathematical thoughts and ideas? Why is collaboration and listening to the ideas of others important?
Vocabulary	**flat shapes**: two-dimensional shapes having only two dimensions (e.g., length and width but no thickness) **solid shapes**: three-dimensional objects having three dimensions such as length, breadth and height **attributes**: a trait that describes an object **above**, **below**, **beside**, and **next to**: prepositions that indicate location of an object
Materials and Preparation	● *The Gift of the Tree*, Alvin Tresselt ● geoblocks ● solid shapes ● pattern blocks ● tree life cycle cards

	● optional: additional materials to build shapes such as sticks, paper, cardboard, tape, and connecting cubes Have a routine in place to photograph and document children' s creations. Prior to this Center lesson, complete Read 1 of *The Gift of the Tree* by Alvin Tresselt.
Intro to Centers	*We've read* The Gift of the Tree *by Alvin Tresselt. We paid attention to key details in the text and illustrations that helped us answer this question: How does the tree change in the story?* Display the book, *The Gift of the Tree*. *Let's look back at the illustrations to remind ourselves of how the tree changed.* Slowly show each page giving children time to study the illustrations. Invite children to share what they notice. Note key words children use to describe the changes of the tree (e.g., size, shape, position). *I noticed that the tree's shape changed a lot in the beginning of this story. This made me think of some of our math tools that we have used to build and create shapes.* Display the collection of geoblocks, solid shapes, and pattern blocks. *How might you use these shapes to show one of the stages of the tree's life?* Invite children to turn and talk. Invite children to touch the geoblocks and pattern blocks, if needed. *At the Math Center this week, you will recreate the different stages of this tree's life using solid and flat shapes. You can also include beautiful stuff!* Describe the expectations for cleaning up and leaving the area when finished.
During Centers	Children compose solid shapes to represent the stages of the tree's life cycle. They may reference the tree life cycle cards. Children may also build representations of the creatures that depend on the tree. Children use **solid** and **flat shapes** to build new shapes. In doing this, children work to recognize, name, describe, and build solid shapes from the environment. Children may notice similarities between the shape of the tree or animals in the illustrations and the shapes they are using to build with. ("*This stump has a point like a triangle, but it is not a triangle.*"). Encourage children to describe the shape. As children identify solid shapes, remind them to also describe the location of the object using positional words such as **above**, **below**, **beside**, and **next to**.

	Children may notice **attributes** of solid shapes in the context of building, such as that a sphere is round and rolls. Follow the children's lead and use precise mathematical vocabulary to narrate what they are doing. Direct their attention to use their own language to describe the attributes of flat and solid shapes. Take observational notes about children's exploration and language. Notice if children: ● Distinguish between flat and solid shapes. ● Use their own language to describe and compare attributes of shapes. ● Build shapes from components. ● Put shapes together to compose new shapes. ● Use positional words to describe the locations of shapes. Possible extensions: ● Add more illustrations from the book. ● Have children draw and record their models.
Facilitation	● Can you tell me about your model? What do the shapes represent? ● How did you decide which shapes to use? ● How did you decide where to place the shapes? ● How could you represent _____ with shapes? ● Did you notice anything in a classmate's model that gave you an idea about your model? ● Could you revise your model to show more features from the illustration? What shapes would be helpful to add or take away? Would moving any shapes be helpful? ● How is your model the same or different from ___'s model? ● What is something that has been challenging for you during math center? What did you do? How were others able to help you?
Standards	**Addressing:** **QR.C.1** Know the number names and the count sequence. ● **K.CC.A.1; K.CC.A.3** **GR.C.1** Identify, describe, analyze, compare, create, and compose shapes based on their attributes. **Building Towards:** **SR.C.1** Describe and compare measurable attributes. ● **K.MD.A.2** **Standards for Mathematical Practice:** 1-8