Unit 5: *Shadows and Reflections*

Week 5

Full Day Schedule

Unit 5 Week 5	**Day 1**	**Day 2**	**Day 3**	**DAY 4**	**DAY 5**
Read Aloud					
Centers					
Intro to Centers					
Art Studio					
Easel					
Writing and Drawing					
Library & Listening					
Dramatization					
Blocks					
Discovery Table					

Puzzles & Manipulatives					
Technology					
Thinking & Feedback					
SWPL Whole Group	Refer to Clipboard Directions				
Whole Group Lessons	**LFOAI:**	**Math:** How Many Creatures in Our Class?	**LFOAI:**	**LFOAI:**	

Small Groups	***Group1 Literacy*** High Support: Shadow Tracings **Group 2 Math** Low Support: Mirror Building **Group 3 Independent** Teacher's Choice	***Group1 Literacy*** **Group 2 Math** Medium Support: Sets of Creatures Medium Support: Number Line Game **Group 3 Independent**

Outdoor Learning	Refer to Nature Extensions for Individual Lesson plans	small groups: dissect seeds	

Unit 5  Week 5	***Songs, Word Play, & Letters***

Day 1

Materials: Tag board strips with the first four verses printed on them, pocket chart, book: *Clap Your Hands*

BOOM! BANG!

Procedure:

- Read the title with children. Point to and sound out B in Boom, B in Bang.
- Recite the poem once, and then distribute the tag board strips. Help children recite the verse on their strip.
- Recite the poem again, cueing children to recite only the verse on their strip, for the first four lines. Cue them to recite the rest in unison.

CLAP YOUR HANDS!

Procedure:

- Show the book. Read the title, pointing to and sounding out C, l, and p in Clap and Y and r in "Your."
- Read the book, keeping the natural rhythm of the verse. Linger on the beginning sounds of the second word in a rhyming word pair (e.g. four/floor, down/clown, bird/word) to encourage children to chime in.

IF YOU'RE HAPPY

- Sing verses for "clap hands,"" stamp feet, " shout hurray," "jump in place," and "raise arms."

Day 2:
Materials: poetry poster, two cards with Rain and drops written on them cards with fiddle-ee-fee and Barnyard Song printed on them

RAINDROPS

Procedure:

- Show the cards Rain and then drops. Tell them these two words together are the name of the next poem. Help children sound out each word.
- Recite the poem and model the motions.
- Read and underline the title. Underline raindrops in the first line. Then skip down to the third line, and underline the words, pitter-patter, and ask if children know what words these are. Sound them out with the children, point to P, tt, and r, in each word.
- Then point to the line in the second verse with "Pitter-patter, raindrops!" Tell children they can read this line with you. Point to the P, tt, and r in Pittter and patter, and then to r, d, p, and s in Raindrops, as you read the words slowly.

BARNYARD SONG

Procedure:

- Show the children the card with fiddle-ee-fee on it. Tell them that this is what the cat says, repeatedly, in a song they know. Point to f, d, and l in fiddle, and to f in fee, while helping children sound out the words. If they don't recall the title, show them the card, read it and sing the song.

GOOD MORNING MRS. HEN

Procedure:

- Turn to the poem in the Big Book of Poetry and ask children, "Do you remember the title of this poem? You can read the title with me." Point to and sound out G in Good, and then underline the rest of the letters, as you read the word, lingering briefly on the 'd' at the end. Point to and sound out M in Morning, M in Mrs. and H in Hen. Underline the rest of these words with your finger as you read it.
- Recite the poem naturally.
- Recite the poem a second time. Then say, "Count the chicks with me as I point to them in the illustration." Talk about which ones are red, yellow, brown and speckled (point to them as you discuss this).

MY SHADOW

Procedure:

- . Review some characteristics of shadows, using what children know from recent story books and other unit activities.
- Recite the poem.

Day 3:
Materials: poetry poster, chart of children's names with W as first letter, *t*wo sets of lowercase alphabet cards

OPEN SHUT THEM

- Position fingers and sing the song.

THE LITTLE TURTLE

- Read the title. Point to and underline The and read it quickly as a sight word. Point to and sound out L in Little and T in Turtle.
- Recite the poem with the children and model the motions.

LOOBY LOO

Procedure:

- Tell the children that next they are going to sing this song. Stand up and ask them to stand up too.
- Sing the song as usual, doing the motions.
- Add a new verse or two (e.g., "back," "right forefinger")
- Sing "Willoughby Wallaby Woo" before doing the next activity. Prepare a chart with children's names using W as the first letter (e.g., Windy for Cindy, Wim for Jim) and point to each name while singing a verse for each child in the group.

LITTLE LETTER/BIG LETTER CHANT

Procedure:

- Distribute uppercase letters that match the lowercase letters selected. Tell children they are going to do the uppercase and lowercase matching activity again.
- Do this chant: *I have the little [name a letter], as you hold it up to show. Take a look to see. Someone has its partner. Who might that someone be?*
- Remind the first few children that they can say: *I have the big [letter name]* when they hold up their card.

Day 4:
Materials: poetry poster, book: *Night Job*

CLAP YOUR HANDS
Procedure:

- Sing several familiar verses and the new ones from last time (flick finger, wiggle nose)

LOOBY LOO
Procedure:

- Tell children the next song they are going to sing will be "Looby Loo". Standup and ask them to stand up too.
- Sing the song as usual.

NIGHT JOB
Procedure:

- Read the title and point to and sound out N in Night, J in Job. Read the name of the author and the illustrator. Read the book, keeping the natural flow.

HANDS
Procedure:

- Point to and read the title, sounding out H.
- Recite the poem as usual and model the motions.
- Tell children they are going to do the poem again but change one part. Tell children to listen carefully.
- Recite the poem again and change "Then give a clap, to then give two claps".

Day 5:
Materials: poetry poster, two sets of lowercase alphabet cards, The Green Grass felt pieces and flannel board

THE GREEN GRASS GROWS ALL AROUND

Procedure:

- Tell children they are going to start with a song they learned a few weeks ago and sing the song as usual.

WINDSHIELD WIPER

Procedure:

- Make the wiper motion and ask the children what poem they think will be next.
- Recite the poem twice.

LITTLE LETTER/BIG LETTER CHANT

Procedure:

- Distribute uppercase letters that match the lowercase letters selected. Tell children they are going to do the uppercase and lowercase matching activity again.
- Do this chant: *I have the little [name a letter], as you hold it up to show. Take a look to see. Someone has its partner. Who might that someone be?*
- Remind the first few children that they can say: *I have the big [letter name]* when they hold up their card.

IF YOU'RE HAPPY

- Sing song as usual.

Unit 5 Week 5	***Small Groups: Sets of Creatures*** **Medium Support**	**Math** **SG 1**	**Standards:** MELDS.M.CCC.PS.8 MELDS.M.OAT.PS.3 MELDS.M.OAT.PS.4

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Guiding Math Ideas:

- Quantity- Reinforcement of all related concepts
- Beginning Composing and Decomposing Numbers
- Acting out story Problems: Forming and reforming groups

Math Concepts from Unit Learning Progressions:

- Sets are special kinds of groups
- Counting groups and comparing sets
- Using story problems to visualize operations
- Problem Solving: Finding meaning

Materials:

- *Five Creatures* by Emily Jenkins
- Ten Frames- 1 or more per child- Math Materials. Also use Grid Games/10 Frames in Teacher Resources for extra 10 frames
- Counters
- Creature stories/questions
- Paper
- Pencils or markers

Math Vocabulary:

- Creature: Creature: an animal or human
- All together: the total number of a set or group.
- Sets: things groups together with a purpose or meaning

Preparation:

This activity follows the Large Group *Five Creatures*

This activity assumes that a child's creatures (humans and animals) won't exceed 10 (the number of slots in the ten frames). If some children's creature families are larger than 10, provide them with an extra 10 frame, or make other accommodations for larger numbers.

Make extra 10 frames if needed-

Place paper and drawing materials on table. Reserve 10 frames and counters for later.

Write down some creature questions to get children started creating their groups.

Procedure:

Show book.

*We had fun making Creature groups with people math. Today we are using our ten-frames and making some **creature** groups about our families.*

First let's think about our families and how many creatures live with us. Let's draw a picture and write names, number words or numbers about our families.
By this time in the year, you know a lot about the children's families and can easily chat with them, point out differences and similarities and suggest things they might add:
I see you are drawing 2 babies. Are those your twin sisters?
I know your grandmother lives with you. How could you draw her?
I remember the story you told me about finding your lost hamster. Better put him in the picture!
Make observations and encourage children to write letters and numerals on their pictures.
Be sure to total the number of creatures, note this for children through words and writing numerals:
You have 7 creatures in your family **all together**. [Children may be able to do this independently]
*Now let's make some Creature **sets**- Remember that **sets** are special groups that are put together with a purpose. How could we use these 10 frames and counters to show our different creature sets? Here are some ideas—Let's try one together.*
How many grown-ups are in your creature family?
How many children?
Children use 10 frames and make one group of adults on one row and one group of children on bottom row.
*Do you have more adults or more children in your creature **sets**? Let's count.*
10 frames are excellent tools for comparing sets and describing relationships. As children work, point out the relationships between the two (or more) groups they are forming.
I think you have fewer people than animals in your home!
I see that you have the same or equal, numbers of children and grown-ups in your family.
1 creature (your cat) has brown hair in your family and 6 creatures (your 2 dogs and 3 people) do not.
Encourage children to think of ways to sort and group and compare. Provide materials for them to count and write numerals if they wish, or taking dictation on a separate piece of paper. Work individually with each child if possible.
Wrap up:
We are going to leave our book Five Creatures, our 10 frames and our counters in Small Group Area for you to play with this week. There are lots of ways you can sort and count the different creatures in your families. You can also make more pictures if you wish.

Strategies to Provoke Math Thinking:

- Building skills in intentional ways: Unit 1 started with an activity *Who Lives with Me?* Children described their families and placed manipulatives representing family members inside a simple house template. Many months later, we are re-visiting family groups, adding complexity by using the concept of creatures, and then sorting and comparing based on attributes and creating sets. Over the year children have gained knowledge and skills about counting, cardinality and sets. Next steps are adding and subtracting using 10 frames.
- Creative Categories: Often, we focus on obvious attributes- color, size, or shape. *Five Creatures* opens up our thinking about the many different ways we can sort and group. During Center Time, encourage children to make unique sorting groups by providing them with a wide

assortment of nature items and asking them to put them into groups and then describe their reasoning. Nature items have lots of unique characteristics, such as unusual textures or shapes, and children will more opportunities to develop their powers of observation and creativity along with their math skills.

Adaptations for Additional Challenge:

- Addition and Subtraction using Creature Sets: Children may be experimenting with operations. Addition is typically the first operation that children use, but some children may also be subtracting. Based on your observations, support children who are engaging in operations, and provide materials for activities for them.
- Part/Part Whole: Use the book *Each Orange has 8 Slices* by Paul Giganti Jr, from your Unit 5 Book List as a teaching tool for making connections between creating sets and understanding part/part whole relationships. This book has illustrations of the 3 types of part-part-whole relationships: A whole can be broken down into equal parts (Orange/segments); Whole things are made up of unique parts (Tricycles); A group of similar items can make a whole (nests of eggs). Use these examples to deepen study of part-part-whole relationships by providing toys and manipulatives that represent the different types.
- Funniest Group: Have fun with creative ways to group items in the classroom, including the 5 senses. Are there things that feel like cotton? Things that are pointy (leaves, pointing fingers, edges of the table? People who can raise their eyebrows? Use the entire environment to group and count. Create a Funniest Group Poster that children can add to over several weeks.

Documentation:

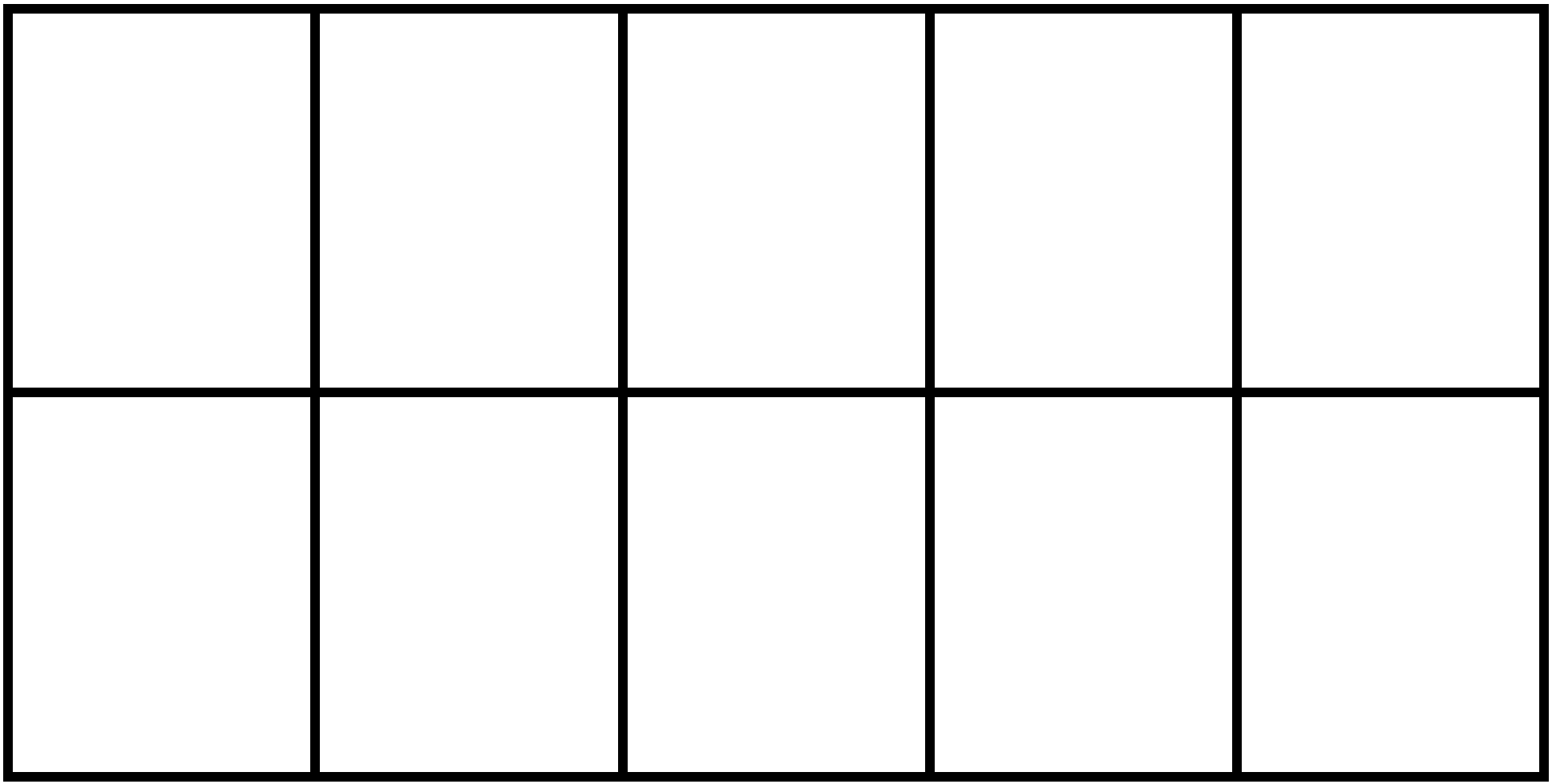
Take photos of the family pictures children create and make notes about how they formed groups, and their grasp of counting and comparisons. If you took pictures, as suggested, in Unit 1 of children's houses/families in Who Lives with Me? Compare and share the photos with children, and tool to document learning for planning and for families.

Provocation:

Science and Math both use classification, so skills in math sorting and grouping will also be useful to young scientists. During your next science lesson, note the embedded math skills. This entire Unit on Shadows and Reflections is a clear combination of science and math. An excellent source of simple and scientifically accurate explanations of concepts of shadows and reflections used in this Unit is *Light: Shadows, Mirrors and Rainbows* by Natalie Rosinsky. It is not listed in your math resources, but is inexpensive to order, or could be found in your school library.

* This activity is adapted from an activity in *The Young Child and Mathematics* (2nd Edition) by J. Copley.

10 Frame or
Grid Game



Unit 5  Week 5	***Small Groups: Number Line Game*** **Low to Medium Support**	**Math** **SG 2**	**Standards:** MELDS.M.CCC.PS.1 MELDS.M.CCC.PS.2 MELDS.M.CCC.PS.4

Guiding Math Ideas:

- Rote and Rational Counting.
- Quantity- Reinforcement of all Related Concepts.
- Problem Solving- Acting out Problems

Math Concepts from Unit Learning Progressions:

- Rote Counting Strategies.
- Rational Counting Strategies: Connecting groups to number names- stable order (Unit 4)
- Numerals communicate and represent math ideas.
- Using the Number line for Counting.

Materials:

- Paper plates with numerals 1-10 on one side and sticky dots of the number on the other side
- Blue painter's masking tape
- Number cards 1-10 (Optional)
- Classroom Number Line poster, if visible
- *10 Black Dots* by Crew (from Unit 1, used as extension
- *Goodnight Numbers* by McKellar (from Unit 1- used as extension.

Math Vocabulary:

- People Math: using our bodies to do math
- Number Line: the order of numbers as we count
- Counting On: Adding some numbers to the number line
- Counting Back: Taking away some numbers from the number line.

Preparation:

Adjust your Small Group so that there are 10 children (or combination of teachers and children to equal 10). If this is not possible, modify the numbers to match your groups.

This Small Group is not done at tables. It is active and requires room for the children to move around

Tape a long line on the floor- Hallways are perfect places for the Number Line Jump.

Designate one end as 1 and one end as 10.

Procedure:

Move children to your prepared area and introduce the activity.

We have our number chart on the wall. We have been using it all year to help us count. Do you remember what ***People Math*** *is? We just did some people math when we made groups with our Five Creature book. Today we are going to make our own* ***number line*** *using People Math. The number line gives the order for our counting.*

See this line on the floor. What numbers does it have?

Children look at line and notice 1 and 10.

There are a lot of numbers missing! Let's make our number line

Give each child a paper plate. Mix the plates up. Call out the numbers in random order. Shuffle plates and repeat.

Our plates have another way to show numbers.

Show sticky dot side.

Can we put ourselves in order using only the sticky dots?

Ask children to turn their plates over and use the sticky dot side. Count dots as needed and have them arrange themselves using only the dots.

Add variety: Play missing numbers by a blank paper plate for a number, and asking children to problem solve and find what number is missing. **Count on** and **count back** by adding and subtracting children. Have children draw cards for their number.

Strategies to Provoke Math Thinking:

- Rote to Rational: This activity combines rote counting, memorizing the numbers in order, with rational counting- counting the sticky dots, thus connecting cardinality to number sequence.
- Math patterns and relationships. This activity reinforces the 1+ pattern that appears in several activities in Unit 5. Patterns are special types of *relationships*. More, less, and equal are also *relationships*- only meaningful in context.
- Subitizing: Arranging the sticky dots. Research shows that children are able to subitize easily up to 6 items. Arrange the dots on plates numbers 1-6 in similar pattern to dominoes or dice. For 7-10 make groups of your choice- 7 could be 4 and 3, or 5 and 2, etc. By this point in the year, many children will subitize, and may be able to count on for the larger numbers.

Adaptations for additional Learning:

- Create a giant 10 frame with tape on the floor and use paper plates as the counters. Place a basket of manipulatives on the floor nearby. Children can experiment with comparing groups.
- Do you have a long hallway? Extend the number line to 20 for children who are mastering rote counting to 20 and beyond.
-

Documentation:

This is an in-the-moment activity. Make a mental note of a child's competencies and counting errors and repeat the activity often. It will probably be a favorite.

Provocation:

- Make connections with concepts, books and materials that were introduced at the beginning of the school year. Here are 3 suggestions:
- *10 Black Dots* used in Unit 1 has more random arrangements of dots, but can serve as a reference for children. Place in the book or math area.
- *Goodnight Numbers,* also from Unit 1 represents number in at least 4 ways on each page, which is something that children may not have noticed or understood at the time. Place this book in the math center again. Sets, 10 frames, tally marks, sets, and counting in 5 different languages all appear in the book.

- Playing dominoes: If the dominoes have been stored for a while, bring them out and place them in the math center again. Children who initially used them as a building tool can play match and count games.

** This activity and strategies are adapted from Number Line Jump, an activity in Big Ideas of Early Mathematics,* 2014 by the Erikson Early Math Collaborative

Unit 5 Week 5	***Large Group: How Many Creatures in our Class?*** Medium Support	**Math LG**	**Standards:** MELDS..M.CCC.PS.8 MELDS.M.OAT.PS.5

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Guiding Math Ideas:

- Acting out Story Problems: Forming and reforming groups
- Beginning Composing and Decomposing Numbers

Math Concepts From Unit Learning Progressions:

- Counting groups and comparing sets
- Using story problems to visualize operations
- There are steps in problem solving: Generating and testing solutions

Adaptations for Using Large Group In Alternate Schedule Slots:

- This activity is about forming and re-forming groups. It can be done at snack time (those who like cheese and those who don't; outdoors- Children stand beside their favorite playground equipment, during transitions forming groups with Velcro, lace or slip on shoes, etc.

Materials:

- *Five Creatures* by Emily Jenkins
- Flip Chart
- Markers
- Paper plates- Enough to help you form creature groups about your family

Math Vocabulary:

- Creature: an animal or human
- People Math: Groups of people can have fun doing math together
- Sorting Questions: Ideas about how we can make groups

Preparation:

Assemble materials. Use paper plates as math "counters" so that all children can see as you form groups. Be sure you have plenty of room to spread out and form different groups.
Put sticky notes on a few pages that you will use to generate questions for forming groups.

We are going to read a book today called Five Creatures by Emily Jenkins	*Show book cover. Children describe cats and people.*

Why do you think the author named this book 5 ***creatures?*** What is a **creature**? *Creatures are animals or humans. At my house, I have 4 creatures… Me, my son, my goldfish and my cat.* *Let's read this book and find out about the creatures in this family.* *I'm looking around our room. How many creatures do we have here?* *Wow, we have a lot of creatures- 16 children, 3 grown-ups, and 1 gerbils. That is 20 Creatures.* *We sort and make groups a lot in our math work.* *In our book, there were lots of different ways to talk about the 5 creatures.* *Let's think about some* ***sorting questions*** *we can use for our creature groups.* ***Sorting*** *means we group things that are alike and different.* *Today we are going to do some* ***people math****, moving our bodies and counting.* *Let's look at our book for ideas.* *How many animals and how many humans?* *I am moving my paper plates:* *2 humans and 2 cats.* *We can make our own groups.* *How many of us can button our buttons?* *What are some other questions about our creatures here in our classroom?* *We have a lot of different ways to talk about the creatures in our classroom. If you think of more, we can write them down on our flip chart and we'll do them later on.*	*Count together.* *Children give ideas.* *Point out to children that there are not 5 people, nor 5 animals but that all together there are five living things, creatures in this family.* *Share children's ideas about* ***creatures*** *Give your family as example, and as you name each member, place a paper plate on the floor in front of you in a row.* *Read book.* *Children count group, including teachers and any class pets that you may have.* *Draw and write the groups on your paper in the form of an equation.* *Turn to the page Three Humans and 2 cats. Re-sort your group of paper plates .* *Write questions on Flip Chart* *Children move and form groups. Count together and put information on Flip Chart* *Continue with questions, forming and re-forming groups and counting. Make sure that some of the questions involve things children can see, such as color of shoes, or wearing a sweater.* *Recap. Children can add questions and ideas about how they would like to sort the large group.* *This activity can be repeated as a part of your daily routine, as a version of Question of the Day.*

Strategies to Provoke Math Thinking:

- Grouping and Comparing Sets: Many early math experiences are about forming and re-forming sets. When children sort their cars into red, blue and green, they are building skills

that they will use to addition and subtraction, comparisons of more, less and equal, and one to one correspondence.

- People Math: Moving our bodies to represent math concepts is an effective way for young learners to visualize concepts such as addition. By using the entire class (pets, children, adults) as the set, we work with large numbers, as many as 20. We do not typically expect preschoolers to add numbers up to 20, but by using **people math** we present experiences to stretch their thinking.

Provocation:

Maximizing SWPL with People Math: Look at all SWPL activities- songs, poems and games. Could
you insert People Math by encouraging a lot of movement during these brief moment?
Example: 6
Little Ducks is about a creature group "Fat ones, skinny ones, fair ones too. But the 1 little duck with
a feather on its back,. He led the others with a quack quack quack. Children could Lots of different
ways to sort those ducks, and for children to pretend to join a group!

* This activity is adapted from an activity in *The Young Child and Mathematics* (2nd Edition) by J. Copley.

Unit 5 Week 5	***Outdoor Learning Opportunities:*** Flowering Trees	**Standards:** **S.ES.PS.1** **S.LS.PS.1-3** **PHS.FM.PS.5**

Materials:	***Vocabulary:***
• Tree parts – twigs, flowers, seeds, leaves • Tree cuttings – apple, forsythia, maple, oak, and pussy willow • Sharp knife or pruner • Vases with water • Magnifying lenses	• Twig • Flower • Bud • Pussy willow • Forsythia

As the days get longer and the nights shorter (after the vernal equinox) the additional sunlight triggers plants to grow. Children can begin to understand that trees are waking up and their buds will begin to open. Some trees will flower before their leaves emerge.

During group time pass around the parts of a tree and have children examine them. Discuss the coming of spring and ask how trees will grow during this time. Will any of these items change? What will happen if we put a twig in water?

Go outside and look for twigs from an apple, maple, and oak tree and a forsythia bush and pussy willow. These are twigs that can be forced to flower earlier by taking cuttings and putting them in water inside immediately. Use a pruner or sharp knife to cut the twigs and then recut as needed over time. Change the water often, as well. Have the children predict whether the buds on the twigs inside will open before the ones on the same trees and bushes outside. Which buds will flower? Which buds have leaves inside them?

Extension: Have the children dissect buds. Collect fallen twigs that have large buds (e.g. hickory, poplar, tulip tree, etc.). Children can use plastic knives to take the buds apart and use magnifying lenses to examine the inside of the buds.

Guiding Questions:

- How do the trees know it is time to grow?

- What is inside a bud?
- Why do some trees have big flowers and others have small flowers?