Unit 5: Shadows and Reflections

# Week 2

|                        | -   | Full Day   | Schedule  |   |  |
|------------------------|---|--|---|---|--|
| Unit 5<br>Week 2       | Day 1                                       | Day 2  | Day 3   | DAY 4   | DAY 5  |
| Read Aloud             | Raccoon on His<br>Own, 3 <sup>rd</sup> Read | <i>Kitten's First Full Moon,</i><br>1 <sup>st.</sup> Read                      | <i>Play With Me,</i><br>4 <sup>th</sup> Read          | <i>Kitten's First Full</i><br><i>Moon,</i> 2 <sup>nd.</sup><br>Read | Raccoon on His Own,<br>4 <sup>th.</sup> Read |
|                        |   |  | Centers   |   |  |
| Intro to Centers       | Reflective Collages<br>Reflection Search    | Reflections in Water<br>(revisit from Week 1)                                  | Black, White, and Grey<br>Illustrations               | Researching Nocturnal<br>Animals                                    | Woodland/ Swamp<br>(revisit from Week 1)     |
|                        |   | Mirrors and Block<br>Structures  | Sorting reflective and<br>non-reflective<br>materials |   |  |
| Art Studio             | Reflective Collages                         | continue   | Black, White, and Grey<br>Illustrations               | continue  | continue                                     |
| Easel                  | Painting<br>Woodlands<br>continued          | Add: Painting on tin foil<br>(mix dish liquid with paint<br>so it won't flake) | continue  | continue  | continue                                     |
| Writing and<br>Drawing | Reflection search                           | continue   | continue  | continue  | continue                                     |
| Library &<br>Listening | Woodland/ Swamp<br>Research continued       | <i>Play with Me</i> Shadow<br>Theater  | continue  | Researching Nocturnal<br>Animals                                    | continue                                     |
| Dramatization          | Woodland/ Swamp continued                   | continue   | continue  | continue  | continue                                     |
| Blocks                 | Mylar and Block<br>Structures<br>continued  | Mirrors and Block<br>Structures  | continue  | continue  | continue                                     |
| Discovery              | Reflections in water continued              | continue   | continue  | continue  | continue                                     |

| Puzzles &<br>Manipulatives |   | Add Math: Making Tall<br>Trees | Sorting reflective and<br>non-reflective<br>materials | continue  | Add Mylar/mirrors<br>and pattern blocks       |
|----------------------------|---|--------------------------------|---|---|---|
| Technology                 | small groups:<br>reflective/non-<br>reflective; digital<br>microscope |                                |   |   | small groups:<br>reflection search;<br>tablet |
| Thinking &<br>Feedback     |   |                                |   |   |   |
| SWPL<br>Whole<br>Group     | Refer to Clipboa  | rd Directions                  |   |   |   |
| Whole Group<br>Lessons     | Math:<br>Whose<br>Shadow Is<br>This?                                  | <b>LFOAI:</b><br>Shadows       | <b>LFOAI:</b><br>Nocturnal and<br>Diurnal Animals     | Problem Story<br>(class discusses issues<br>impacting classroom<br>community) or<br>Soc/Emotional<br>Curriculum of choice | LFOAI:<br>Reflections and<br>Shadows          |

|          | Group1 Literacy   | Group1 Literacy                                |                          | Group1 Literacy       |
|----------|-------------------|--|--------------------------|-----------------------|
| Small    | Medium Support:   | Medium Support: Mirror Me                      |                          | High Support:         |
| Groups   | Reflective/ Non-  |  |                          | Reflection Search     |
|          | Reflective        | Group 2 Math                                   |                          | Group 2 Math          |
|          | Materials         | High Support: Shadow Measu                     | ring                     | -                     |
|          | Group 2 Math      |  | -                        | Medium Support:       |
|          | High Support:     | Group 3 Independent                            |                          | Animal Shadow         |
|          | Making Tall Trees | Teacher's Choice                               |                          | Sorting               |
|          | Group 3           |  |                          | Group 3 Independent   |
|          | Independent       |  |                          | Teacher's Choice      |
|          | Teacher's Choice  |  |                          |                       |
|          |                   | -  |                          |                       |
| Outdoor  | Refer to Nature   | small groups: reflective/non-reflective adding | small groups: reflection | search-pond life walk |
| Learning | Extensions for    | natural items                                  |                          | ·                     |
| C        | Individual Lesson |  |                          |                       |
|          | plans             |  |                          |                       |

| Outdoor<br>Learning | Refer to Nature<br>Extensions for<br>Individual Lesson<br>plans | small groups: reflective/non-reflective adding natural items | small groups: reflection search-pond life walk |
|---------------------|---|--|--|
|---------------------|---|--|--|

|                        |   | Part Day S  | Schedule  |   |  |
|------------------------|---|---|---|---|--|
| Unit 5<br>Week 2       | Day 1                                       | Day 2   | Day 3   | DAY 4   | DAY 5  |
| Read Aloud             | Raccoon on His<br>Own, 3 <sup>rd</sup> Read | <i>Kitten's First Full Moon,</i><br>1 <sup>st.</sup> Read                       | <b>Play With Me</b> ,<br>4 <sup>th</sup> Read         | <i>Kitten's First Full</i><br><i>Moon,</i> 2 <sup>nd.</sup><br>Read | Raccoon on His Own,<br>4 <sup>th.</sup> Read |
|                        |   |   | Centers   |   |  |
| Intro to<br>Centers    | Reflective Collages<br>Reflection Search    | <i>Play with Me</i> Shadow<br>Theater   | Black, White, and Grey<br>Illustrations               | Researching Nocturnal<br>Animals                                    | Woodland/ Swamp<br>(revisit from Week 1)     |
|                        |   | Mirrors and Block<br>Structures   | Sorting Reflective and<br>Non-Reflective<br>Materials |   |  |
| Art Studio             | Reflective Collages                         | continue  | Black, White, and Grey<br>Illustrations               | continue  | continue                                     |
| Easel                  | Painting Woodlands continued                | Add: Painting on tin foil<br>(mix dish liquid with paint<br>to prevent flaking) | continue  | continue  | continue                                     |
| Writing and<br>Drawing | Reflection search                           | continue  | continue  | continue  | continue                                     |
| Library &<br>Listening | Woodland/ Swamp<br>Research continued       | <i>Play with Me</i> Shadow<br>Theater   | continue  | Researching Nocturnal<br>Animals                                    | continue                                     |
| Dramatization          | Woodland/ Swamp<br>continued                | continue  | continue  | continue  | continue                                     |
| Blocks                 | Mylar and Block<br>Structures<br>continued  | Mirrors and Block<br>Structures   | continue  | continue  | continue                                     |

| Discovery<br>Table   | Reflections in Water continued  | continue  | continue  | continue                             | continue  |
|--|---|---|---|--------------------------------------|---|
| Puzzles &<br>Manipulatives                                     |   | Add Math: Making Tall<br>Trees  | Sorting reflective and<br>non-reflective<br>materials   | continue                             | Add Mylar/mirrors<br>and pattern blocks   |
| Technology   | small groups:<br>reflective/non-<br>reflective; digital<br>microscope |   |   |                                      | small groups:<br>reflection search;<br>tablet   |
| Thinking &<br>Feedback   |   |   |   |                                      |   |
| SWPL Whole<br>Group  | Refer to Clipboa  | rd Directions   |   |                                      |   |
| Let's Find Out<br>About It<br>Problem<br>Stories               | LFOAI:<br>Shadows   | <b>LFOAI:</b><br>Nocturnal and Diurnal<br>Animals   | Problem Story (class<br>discusses issues<br>impacting classroom<br>community)<br>Or<br>Social Emotional<br>Curriculum of Choice | LFOAI:<br>Reflections and<br>Shadows | Problem Story (class<br>discusses issues<br>impacting classroom<br>community)<br>Or<br>Social Emotional<br>Curriculum of Choice |
| Math Whole<br>Group<br>Small Groups<br>Story<br>Telling/Acting | Math Whole<br>Group<br>Whose<br>Shadow Is<br>This?                    | Group1 Literacy (choose 1)<br>Medium Support: Mirror Me<br>High Support: Reflection Search<br>Group 2 Math (choose 1)<br>High Support: Shadow Measuring<br>Medium Support: Animal Shadow<br>Group 3 Independent |   |                                      | Story Telling/Acting<br>(refer to<br>Storytelling/Story<br>Acting Guide   |
| Outdoor<br>Learning  | Refer to Nature<br>Extensions<br>for Individual<br>Lessons plans      | small group: Reflective/non-reflective adding natural items<br>Reflection Search – Pond Life Walk   |   |                                      | I   |

# Unit 5 Week 2 Discovery

#### **Reflections in Water**

| NAMING WO           | ORDS           | ACTION WO       | ORDS              | DESCRIBING WORDS     |
|---------------------|----------------|-----------------|-------------------|----------------------|
| light<br>reflection | raccoon        | reflect         | document<br>shine | 5                    |
| surface             | swamp<br>mylar | view<br>explore | illuminate        | reflective<br>bright |
| Illustration        | pond           | observe         | notice            | dull                 |
|                     |                |                 |                   | clear                |

# Comments / Questions / Expanded Conversation

# **RIGHT HERE:**

### Use Self talk + Force Choice Questions – forexample:

I can see my reflection in the mylar. My face looks a little blurry. When you look at your reflection in the mylar does it look clear like in a mirror or blurry?

# **Expand Children's Comments:**

Child: This reflection is bright.

Teacher: That reflection is bright and very clear and detailed. Teacher: You see a reflection of yourface!

### CONNECT TO TEXT:

In the book, *Raccoon On His Own,* the raccoon saw his reflection in the water of the stream. What else did he see in the stream on his journey in theboat?

#### NON-IMMEDIATE EVENTS:

I saw my face and the sky reflected in a puddle outside today. When you go outside, look in the big puddle and see what is reflected. Then, try to remember to tell me about it. !

# Unit 5 Week 2 Puzzles and Manipulatives

| Reflection | Puzzles |
|------------|---------|
|------------|---------|

| NAMING WORDS                                  | ACTION W  | ORDS                                   | DESCRIBING WORDS   |
|---|---|--|--|
| jigsaw puzzle<br>piece<br>reflection<br>image | fit<br>attach<br>match<br>emerge<br>rotate<br>solve | find<br>connect<br>complete<br>predict | color names<br>shape words<br>size words<br>similar<br>different |

# Comments / Questions / Expanded Conversation

#### **RIGHT HERE:**

#### • Use Parallel talk + Prediction – for example:

You found the piece that fits and attached it. I see the picture starting to emerge. What reflection do you predict this willbe?

You are matching similar colors- red to red, grey to grey. That looks like a helpful technique for completing the puzzle.

**CONNECT TO TEXT** (Categorization and languagecomprehension): In *Raccoon on His Own* and *Play With Me* there were reflections in water. What other sorts of reflections can we see in these puzzles?

#### NON-IMMEDIATE EVENTS:

I have a puzzle table at my house. We always have a puzzle on the table to work on. What do you do for fun when you are not at school?

Developed by Hanson Initiative for Language & Literacy, based on Center Time conversation tips in *Opening the World of Learning* (2005) by Schickedanz & Dickinson

# Unit 5 Week 2 Blocks

# **Mirror and Block Structures**

| NAMING WORDS  | ACTION WORDS  | DESCRIBING WORDS   |
|---|---|--|
| reflection<br>light<br>surface<br>swamp<br>illustration<br>raccoon<br>structure<br>mirror | (present progressive and irregular<br>past tense)<br>building / built<br>making / made<br>falling / fell<br>breaking / broken<br>growing / grew<br>create<br>plan<br>sketch | (comparatives and superlatives)<br>big / bigger / biggest<br>tall / taller / tallest<br>high / higher / highest<br>long / longer / longest<br>strong / stronger / strongest<br>wide / wider / widest<br>thin / thinner / thinnest<br>thick / thicker / thickest<br>flat / flatter / flattest |

# Comments / Questions / Expanded Conversation

# **RIGHT HERE:**

# • Use Parallel talk with a Focus on Morphology – forexample:

You are building a tower. It is tall, now it is tal<u>ler</u>, now it is the tal<u>lest</u> tower of all. You built the tal<u>lest</u> tower in the blocktown.

# • Use Self talk with a Focus on Morphology – forexample:

I am making a house. It is going to have thick high walls and a wide flat roof. See, this house has the thick<u>est</u>, highest walls and the wid<u>est roof</u> of all the houses inthis block town. Tell me about what you arebuilding.

# • Use Morphological Expansions – forexample:

Child: make a tower Teacher: You made a tower. Child: My tower is big. Teacher: Your tower is bigger and taller than the one you built before.

# NON-IMMEDIATE EVENTS:

Child: I falled down on the ice at myhouse. Teacher: You fell? You fell on the ice? I hope you didn't get hurt. Tell me more about what happened.

# Unit 5 Week 2 Library and Listening

### **Researching Nocturnal Animals**

| NAMING WO <u>R</u> DS                                     |               | ACTION WORDS  |         | <b>DESCRIBING WORDS</b> |
|---|---------------|---|---------|-------------------------|
| researcher<br>data<br>information<br>zoologist<br>results | graph<br>fact | investigate<br>explore<br>revise<br>report<br>summarize | analyze | non-fiction             |

# **Comments /Questions / ExpandedConversation**

### **RIGHT HERE:**

## • Use Parallel Talk + Open Ended Question – forexample:

I see that you are reading a book about bats. What are youlearning?

• Ask an Open Ended Question + Use Self Talk – for example:

What is something interesting about raccoons? I read in this book that raccoons sometimes wash their food before eating it.

# • Use Self Talk + Open Ended Question – forexample:

When I read this book about bats I had a lot of questions. I wonder what else I could do to find out more information about bats?

#### TextConnections:

This book about raccoons reminds me of *Raccoon on His Own* and the raccoon's adventure in the boat.

# Unit 5 Week 1 Art Studio

### Black, White, and Gray Illustrations

| NAMING WC  | RDS                                    | ACTION WORDS                                | DESCRIBING WORDS                |
|--|--|---|---------------------------------|
| surface<br>image<br>light<br>illustration<br>shade | media<br>painting<br>sculpture<br>tint | describe<br>adhere<br>collaborate<br>sketch | light<br>bright<br>dark<br>dull |

# **Comments / Questions / Expanded Conversation**

# **RIGHT HERE:**

# • Use Parallel talk + Forced Choice Questions – for example:

First, you sketched a design and then you gathered materials from Beautiful Stuff. Should I sketch a plan first to start my illustration?

Use Self talk with a Focus on Morphological Word Endings (regular past tense) :

I sketched my illustration and then I painted it on a piece of paper. Then, I decorated it with beautiful stuff. What did you do?

# CONNECT TO TEXT: (focus on syntax and social skills)

In the book, *Play With Me*, the little girl asked the animals, "Will you play with me?" Let's invite a new friend to come play at the Art Studio. Let's go ask Takia, "Will you play with us? Will you create illustrations with us?"

### NON-IMMEDIATE EVENTS:

I like to create illustrations at home. Sometimes I paint, and sometimes I draw or sketch with pencils. I might use black and white, but sometimes I use a variety of different colors. Do you ever draw or sketch or paint at home?

# Unit 5 Week 1 Art Area/Table

# **Reflective Collages**

| NAMING WORDS               | ACTION | WORDS      | DESCRIBI | NG WORDS       |
|----------------------------|--------|------------|----------|----------------|
| collage foil               | attach | secure     | shiny    | dull           |
| masking tape               | paste  | tape       | crumpled | flat           |
| type of paper (reflective, | crush  | smooth-out | aluminum | reflective     |
| non-reflective, tissue,    | create | glue       | dull     | non-reflective |
| construction)              | design | decorate   | creative | innovative     |

# **Comments / Questions / Expanded Conversation**

#### **RIGHT HERE:**

#### • Use Self talk + Open ended Questions – for example:

I created a reflective design in the center of my collage with the foil. Look at my reflection. What kind of design did you make in your collage? Let's look at your reflection in your collage.

# **Expand Children's Comments:**

Child: Mine is shiny.

Teacher: Yes. The paper in your collage is shiny and reflective.

#### CONNECT TO TEXT:

The little girl in the book, *Play With Me*, looked in the pond and saw reflections. What animals did she see reflected there?

#### NON-IMMEDIATE EVENTS:

I am going to hang my collage on my refrigerator at home. I am going to have my friends look for their reflections in my collage. Where are you going to hang your collage? Who would you like to have look for their reflections in your collage?

# Unit 5 Week 2 Writing Center

| Reflection Search  |  |                  |
|--|--|------------------|
| NAMING WORDS   | ACTION WORDS   | DESCRIBING WORDS |
| cartographer map<br>piece location<br>part reflection<br>whole<br>distance<br>location<br>detail | locate clarify<br>depict<br>describe<br>illustrate<br>discover<br>represent<br>explain | color words      |

# **Comments / Questions / Expanded Conversations**

### **RIGHT HERE:**

# • Use Parallel Talk + Indirect + Forced Choice Questions – for example:

What a (colorful, creative, interesting) map! Tell me about this part here that you drew with the brown pencil. Describe why you made it. What reflection did you find that is this color brown?

# • Use Self Talk + Open Ended Questions – forexample:

I like using colored pencils. There are so many different shades. This lime green pencil is just the right color for what I found. It's the same color. What colors do you like using?

# CONNECT TO TEXT:

We could make a map showing the swamp and the pond from *Raccoon on His Own* and *Play With Me*.

# NON-IMMEDIATE EVENTS:

After we complete our maps, we can share them with our friends and see if they are able to use the maps to find the different reflections around our classroom.



# Read Aloud: Kitten's First Full Moon

Standards:ELA.SL.CC.PS.1 - 3;ELA.RL.KID.PS.1 - 3ELA.RL.CS.PS.1 - 3;ELA.RL.IKI.PS.1 - 2ELA.RL.LTC.PS.1



| Materials:<br>• Kitten's Full Moon | <ul> <li>Vocabulary:</li> <li>Chased: to run after</li> <li>Firefly: a beetle that flies at night and glows at one end</li> <li>(Full) moon: when the moon looks like a whole circle</li> <li>Lick: to lap with tongue</li> <li>Moon: a bright object you often see in the night sky</li> <li>Raced: to move quickly</li> <li>Reflection: when light hits a flat, shiny surface and bounces back</li> <li>Sprang: to leap or rise quickly</li> <li>Christebed: to roach out</li> </ul> |
|------------------------------------|--|
|                                    |  |

#### First Read:

Children will:

- Listen to a story read aloud.
- Demonstrate increasing levels of sustained and focused engagement.
- Show a steady increase in the number of words in listening vocabulary.
- Develop understanding of main events.

Teachers will:

- Read with expression.
- Select 5-10 vocabulary words and enhance them by: pointing to the picture, gesture, tone of voice or by inserting a short definition.
- Provide comprehension asides: comment during the story about the main character's emotional state, explain an illustration or a change in scene, or indicate what various characters do or do not know.
- Model analytical thinking when appropriate e.g. "I'm thinking...."

| "I have a new story for you today. The title of<br>this books is <i>Kitten's First Full Moon</i> . The author<br>and illustrator is Kevin Henkes."                               | Show front cover. Point to title, intentionally<br>underlining words using voice print match when<br>reading both the words in the title as well as with<br>author. |
|--|---|
| "This is a story about Kitten who sees her first<br>full moon and thinks that it is a bowl of milk.<br>Let's read about what happens to Kitten as she<br>chases after the moon." | Introduce the main character, using the<br>illustrations on the cover. Point to Kitten and<br>trace the circle of the full moon.                                    |
| "It was Kitten's first <b>full moon-</b> she could see all of the moon in the sky <b>."</b>  | p. 2 Point to Kitten and trace the circle of the full moon.   |
| "she closed her eyes and <i>stretched</i> her neck and opened her mouth and <i>licked</i> ."   | p. 3 Model.   |
| "wiggled her bottom and sprang- jumped-<br>from the top step"  | p. 7-8  |
| "Kitten <b>tumbled</b> - she fell"   |   |
| "So she <b>chased</b> it- ran after the moon- down the sidewalk"   | p.11-12   |
|  | p.18 Point to reflection in the pond.   |
| "She <b>leaped</b> with all her might"   | p.20 gesture - sweep finger under Kitten leaping  |
|  |   |

#### Discussion Questions(s):

- Why did the kitten think the moon looked like a bowl of milk?
- How did Kitten try to get the milk from the sky?

#### Second Read

Children will:

• Demonstrate increased level of sustained and focused engagement

- Show a steady increase in the number of words in listening vocabulary
- Develop understanding of main events

Teacher will:

- Continue to define the vocabulary words from Story Reading 1 and include additional vocabulary that may need more verbal definitions.
- Explain feelings or thoughts of secondary characters.
- Deepen the comprehension of primary characters, story problem, etc.
- Model analytical thinking.

| "We've read this story before, so you know that<br>the title of the books is <i>Kitten's First Full Moon</i><br>by Kevin Henkes."   | Show cover, point to title and linger allowing children to chime in. |
|---|--|
| "Kitten tries to <i>lick</i> the moon because she thinks<br>it is a bowl of milk to drink she looks surprised<br>that she <i>licked</i> a <i>firefly</i> - a bug who glows at<br>night" | p.3-4 Comprehension aside. Point to moon and firefly on tongue.      |
| "Kitten keeps <i>chasing</i> the moon- she thinks the moon is moving away from her."  | p.11-12 Comprehension support.                                       |
| "Kitten looks like she is creeping quietly, trying to sneak up on the moon so she can catch it"   | p.13-14  |
| "When Kitten sees the moon's <i>reflection</i> on the surface of the water, she thinks it is a large bowl of milk."   | p.18 Comprehension aside. Point to the moon and moon's reflection.   |
| "She was wet and sad and tired and hungryI<br>think she looks a little scared here too"   | p.22 Point to Kitten's eyes.   |
| "Lucky Kittenyou can see how Kitten thought<br>the moon in the sky was a bowl of milk both<br>are round and white"  | p.29 Comprehension aside. Trace shape of bowl<br>and moon.           |

#### Discussion Questions(s):

- How did Kitten feel when she couldn't get the bowl of milk in the sky? How do you know?
- Why does the author say "Lucky Kitten!" on the last page of the book?

#### Third Read:

Children will:

- Jointly reconstruct the story with peers and teacher
- Recall some main events when prompted
- Ask/Answer questions for further understanding

#### Teacher will:

- Jointly reconstruct the story with children.
- Expand, clarify or add more information to children's responses.
- Address misunderstandings.
- Define words as necessary.
- Deepen comprehension asides.
- Model analytical thinking.

| "We've read this book several times before so<br>we remember the title is And the author and<br>illustrator is Kevin Henkes. Today we are going to<br>talk about and retell the story together." | Show cover, linger and fill in title if not provided by children. |
|--|---|
|  | p. Read first page  |
| "But we remember when she closed her eyes"   | p.3-4   |
|  | p.5-6 Read.   |
| "So then what did Kitten do? What happened?"   | p.7-8   |
|  | p.9-10 Read.  |
| "Kitten started chasingwhat happened?"   | p.11-12   |
| "And"  | p.13-14   |
| "Then Kitten had an ideaWhat happened next?"   | p.15-16   |
| "Then we remember what Kitten saw"   | p.17-18   |

| "And here"                      | p.19-20         |
|---------------------------------|-----------------|
| "Poor Kittenwhat happened?"     | p.21-22         |
| "After she get out of the pond" | p.23-24         |
| "We remember…"                  | p.25-26         |
| "Lucky Kitten."                 | Read last page. |

#### Discussion Questions(s):

- How are the reflections that Ernst collects in *Puddle Pail* the same or different from the reflection of the moon Kitten chases in this story?
- What happened to the moon's reflection in the pond when Kitten jumped in?

#### Fourth Read:

Children will:

- act out one or more scenes from the story
- explore character motivations and emotions
- recall main events from the story

With children, choose one scene to act out. Assign roles to children, or use a structure to ask for volunteers. As you read the corresponding pages from the story, children act out the scene and recite any dialogue.

#### Discussion Questions(s):

• What will the kitten do next time she sees the moon's reflection in the water?

| Suggested Transition Activity<br>First Read                              | Literacy/Language Skills<br>Supported  |
|--|--|
| Dismiss children using the ending sounds from Kitten's First Full Moon.  | <u>Direct</u><br>-phoneme segmentation |
| Say: "Today I will dismiss you using the last sound in your name. I will | -vocabulary support                    |
| use words from Kitten's First Full Moon."                                | Indirect                               |
|  | -exposure to well formed               |
| "If you name ends with the sound /t/ like first, you many"               | sentence structure                     |
| "If your name ends with /n/ like Kitten, you may"                        |  |
| "If your name ends with /I/ like full, you may"                          |  |
| *Support children by continuing to exaggerate the ending sounds to       |  |
| help bring their attention to it. For children who do not recognize that |  |
| the ending sound of their name matches- state it for them highlighting   |  |
| the sound in both the child's name and the word (i.e. Amal, the last     |  |
| sound in your name is /l/ just like the last sound in full. You may")    |  |

| Suggested Transition Activity<br>Second Read  | Literacy/Language Skills<br>Supported                         |
|---|---|
| Dismiss children using sounds from <i>Kitten's' First Full Moon</i> and child names.    | <u>Direct</u><br>-phoneme segmentation<br>-vocabulary support |
| Say: "If your name begins or ends with /m/ like moon/k/ like kitten/f/ like full, etc." |   |

| Suggested Transition Activity | Literacy/Language Skills |
|-------------------------------|--------------------------|
| Third Read                    | Supported                |

| Point to the letters in the title on the cover of the book, <i>Kitten's First Full Moon</i> .   | <u>Direct</u><br>-UC/LC letter id |
|---|-----------------------------------|
| Say: "If your name has an uppercase <b>K</b> in it you may"<br>"If you name has an uppercase <b>F</b> in it, you may"<br>"If your name has a lowercase <b>i</b> in it, you may" |                                   |

| Suggested Transition Activity   | Literacy/Language Skills                          |
|---|---|
| Fourth Read   | Supported   |
| Use movement words from the story to dismiss the children.  | Direct  |
| Say:  | -vocabulary support                               |
| "Jose, Ahmed and Hailey <i>wiggle</i> your body and then you may"<br>"Amanda, Safia and Chantelle <i>stretch</i> your neck then you may"<br>"pretend to <i>climb</i> a tree and then you may"<br>" <i>close</i> your eyes then open your eyes and now you may go" | Indirect<br>-exposure to well formed<br>sentences |



# **Reflective Collages**



Standards: ATL.EP.PS.1 -5 CA.VA.PS.1-5 CA.DE.PS.1 -3 S.LS.PS.4, 6 M.MD.PS.1-2



#### Materials:

- Raccoon On His Own
- Play With Me
- Kitten's First Full Moon
- *Reflective/Non-Reflective Material (tin foil, tinsel, paper, fabric etc.)*
- paper
- adhesives
- flashlights
- mirrors

**Preparation:** Gather and set up materials.

#### Vocabulary:

- reflective
- non-reflective
- reflection
- shiny
- dull

| Intro to Centers:<br>"In Play With Me, Raccoon On His Own, and Kitten's First Full<br>Moon, the girl, the raccoon, and the kitten saw their<br>reflections. What do you notice?" | Show illustrations. Children respond. |
|--|---------------------------------------|
| " <i>Light</i> from the sun and moon <i>shone</i> on the <i>surface</i> of the water and created a <i>reflection.</i> "  |                                       |
| "Today in the Art Studio, you can create <i>reflective</i> collages with theses materials. What do you notice?"  | Show materials.<br>Children respond.  |
| "The materials with a <i>shiny surface</i> are <i>reflective</i> , and the materials with <i>dull surfaces</i> are <i>non-reflective</i> ."                                      |                                       |

#### **During Centers:**

Encourage children to collaborate, i.e., one child arranges materials another child adheres materials. Encourage children to make a group or partner collage. Support children with using collages as backdrops in Blocks. Challenge children to use flashlights and mirrors at different angles on collages. Compare and contrast reflective collage in natural and artificial light.

#### **Guiding Questions during Centers:**

- How is your reflective collage similar to or different from the illustrations in *Play With Me/ Raccoon on His Own/ Kitten's First Full Moon*?
- What do you predict will happen to your reflective collages if we turned off the lights in the classroom?
- How is a reflective collage similar to or different from a mirror?
- Did you use more or less reflective materials in your collage than your friend? How do you know?
- Did you add more reflective or more non-reflective material to your collage? How do you know? What is the difference?

*Thinking & Feedback:* Invite children to share their processes. Encourage children to describe the challenges they might have encountered.

**Documentation:** Collect samples of the children's work as well as photographs and/or video of their process; use the documentation to launch a discussion during Thinking and Feedback.

*Provocation:* Display reflective collages in different parts of the classroom. Document how collages look at different times of the day.













# **Reflection Search**



Standards: ATL.RPS.PS.3-6 ELA.W.PD.PS.1 ELA.W.R.PS.1-2 M.G.PS.7 -8



#### Materials:

- Raccoon On His Own
- Kitten's First Full Moon
- children's Classroom Maps (from Unit 2)
- paper
- clipboards
- writing utensils
- flashlights
- Preparation: Set up materials.

#### Vocabulary:

- map
- reflection
- search

| Intro to Centers:<br>"In Raccoon On His Own and Kitten's First Full Moon, the<br>raccoon and the kitten looked in the water. What do you<br>notice?"                                   | Show illustrations. Children respond.  |
|--|--|
| "Today you can use these materials to <b>search</b> for<br><i>reflections</i> in our classroom. What do you notice?"   | Show materials. Children respond.      |
| "Here are the classroom <i>maps</i> that you used when you<br><i>searched</i> for colors in the classroom. How can they be<br>helpful when you <i>search</i> for <i>reflections</i> ?" | Show Classroom Maps. Children respond. |

#### **During Centers:**

Encourage children to collaborate, i.e., one child finds reflections, another records on the map. Encourage children to label their observations. Encourage children to use flashlights to create reflections. Challenge children to graph the number of reflections they find. Discuss why there are more reflections were found in certain areas of the classroom. Compare and contrast reflections to shadows they find.

#### **Guiding Questions during Centers:**

- Was this reflection created by natural or artificial light? How do you know?
- Why are more/fewer reflections in the \_\_\_\_\_ area ?
- How do you know this is a reflection, and not a shadow?
- How are classroom reflections similar to or different from the reflections in *Raccoon On His Own/ Kitten's First Full Moon*?

*Thinking & Feedback:* Invite children to share their processes. Encourage children to describe the challenges they might have encountered.

**Documentation:** Collect samples of the children's work as well as photographs and/or video of their process; use the documentation to launch a discussion during Thinking and Feedback.

*Provocation:* Encourage children to play "Hide And Seek" with reflections, i.e., children give each other maps that guide them to reflections they have found.



Unit 5

# **Mirrors And Block Structures**



Standards: CA.DE.PS.1-2 ELA.SL.CC.PS.1-3 ELA.RL.IKI.PS.1-2 ELA.RL.LTC.PS.1



#### Materials:

- Raccoon On His Own
- Beautiful Stuff
- large pieces of cardboard, covered with mylar/shiny wrapping paper
- flashlights
- mirrors

#### Vocabulary:

- reflection
- sunlight
- swamp
- structure
- mylar
- surface
- mirror

Preparation: Gather materials and set up in the Block Center.

| Intro to Centers:<br>"In Raccoon On His Own, the baby raccoon looked into<br>the swamp water. What do you notice?"<br>"The sunlight shone on the water's surface and created               | Show illustrations.<br>Children respond.                  |
|--|---|
| a <b>reflection</b> ."<br>"Today in Blocks, you can build <b>structures</b> with these<br>materials. What do you notice?"<br>"How are the <b>mirrors</b> similar to and different from the | Show materials.<br>Children respond.<br>Children respond. |
| <i>mylar</i> you used last week in blocks?"<br>"What do you <i>predict</i> will happen when you use <i>mirrors</i><br>with your <i>structures</i> ?"                                       | Children respond.   |
| ,  |   |

#### **During Centers:**

Compare and contrast block structure reflections to illustrations in *Raccoon On His Own*. Compare and contrast reflections with the classroom lights turned off. Encourage children to experiment with moving the light source/object. Encourage children to "record" their illustrations in Writing and Drawing. Encourage children to use create settings from *Play With Me* and *Raccoon On His Own* using block structures and mirrors.

#### **Guiding Questions during Centers:**

- How does the position of the mirror affect the block structure reflection?
- What happens to the reflection if you shine a flashlight on the structure?
- How are reflections in the mylar similar to or different from reflections the mirror?
- How are the reflections in mirrors similar to or different from the reflections depicted in *Play With Me* /*Raccoon On His Own*?

*Thinking & Feedback:* Invite children to share their processes. Encourage children to describe the challenges they might have encountered.

**Documentation:** Collect samples of the children's work as well as photographs and/or video of their process; use the documentation to launch a discussion during Thinking and Feedback.

*Provocation:* Give children smaller mirrors and wooden cubes for a scaled-down work area. Challenge children to duplicate each other's structures by looking at the reflections.









Unit 5

# Black, White, And Grey Illustrations



Standards: PHD.FM.PS.5-6 ELA.RL.CS.PS.3 ELA.RL.CS.PS.2 CA.VA.PS.1, 3-5



#### Materials:

- Kitten's First Full Moon
- black, white, and grey paint
- variety of paper
- variety of paintbrushes
- smocks
- newspaper
- paper towels

**Preparation:** Set up materials.

- tint
  - shade
  - illustration
  - shadow
  - reflection
  - depict

| Intro to Centers:<br>"In Kitten's First Full Moon, Kevin Henkes did not use<br>many colors in his illustrations. What do you notice?" | Show illustrations.<br>Children respond. |
|---|--|
| "Why are black, white, and gray useful for depicting<br><i>shadows</i> and <i>reflections</i> ?"                                      | Children respond.                        |
| "Today in the Art Studio, you can use black, white, and gray paint to create <i>illustrations</i> ."                                  | Show materials.                          |
| "How will you mix colors to create <i>tints</i> and <i>shades</i> for your painting?"   | Children respond.                        |

#### **During Centers:**

Encourage children to collaborate, i.e., one child mixes the paint, another child creates the illustrations. Compare and contrast children's illustrations to the illustrations in *Kitten's First Full Moon*. Support children in painting circles and other shapes from the illustrations in *Kitten's First Full Moon*.

#### **Guiding Questions during Centers:**

- How did you use black, white, and gray to illustrate a shadow/reflection?
- How are the illustrations of shadows and reflections in *Kitten's First Full Moon* similar to or different from the reflections in *Play With Me* and/or *Raccoon On His Own*?
- How does Kevin Henkes use shapes in the illustrations for Kitten's First Full Moon?

*Thinking & Feedback:* Invite children to share their processes. Encourage children to describe the challenges they might have encountered.

**Documentation:** Collect samples of the children's work as well as photographs and/or video of their process; use the documentation to launch a discussion during Thinking and Feedback.

*Provocation:* Encourage children to create a large group illustration, similar to collaborative collage. Encourage children to label their illustrations. Encourage children to create a black, white, and grey mural.



Unit 5 Week 1

# Sorting Reflective and Non-Reflective Materials

Manipulatives

Standards: ELA.SL.CC.PS.1-1b ELA.SL.CC.PS.3 PHD.FM.PS.5 -6





#### Materials:

- Raccoon On His Own
- Play With Me
- reflective and non-reflective materials (e.g., foil, mirrors)
- flashlights
- trays
- containers for sorting materials
- labels: "reflective"/ "non-reflective"

#### Vocabulary:

- reflective
- non-reflective
- shiny
- dull
- surface
- sort

**Preparation:** Gather reflective materials such as foil, mirrors, and magnifying glasses from around the classroom. Gather non-reflective materials. Label trays with "reflective" and "nonreflective." Set up materials in the Art Studio.

|  | 1                                 |
|--|-----------------------------------|
| Intro to Centers:<br>"In Raccoon On His Own and Play With Me, the raccoon<br>and the girl saw their reflections in water. What do you<br>notice?"  | Show illustrations.               |
| "When the <i>sunlight</i> shone on the <i>shiny surface</i> of the water a <i>reflection</i> was created."   | Children respond.                 |
| "I want to create a <i>reflection</i> with these materials. What do you notice?"   | Show materials. Children respond. |
| "The is <i>shiny</i> , like the <i>surface</i> of water. The<br>is <i>dull</i> not shiny. If I shine a light on the and the<br>, where do you predict would be a <i>reflection?</i> "  | Model. Children respond.          |
| "Today in Puzzles and Manipulatives, you can shine the<br>flashlight (or hold up to a light source, i.e., lamp)on the<br>materials. If you see a <i>reflection</i> on the material, <i>sort</i> it<br>into the tray labelled ' <i>reflective.</i> ' If you don't see a |                                   |
| <i>reflection</i> on the material, sort it into the tray labelled,<br><i>'non-reflective'</i> ."   | Model.                            |

#### **During Centers:**

Support children in using light sources, i.e., flashlights, lamps, etc. to test materials. Encourage children to collaborate, i.e., one child shines the light source, another sorts into the tray. Compare and contrast the reflections on the materials to the reflections in *Play With Me* and *Raccoon On His Own*. Encourage children to count the objects in the groups, record the data, and/or compare which has more/less.

#### **Guiding Questions during Centers:**

- How did you sort the materials?
- How can you make the number of items in the two groups equal/the same?
- How are the reflective materials similar to or different from a mirror?
- What do you predict would happen if we hung the reflective materials in the window like when we did the *Color Fading* experiment?

*Thinking & Feedback:* Invite children to share their processes. Encourage children to describe the challenges they might have encountered.

**Documentation:** Collect samples of the children's work as well as photographs and/or video of their process; use the documentation to launch a discussion during Thinking and Feedback.

*Provocation:* Encourage children to label 'reflective' and 'non-reflective' groups with other names, i.e, shiny, dull, sparkly, matte, etc. Encourage children to list other materials in the classroom/around the school into the groups, i.e., draw a picture of the front door to add to the 'non-reflective' group.







# Play With Me Shadow Theater



#### Materials:

- Play With Me
- Shadow puppets (resources)
- Flash light
- Cardboard box for shadow theater, white fabric, paper or plastic

#### Vocabulary:

Librarv &

Listening

- animal names
- shadow
- leaped
- plopped
- jabber
- chatter
- audience
- puppeteer

**Preparation:** Make a shadow theater from a box by cutting a hole out of the bottom. Adhere the white fabric, paper or plastic to all sides of the hole. Tape a flashlight onto a shoebox and point to the shadow theater. Print the puppets on cardstock and tape them to s stick.

| <i>Intro to Centers:</i><br>"In <i>Play With Me</i> , the girl met many animals. Why didn't<br>the animals want to play with her? | Show illustrations.<br>Children respond. |
|---|--|
| "Today, you can use these shadow puppets to act out the story in the shadow theater."   | Show materials and model                 |

#### **During Centers:**

Encourage children to use the book to help them act out the story with the shadow puppets ( what animal came first, second; how did the \_\_ get away (leaping, plopping)? Facilitate the division of shadow puppets.

#### Standards:

MELDS.SED.ED.SR.PS.8 MELDS.SED.SD.BRC.PS.3 MELDS.CA.DP.PS.2 MELDS.ELA.RL.IKI.PS.1 MELDS.M.MD.PS.3

#### **Guiding Questions during Centers:**

- How will you decide which shadow puppets each of you will get?
- How can you find out which animal came first?
- How will you decide who is the **audience** and who is the **puppeteer** the person using the shadow puppets?
- In the book it says that the chipmunk chattered, what might that sound like?
- What is the job of the audience?

*Thinking & Feedback:* Invite children to share their processes. Encourage children to describe the challenges they might have encountered.

**Documentation:** Collect samples of the children's work as well as photographs and/or video of their process; use the documentation to launch a discussion during Thinking and Feedback.















# **Researching Nocturnal Animals**



**Standards:** ELA.W.TTP.PS.2 ELA.W.R.PS.1-2 ELA.IT.D.PS.1-3 ELA.IT.S.PS.1-3 ELA.IT.I.PS.1-2 S.LS.PS.2, 6



#### Materials:

- Raccoon on His Own
- Kitten's First Full Moon
- writing utensils
- Blank books
- Nocturnal Animals and Who is Awake at Night resources

#### **Preparation:** Gather materials.

#### Intro to Centers: "In Raccoon On His Own, the raccoon and his family Show illustrations. looked for food in the daytime. How do you know? Children respond. "In Kitten's First Full Moon, the kitten also looked for Show illustrations. food, but at nighttime. How do you know?" Children respond. "Here are images of *diurnal* and *nocturnal* animals. What Show images. do you notice? Children respond. "Today in Library and Listening, you can research nocturnal animals and find out how being awake at night is helpful and how they can find food when it's dark."

#### **During Centers:**

Encourage children to use their *Woodland/Swamp Research*. Compare the animals in research to the illustrations in *Raccoon On HIs Own* and *Kitten's First Full Moon*. Encourage children to graph a survey, *"Would you rather be a diurnal or nocturnal animal?* (see sample). Encourage children to create diurnal and nocturnal animals using Beautiful Stuff. Encourage children to construct animal habitats, turn off the classroom lights/use use flashlights to act out diurnal and nocturnal animals.

### Vocabulary:

- Nocturnal- active mainly during the night
- Diurnal- active mainly during the day
- research
## **Guiding Questions during Centers:**

- How are diurnal animals similar to and different from nocturnal animals?
- How are nocturnal animals similar to and different from people, like the father in *Night Shift Daddy*, who work at night?
- How is being awake at night similar to and different from animal camouflage?
- How can you add your research to your Woodland/Swamp Research?
- How is the moon helpful to nocturnal animals?

*Thinking & Feedback:* Invite children to share their processes. Encourage children to describe the challenges they might have encountered.

**Documentation:** Collect samples of the children's work as well as photographs and/or video of their process; use the documentation to launch a discussion during Thinking and Feedback.





# **Nocturnal Animals**







Most bats are active at night or at twilight. As they can locate their prey by means of sonar, they do not require daylight in order to hunt. It's also common for bats to retreat to caves during the winter and hibernate for six months.

# Owl



These birds wait, listen and watch for prey, then swoop down. Their large facial disks focus sound, and the placement of their ears assists them in locating prey, because of the lack of light during the late and early hours in which they hunt. They are active mostly during the night.

# **Red Fox**



The Red Fox is has a tendency to becoming nocturnal in areas of great human interference (and artificial lighting). It is most active at night and at twilight, and hunts alone.

# Hedgehog



# Rabbit



Rabbits are mainly nocturnal, emerging from their burrows at dawn and dusk, although on warm, sunny days, or in undisturbed places, they may be out during broad daylight.

# Long eared Jerboa



# Tarantula



Tarantulas are nocturnal, avoiding bright light and direct sunlight. They live in live in small, dark holes in the ground and are mostly active at night.

# Night Monkey



Night monkeys have big brown eyes, giving increased ability to be active at night. They are called night monkeys because all species are active at night, and are in fact the only truly nocturnal monkeys.

# Lemur



# Who is awake at night?



I have two big round eyes. I have feathers. I live in the woods. I go Whooo! Who am I?



I have prickles. I roll into a ball when I'm scared. I like to hide in the leaves. Who am I?



I am small. I have wings. I have big ears. I like to live in caves. Who am I?



I have a bushy tail. I have pointed ears. I can run fast. I am very clever. Who am I?



I am black and white I live under the ground. I sniff out food. I live with my family. Who am I?



The End



# Small Groups: Mirror Me

Support: Medium

Standards: SED.SD.BRC.PS.1-6 ELA.SL.CC.PS.1-3 ELA.RL.KID.PS.1-3 .ELA.RL.IKI.PS.1 ELA.RL.ITC.PS.1





## Materials:

- Raccoon On His Own
- Kitten's First Full Moon

# Vocabulary:

- mirror
- reflect(-ion)
- imitate

Preparation: Gather texts.

## Procedure:

Show illustrations from *Raccoon On His Own* and *Kitten's First Full Moon*. Compare and contrast the reflections. Tell children they will use each other as mirrors to create a reflection.

Pair children to take turns doing an action/gesture that the partner child mirrors--imitates.





# Small Groups: Reflection Search Support: High

Standards: ATL.RPS.PS.3-6 ELA.W.PD.PS.1 ELA.W.R.PS.1-2 M.G.PS.7 -8



## Materials:

- Raccoon On His Own
- Kitten's First Full Moon
- clipboards
- writing utensils

**Preparation:** Set up materials.

### **Procedure:**

Show illustrations from *Raccoon On His Own* and *Kitten's First Full Moon*. Compare and contrast the reflections the baby raccoon and kitten saw when they went exploring. Weather permitting, explore outside, or alternatively, around the school.

Tell children they will go on their own exploration to look for reflections. Give children materials to record their observations. Encourage children to make a map of the school/playground and label where they found a reflection.

Compare and contrast children's documentation. Discuss why or why not they would find more or fewer reflections if it were night and/or if the weather were cloudy.

Consider asking for family volunteers to accompany children.



Finding and documenting reflections found outside

# Vocabulary:

- reflection
- light
- surface
- image

| Unit 5 |  | Math | Standards:   |
|--------|--|------|--|
| Week 2 | Small Groups: Shadow Measuring<br>High Support | SG1  | MELDS.M.MP.PS.5<br>MELDS.M.CCC.PS.5<br>MELDS.M.MD.PS.9 |
|        |  |      | MELDS.M.MD.PS.10<br>MELDS.M.MD.PS.11                   |



Image downloaded from Amazon.com

# **Guiding Math Ideas:**

- Integrated projects- Science/Technology/Engineering Math [STEM]- Measuring
- Problem Solving- Finding meaning and testing theories

# Math Concepts from Unit Learning Progressions:

- How many means the last number counted and represents the amount in the entire group.
- Growing use of accurate measurement terms
- Using tools to measure and compare shadows.
- Experimenting with non-standard measurement and standard measurement-Direct and Indirect Comparison.
- Exploring length and height: Continuous and discrete measurement

#### Materials: Math Vocabulary: • Whose Shadow is This? OR Guess Whose Shadow • Shadow- the special shape • Light Source- Small Lamp without shade is preferredwe see when something or use large Flashlight blocks the light shining on a Whiteboard, White Wall or White paper/sheet person or thing. It is dark. attached to wall Compare or Comparison- A Markers way to find out how things Small classroom items are alike or different • Unifix cubes Length- how long something Data collection paper- Large paper for recording is from end to end. findings. • Height- How tall something is from top to bottom Width- how wide something is from side to side

# **Preparation:**

This activity is a follow-up to Week 2 Large Group Whose Shadow is This?

Use the shadow-casting area as described in Large Group, making adjustments for Small Group as needed. Use large white paper or a whiteboard rather than projecting shadows directly on a wall (You will be marking on the shadow-casting area.)

Create a data collection method such as a large paper, a notebook on table, etc. Write *Shadow Measuring* at the top. See sample at end of lesson plan.

Gather an assortment of small classroom items and place in basket on table along with other supplies for easy access.

# Procedure:

Introduce the activity and show the book, Whose Shadow is This? as a resource.

When we did Large Group, we wondered how we might measure shadows. Today we are going to experiment with measuring shadows. Shadows are different for each object. Shadows could be large or small. Let's see how we might measure them.

I have a block in this basket. I wonder how big its shadow is.

First let's measure the things we have using our Unifix cubes.

Place some objects on the table with basket of Unifix cubes. Children will choose objects and create Unifix models the same length or width as the object.

Example: This spoon from the Home center is 8 cubes long.

Demonstrate how to place objects in front of the light source and project the shadow.

How could we measure its shadow?

Child places object in front of light source and compares their Unifix creation to the shadow. Make marks on the wall paper indicating top and bottom (or side to side) to assist with creating Unifix cube chains if needed.

Note differences. Create another Unifix cube group of the shadow object.

Then compare them side by side and note the differences.

Invite children to take turns choosing objects, and measuring them. Encourage them to measure objects for width as well as height and length, using accurate terms. Record the data as you continue the activity, allowing children to experiment with a variety of objects as well as the relationship of the object to the light source

At the end of the activity, read the data together:

The spoon was 8 cubes long when we measured it on the table, but the shadow was 10 cubes long. OR

When the spoon was close to the light, the shadow was 10 cubes long. When it was farther away, it was 9 cubes.

# Strategies to Provoke Math Thinking:

- Measurement is both easy and complex-- easy because we do it every day, and complex because it requires multiple skills and understanding of quantity to do it accurately. While it may seem straightforward and clear to measure things using tools, the many concepts included in measuring require lots of experimentation. Here are 2 of the complex ideas about measurement introduced in this activity.
  - Non-standard measurement: The Unit. This activity introduces the important concept of the Unit in measurement. In this case, even though Unifix cubes are all the same size, they are still a Non-standard measurement, (They do not have a number system attached to them, and thus are not considered standard measuring tools, such as rulers or measuring tapes, or scales.). Understanding a unit and what kinds of units can be used in

non-standard measurement will require lots of experimentation.

Direct and Indirect Comparison: This activity includes the idea of direct and indirect comparison. When 2 objects are side by side and are compared, that is direct comparison. When a representation of the object (such as the Unifix cubes) are compared, that is indirect comparison. Indirect comparison is often needed when we cannot directly compare something. For example, we cannot move our shadow beside us and compare it directly to our bodies, or physically move two buildings side by side and compare them for height. We can *indirectly* compare them by using measuring tools.

# Adaptations for Additional Challenge:

- Continuous and Discrete Measurement: When we use a measuring tape or string to measure, we are using continuous measurement. When we use a Unit over and over, such as a small ruler that we place end to end, we are using discrete measurement. Encourage children who have special interest in measuring to use both types of measuring tools by placing a basket of different sizes and types of measuring tapes, as well as different sizes of rulers on the shelves in your math or manipulative center, along with a journal.
- Create Measuring Challenges, such as measuring all the trucks in the Block Center, or finding out which book in the Reading Center is tallest. Observe children's growing skills and provide support and information on such things as: how to accurately measure; what attribute children are measuring (height, width); and different ways to measure the same thing.

### **Documentation**:

Use data collection from Small Group Activities and/or personal journals that children create to document their growing skills in understanding measurement. Use concrete examples to share with families, as measuring things and using measurement terms happens in everyday life and can be reinforced at home.

## **Provocation:**

Take Shadow Measuring problems outdoors by taking a basket of measuring tools to the playground

and recording children's findings on paper or in a journal as they measure the shadows of playground

equipment or natural objects. Share their findings during SWPL, lunch, or other transition times.

# Sample Data Collection Chart

| Object        | Unifix Cube<br>Measurement | Shadow Cube<br>Measurement (Near) | Shadow Cube<br>Measurement (Far) |
|---------------|----------------------------|-----------------------------------|----------------------------------|
| Block         | 6                          | 10                                | 8                                |
| Crayon        | 4                          | 6                                 | 2                                |
| Hot Wheel Car | 2                          | 3                                 | 1                                |



















Week 2

# Songs, Word Play, & Letters

## Day 1

Materials: poetry posters, chart paper with the words, buzz, hoot, and swish written on it in a column

# WHAT ARE YOU WEARING?

Procedure:

- Tell children they will sing the song about what they are wearing.
- Sing the song, naming a clothing item and its color, for each child in the group.

# THE WHEELS ON THE BUS

Procedure:

- Sing several familiar verses.
- Add a couple of new verses using animals and their sounds (owls go hoot, hoot, hoot; bees go buzz, buzz, buzz).

# **INTERESTING SOUNDING WORDS** (and The Wheels on the Bus)

Procedure:

- Tell children that some of the sounds they just sang are interesting.
- Ask children what sound an owl makes in the song. Ask them to say the sound they hear at the beginning of the word hoot /h/, and then the sound they hear at the end /t/. Isolate the two sounds for children, if needed.
- Ask what letter is used to write /h/, and what letter is used to write/t/.
- Display the chart paper and ask which word they think is hoot. Say, *Hoot starts with the letter* h *for /h/ and ends with the letter* t *for /t/. Let's see, this first word* (point to buzz) *starts with b, /b/, not /h/ and ends with z /z/, not /t/. It doesn't say hoot.*
- Next, ask children what sound the bee makes in the song. Again ask children to say the sound they hear at the beginning of buzz /b/, and the sound they hear at the end /z/. Ask what letter is used to write each of these sounds, and then ask them to point to the word on the chart
- Read the word swish, underlining s, w, i, and sh as you sound it out. Ask children what made that sound in the song (the windshield wiper).

# STAND UP

Procedure:

- Say "I am going to change a couple of things in the poem and you should listen carefully." Instead of "stamp your foot" say, "shake your hands," instead of "Bend two knees" say "Bend one knee."
- Raise your voice a little bit to emphasize these changes when you come to them and go slowly enough to allow children to hear the new verses.

# Day 2:

Materials: poetry posters, set of upper and lowercase letters

# EENTSY WEENTSY SPIDER

Procedure:

- Position fingers in the usual starting position for this song and ask children what song they think will be first today.
- Sing the song.

# LOOBY LOO

Procedure:

- Stand up and ask children to stand up too.
- Sing the song as usual, doing the motions.
- Add a new verse or two (e.g., "back," "right forefinger").

# LITTLE LETTER/BIG LETTER CHANT

Procedure:

- Tell children they are going to play the Little Letter/Big Letter Chant game.
- Distribute the uppercase letters and retain the lowercase matches.
- Say this chant: I have the little [name a letter]. As you hold it up. Take a look to see. Someone has its partner. Who might that someone be?
- Proceed by using the lowercase matches for all letters distributed to children.
- Remind the first few children that they should say, *I have the big* [name a letter] when they hold up their card.

# WINDSHIELD WIPER

Procedure:

- Make the wiper motion with arms and ask the children what poem they think will be next
- Recite the poem twice.
# Day 3 Materials: poetry posters I'M A LITTLE TEAPOT

Procedure:

- Ask children to stand up. Model teapot pose and sing song.
- Add a new verse "Add a bit of sugar to make it sweet. Stir it in. Then drink the tasty treat." (motions: spooning sugar into a cup, stirring, then pretending to hold a cup to mouth to drink it)

# CLOUD

Procedure:

- Read the title to children, sounding out C and I, as you underline the word with a finger.
- Recite the poem with the children and repeat a second time.

GUESS WHAT WORD I AM SAYING; (And Play with Me):

Procedure:

• Hold up Play with Me and tell children, "I am going to say some words from this book in a different way. You are to guess what words they are and say them the right way".

• Present words in individual phoneme segments, if you think children are ready for this. When presenting words, do not pause too long in between phonemes. If phoneme blending seems too difficult for some children, present some words in onset – rime segments and others in phoneme segments, to meet the range of skills in your group of children.

- Present an example first. Say, If I say /l/-/e/-/f/, you would say leaf.
- To present weed, say /w/-/e-/d/.
- To present log, say /l/-/o/- /g/.
- To present snake, say /s/-/n/ -/a/-/k/. rock, say /r/-/o/-/k/.

• After children guess, confirm with a comment that reinforces their understanding of the word's meaning. For example, say, "Yes, weed was the word I was saying. Remember that the little girl in Play With Me saw the grasshopper eating a leaf of a weed?" Or, "Yes, log is the word I was saying. The turtle was sitting on a log until he became frightened and plopped into the pond."

• If children are not ready to blend phoneme segments, provide onset-rime segments (e.g., l-eaf; w-ee

# Day 4

Materials: poetry posters, picture cards (optional): mouse, fawn, pail, snake

# **TEN LITTLE FINGERS**

Procedure:

• Point to and sound out T in Ten, L in Little, and F in Fingers while reading the title with children.

• Recite the poem as usual, modeling the motions.

• Ask two children to raise both hands and ask the other children how many fingers there are altogether. After children offer ideas, add the two sets of fingers by taking one set of hands as a given, 10, and then counting on to add the second child's fingers like this: 11, 12, 13...20.

CAN YOU THINK OF WORDS THAT END WITH THE SAME SOUND AS \_? (and Ten Little Fingers)

Procedure:

• Tell children that the words, shut and tight from "Ten Little Fingers" end with the same sound, /t/. Tell them that many other words also end with /t/ and give some examples (sit, cat).

• Ask children to think of other words that end with /t/.

• Provide words for children to decide: *Does kite end with /t/? How about dish? How about plate?* 

• Use the picture cards. Ask children to think of words that end with /s/ as in mouse, /n/ as in fawn, /l/ as in pail. And /k/ as in snake.

# **CLAP YOUR HANDS**

Procedure:

• Sing four or five verses using some verses that children have sung before, as well as some new ones (e.g. "pat head" or "pull ear).

GUESS WHAT WORDS I AM SAYING (and Raccoon on His Own)

Procedure:

• Hold up the book and tell children they will hear some words from this book in a funny way

and they are supposed to guess what words they are and say them the right way.

• Present words in individual phoneme segments if children are ready. When presenting words, don't pause too long in between phonemes. If phoneme blending seems too difficult for some children, present some words in onset-rime segments and others in phoneme segments, to meet the range of skills

• For boat, say b-(pause) oa-(pause) t. For mud, say m- (pause), u- (pause) d. For snake say s- (pause), n- (pause) a- (pause), ke. For float, say fl- (pause), oa- (pause), t.

• After children guess, confirm with a comment that reinforces their understanding of the word's meaning. For example, say, Yes, boat was the word I was saying. Remember that the raccoon in Raccoon on His Own climbed into a boat? Or Yes, mud is the word I was saying. The boat was stuck in the mud until raccoon climbed in, and then the boat drifted away into the swamp. You are good at putting sounds together to make a word.

#### Day 5

Materials: poetry posters, two cards with rain and drops written on them, picture cards; turtle, snake, mosquito, chipmunk, fawn

## RAINDROPS

Procedure:

• Show the card with Rain written on it. Point to R and sound it out with the children. Then point to ai and sound it out. Do the same with n.

• Next, show the card with drops on it. Point to d and sound it out, then sound out r-o-p-s. Ask if anyone can guess the title of the poem.

• If children do not guess it correctly, read the title while underlining it with a finger. If children guess the correct title, read the title with them to confirm that they were correct. Recite poem.

## **OPEN, SHUT THEM**

Procedure:

• Hold up both hands, then open and close them. Ask if children can guess what song they will sing next.

• Sing the song as usual.

• Sing the song a second time, mouthing the words but not speaking them, while doing the motions.

## I'M THINKING OF CLUE GAME (Play With Me)

Procedure:

• Say," In this game, I am going to give you clues. Listen to all of the clues, think about what the word could be, and then raise your hand when you have an idea of the word I am describing." Show the picture card after each word is guessed.

• For turtle, use these clues: This is an animal that likes water and can swim in it, but it doesn't stay there all the time. This animal carries its shell on its back and pulls its head inside when it

is scared. If children don't guess from these two clues, given this one: The name of this animal starts with /t/ and ends with /l/.

• For snake: This is an animal that doesn't have legs. These animals sometimes live in holes in the ground. If children do not guess the word from these clues, use this one: The name of this animal starts with /s/ and ends with /k/. In Play with Me, this animal went down into its hole to hide from the little girl.

• For mosquito: This is an insect that flies. If this insect bites you, the bite itches a lot. If children do n guess the word, provide this clue: The name of the insect starts with /m/ and ends with /o/. In the story, the frog was waiting to catch and eat one. • For blue jay: This is a kind of bird. There are two words in its name. The first word is blue. In the story, this bird sat on a bough and then flew away from the girl.

• For fawn: This is a baby deer. In the story, the little girl was quiet and one of these came up to her and licked her cheek. If children do not guess the word from these clues, use this one: The name of the animal starts with /f/ and ends with /n/.

• For chipmunk: This is a furry animal that looks a little like a squirrel. It eats acorns like squirrels do, and it climbs trees. If children don't guess with these clues, use this one: The first part of this animal's name is chip.

# IF YOU'RE HAPPY

Procedure:

• Sing the song as usual.

| Unit 5 |   | Math | Standards:<br>MELDS.M.G.PS.2                            |
|--------|---|------|---|
| Week 2 | Large Group: Whose Shadow is This? OR Guess<br>Whose Shadow | LG   | MELDS.M.MD.PS.10<br>MELDS.M.MD.PS.11<br>MELDS.S.ES.PS.4 |
|        | Medium to High Support                                      |      |   |



Image downloaded from Amazon.com

### **Guiding Math Idea:**

- Integrated projects- Science/Technology/Engineering Math [STEM]- Measuring- Non-Standard
- Beginning Operations- Comparisons- Greater Than/Less Than
- Patterns- Identifying Patterns in the Surrounding Environment using Attribute Words *Math Concepts From Unit Learning Progressions:*
- Math is a part of many learning projects (Uses math in STEM activities)
- Discovering, describing and comparing attributes of shapes.
- Using math terms accurately.
- We can identify and utilize shape and space concepts in science engineering and technology as well as math.

### Adaptations for Using Large Group In Alternate Schedule Slots:

This Guessing Game can be used during Transitions, SWPL or Outdoors. Note: This activity also supports Science standards.

# Materials:

- Whose Shadow is This? by Claire Berge OR Guess Whose Shadow\*
- 4 or 5 Classroom Items, one of which you will use for demonstration
- Box or cloth to conceal the Classroom Items
- Flip Chart- One blank page, and one page divided into as many sections as you have Classroom Items.
- Markers
- Light Source- Small Lamp without shade is preferredor use large Flashlight
- Whiteboard, White Wall or White paper/sheet attached to wall

## Math Vocabulary:

- Shadow- the special shape we see when a person or thing blocks the light that is shining on it.
- Engineering- a way to solve problems through using ideas and equipment.
- Compare or Comparison- A way to find out how things are alike or different
- Length- how long something is from end to end.
- Height- How tall something is from top to bottom

 Width- how wide something is from side to side
 Experiment- a way to test out our ideas about something.

# **Preparation:**

\* Whose Shadow is This? Is the preferred book (listed in Math Books Resources) because it has many descriptors of attributes of shadows . It also has facts about shadows and activity ideas at the end of the book. If unavailable, substitute *Guess Whose Shadow*, from the general book list.

Prior to Large Group time, set up a shadow-casting activity in the classroom: Position a lamp or flashlight to cast a bright light on a large white surface. Leave room for you to sit near the light.

Find 5 or 6 items in classroom that can easily be brought to group time and that will cast distinctive shadows, such as a long rectangular block, a truck, a pair of scissors, a plate from Home Center, etc. Set aside one of the items for demonstration, and place the others in a box or cover with a sheet, so that the children cannot see them. Test out your shadow-casting area ahead of time to see if shadows are clearly visible on the white surface and make adjustments.

Alternative if you do not have a space or access to whiteboard/light source, draw outlines of the items on dark bulletin board paper, one per piece of paper and time cut out the shapes/shadows. Place shadow/silhouettes one by one in center of group, and ask them to guess Whose Shadow is This? And then bring out the matching object and continue with the activity as written.

At Group Time: Gather materials. Hide the classroom items in block or under a cover so that children cannot see them ahead of time.

| We are learning about <b>shadows</b> this week. Who<br>can tell us what a <b>shadow i</b> s?   | Ask children for a few definitions and write down<br>on flip chart, reading them as you write.     |
|--|--|
| You have good ideas about shadows. A shadow<br>is a special shape that is made when we or an<br>object blocks the light that is shining on it.<br>Outside, shadows are made by the sun, but you<br>can make them inside as long as you have light.<br>All people have shadows- and anything else that<br>blocks the light. | Introduce book and read. [Whose Shadow is  |
| We have a book about shadows.  | This? Or Guess Whose Shadow.]  |
| We are going to have some fun with shadows!<br>What equipment do you see that I am using to<br>create a shadow-casting area?<br>Here is a special way to make shadows using a<br>light and a white wall.   | Children will describe the light and the wall.<br>Demonstrate how the shadow-making area<br>works. |

When we describe how we make something, we are using our **engineering** skills. Engineers are people who figure out how to solve problems.

Do you see the shadow of my hand? I have a \_\_\_\_\_.[demonstration object] Can you see its shadow? What do you notice about this shadow? [Example]. Yes, this is a plate from our home center. It's shadow is round and wide. I'm going to write "plate" on our paper, and some of our words.

We are going to play a guessing game about shadows. I have hidden some things from our room that I am going to use to make shadows. [Example]

\_\_\_\_\_ said the shadow was tall. Another word for tall is called **height.** That's a measurement from top to bottom.

Let's try another one and **compare** their shadows. **Compare** means to find out how things are alike and different.

What happens when I move this closer to the light? Farther away?

The shadow changes! It gets bigger or smaller. Did the [object] really change its size? How could we find out?

[Optional]

We are going to leave our shadow-casting area here for you to experiment with during center time. Do you remember what **experiment** means?

We experiment when we test out our ideas about something, usually when we are curious. In our small group math time we will try to measure shadows! Place your hand in front of the light. Then, take your demonstration item and put it in front of the light and cast a shadow.

Children give ideas about the shadow. Encourage the use of descriptors such as tall, short, wide, pointy, etc. Write the object name in one section of the chart paper, and put children's descriptors underneath.

One by one, place hidden objects in front of the light source. Children will guess what the object is. Encourage the use of descriptors as they talk about the item. As children describe, take opportunities to introduce accurate measurement words. Continue writing on the chart.

Continue until all hidden objects are described or as time permits. Use comparison words as children add ideas, such as shorter, longer, wider, bigger, etc.

Move the object closer or farther away from the light source. Children will notice how the size of the shadow changes.

Children may suggest measuring. Write ideas down for later use during Small Group 1. See Math Small Group 1 for follow up activity. If possible leave the shadow-casting area and a box of items for the children to experiment with during center time as a preview of small group.

Children give ideas about what it means to experiment.

### Strategies to Provoke Math Thinking:

- Use of accurate measurement terms: Accept children's descriptions, but insert accurate measurement terms. For example, many people interchange or confuse the ideas of height and length. We might lay down something down on the floor, measure it and say this is how "tall" something is, rather than how long it is. A child might describe an object by saying how "fat" it is, giving us an opportunity to say- Yes, it is wide.
- STEM- Working with shadows is a perfect way to integrate science, technology, engineering and math. As you set up the shadow-casting area, you are using engineering skills. As you talk about shadows and how they change in relation to a light source you are using science. Describing the attributes of the items and measuring shadows, which occurs in Math Small Group 1.

## Adaptations for Additional Learning:

- Some children may be very interested in shadows. If you have access to technology, look up shadows online [or have children do it], and share information. A child could create a "shadow fact book", writing down ideas and experimenting with different light sources, such as small or large flashlights or different surfaces for projecting shadows.
- Explore the idea of **engineering** further. As children build structures in the block center, or identify problems (Example: We want to see which car is the fastest), describe their work such as creating ramps, as engineering.

### **Provocation:**

- Place books about shadows in the book center, such as *Moonbear's Shadow* from your curriculum. The non-fiction section of libraries have books about shadows.
- Silhouettes are special shadows. If there is interest, adapt your shadow-casting area so that a child can sit sideways in front of the light source and the image of his/her head is projected onto the wall. Optional: Place white paper on the wall and draw around her/his head. You could use the silhouettes for a guessing game, and then send them home for families with information about shadows.
- Adapt to outdoor play: Go on a shadow-hunt outdoors and have children describe the shadows cast by playground equipment and natural objects. If you have 2 outdoor times, one morning and one afternoon, compare the shadows, or compare shadows on cloudy and sunny days.



# Let's Find Out About It: Reflections and Shadows

Standards: ATL.IC.PS.1, 3-4 ELA.SL.CC.PS.1-3 ELA.RL.KID.PS.1-3 ELA.W.R.PS.1-3



### Materials:

- Kitten's First Full Moon
- Shadow images
- Reflection images
- chart paper
- Chart markers

# Vocabulary:

- reflection
- shadow
- shiny

# Preparation: Gather materials.

| <i>Let's Find Out About It:</i><br>"In <i>Kitten's First Full Moon,</i> the kitten saw a bowl of milk in<br>the water. What do you notice?"          | Show illustrations. Children respond.                     |
|--|---|
| "The moonlight shone on the water's <i>shiny surface</i> and made<br>a <i>reflection</i> . What do you notice when the moon shone on<br>the kitten?" |   |
| "The moon shone on the kitten and created her <i>reflection</i> in the water in front of her. Behind her, was her <b>shadow</b> ."                   |   |
| "Here are images of <i>reflections</i> and <i>shadows.</i> "   | Show images.  |
| "How are <i>reflections</i> the same as or different from <i>shadows?"</i>   | Record and summarize children's responses on chart paper. |













Unit 5

# Let's Find Out About It: Nocturnal/Diurnal Animals

Standards: ELA.RL.KID.PS.1-3 ELA.IT.D.PS.1-3 ELA.IT.I.PS.1-2





### Materials:

- Raccoon on His Own
- Kitten's First Full Moon
- nocturnal and diurnal animal images
- Nocturnal Animals resource

Vocabulary:

- nocturnal
- diurnal

**Preparation:** Gather materials. Print and bind the Nocturnal Animals resource.

| <i>Let's Find Out About It:</i><br>"In <i>Raccoon On His Own,</i> the raccoon family went out to look<br>for food. In <i>Kitten's First Full Moon,</i> the kitten went out to<br>look for food. What do you notice?" | Show illustrations. Children respond.   |
|--|---|
| "Raccoons are usually <b>nocturnal</b> animalsthey stay awake at<br>night and sleep during the day."   |   |
| "Cats are usually <i>diurnal</i> animalsawake during the day and asleep at night."   |   |
| "Here are images of <b>nocturnal</b> and <b>diurnal</b> animals. What do you notice?"  | Show images. Children respond.  |
| "The title of this book is <i>Nocturnal Animals.</i> How can we act<br>like <b>nocturnal</b> and <b>diurnal</b> animals?"  | Read book, pausing in places for<br>children to act out the animals'<br>descriptions, i.e., big eyes, sneaking,<br>etc. |



# Let's Find Out About It: Shadows

Standards: ELA.RL.KID.PS.1-3 ELA.IT.D.PS.1-3 ELA.IT.I.PS.1-2



#### Materials:

- Kitten's First Full Moon
- Guess Whose Shadow?
- flashlights
- large white paper to set up as a screen
- white sheet
- objects from around the classroom

#### Vocabulary:

- shadow
- block
- surface
- light
- shine
- Opaque--lets no light pass through
- Transparent-- lets light pass through
- Translucent--lets some light pass through

*Preparation:* Set up materials. Create a white screen to create shadows.

| <b>Let's Find Out About It:</b><br>"We saw <b>shadows</b> in <i>Kitten's First Full Moon</i> . What do you<br>notice?"                             | Show illustrations. Children respond. |
|--|---------------------------------------|
| " <i>Shadows</i> are made when an object <i>blocks</i> - gets in the way of- <i>light</i> ."   |                                       |
| "In <i>Kitten's First Full Moon,</i> Kitten's body <b>blocked</b> the moonlight and created a <b>shadow</b> ."                                     |                                       |
| "We will read a book titled Guess Whose Shadow."   |                                       |
| "How are the <b>shadows</b> in <i>Guess Whose <b>Shadow</b> similar to or different from the shadows in <i>Kitten's First Full Moon</i>?</i>       | Children respond.                     |
| "I will <i>shine</i> a flashlight on a white <i>surface</i> , and then I will move my hand to <i>block</i> the <i>light</i> . What do you notice?" | Children respond.                     |
|  |                                       |
|  |                                       |



### **Outdoor Learning Opportunities:**

Pond Life – Raccoon Hands

Standards: M.G.PS.1 S.LS.PS.1,4 PHD.HKP.PS.2 PHD.FM.PS.5



### Materials:

- Large pot or bowl with water
- Several different types and sizes of sea shells (two of each type)
- Three towels

# Vocabulary:

- Pond
- Reflection
- Shell
- Raccoon

Take the children outside in late spring to visit a pond or stream (or vernal pond) in your area. Have them look in the pond and see their reflection. Is it easy or hard to see what is in the pond, especially when the sunlight is reflecting on the pond? Have the children look for what lives near or in the water (both plants and animals). Look for animal tracks near the water's edge and animal scat. Collect shells that might be around the pond. Raccoon tracks might be found near a pond. Their footprints look similar to a human hand. Raccoons often use their sense of touch to examine food in a pond before eating it, especially since they are nocturnal and may be visiting the pond at night when it is difficult to see what is in it.

In the classroom fill a large pot or bowl with water and place it on a towel. Bring in a collection of shells (possibly ones that have been collected by the children) and place one of each type of shell in the water. Make sure and have a duplicate of each shell on a towel near the bowl of water. Cover the bowl with a towel so the children cannot see the shells in the water. The children can pretend to be raccoons as they feel the shells in the bowl (under the towel). They will try and match the ones they feel with the shells they can see on the towel next to the bowl.

Extension: Place shells in a sensory table with water so the children can use their sense of touch to examine the shells and discriminate between the different types of shells. This might be a good activity to do prior to Raccoon Hands, so the children have some experience with the shells before taking away their ability to see them in the water.

# **Guiding Questions:**

- If the sunlight is reflecting on the pond, is it easier or harder to see what is in the pond?
- What types of animals and plants can you find at a pond?
- How do raccoons find their food in a pond at night?
- Are all sea shells the same? How are they different?

| Unit 5 Reflection Search: Small Group<br>Week 2 Lower Level Technology Support | ISTE-S<br>6b | Standards:<br>ATL.RPS.PS.3-6<br>ELA.W.PD.PS.1<br>ELA.W.R.PS.1-2<br>M.G.PS.7-8 |
|--|--------------|---|
|--|--------------|---|

[book covers that represents the book(s) the lesson touches upon]

## Technology Concepts

Create original works or responsibly repurpose or remix digital resources into new creations

| Materials:   | Vocabulary:   |
|--|---|
| <ul> <li>Smartphone or tablet with camera</li> </ul> | <ul> <li>Use vocabulary from<br/>original lesson</li> <li>Digital transformations</li> <li>Beautiful art</li> </ul> |

## **Preparation:**

Smartphone or tablet ready to take pictures

## **Procedure:**

Take pictures of what children find in reflection search

Change pictures using transformation capability of camera. Save transformations and discuss with children how images look different. What do reflection pictures look like now? Help children understand that the class created photographic digital transformation and created beautiful art

| Unit 5<br>Week 1 | Small Groups: Reflective/ Non-<br>Reflective Materials | ISTE-S<br>1c<br>3d | Standards<br>M.G.PS.1 M.MD.PS.1-<br>2 M.MD.PS.8 -9 |
|------------------|--|--------------------|--|
|                  | Lower Level Technology Supplement                      |                    |  |

### **Technology Concepts**

- Students use technology to seek feedback that informs and improves their practice and demonstrates their learning in a variety of ways
- Children build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions

| Materials:  | Vocabulary:   |
|---|---|
| <ul> <li>Laptop</li> <li>Digital Microscope</li> <li>Reflective/Non-Reflective Materials</li> </ul> | <ul> <li>Use vocabulary from<br/>original lesson</li> <li>Digital Microscope</li> <li>Examine</li> <li>Observe</li> <li>Compare/Contrast</li> </ul> |

#### **Preparation:**

Laptop with Digital Microscope Reflective/Non-Reflective Materials Extension - writing materials to write down observations

#### **Procedure:**

Children examine the materials using the digital microscope Extension - write down observations in a journal