ANGEL'S AVOCADO

Key Focus: **Science**

Observation: As part of a unit on fruits and vegetables, Ms. Carol has brought an avocado to show the class. At circle time the day before, she took predictions from the class on what might be inside an avocado and asked children to draw pictures of their predictions. Today, Ms. Carol cuts the avocado open in front of the entire group. As they transition to centers, Ms. Carol lets the class know that she will be placing half of the avocado in the science center. Children are instructed that in the science area they can make "observational sketches" of the avocado. She reminds them that observational sketches should look as much like the object they are sketching as possible.

Below is Angel's observational sketch of the half avocado:

Reflecting on the Documentation: **Participants may quickly shift from reflecting on the documentation to interpreting the observation or suggesting strategies for extending learning. Remind participants to discuss the advantages and disadvantages of documentation technique.*

Ask: How does a work sample such as this contribute to your understanding of Angel's development?

Sample Responses: By asking Angel to draw exactly what he sees, the teacher is able to develop a sense of how Angel perceives what he draws, what parts of the avocado he views as important, and how well he can translate the real world into a drawing or model. The teacher can also see the amount of visual motor control that Angel has.

Interpretation of the Observation:

**Remind participants that in their interpretation they are looking for patterns, critical incidents, or errors. It is important to stick to the data.*

Ask: What does this drawing tell us about what Angel knows about avocados?

Sample Responses: Angel differentiated between the rind—the outer body of the avocado—and the inside of the avocado. He has captured that the avocado is not exactly circular, but rather more of an oval shape. He showed that there are different gradations of color inside the avocado—dark green to lighter shades of green.

Relating Your Observation to the Child Outcomes Framework:

**Although participants can defend other interpretations, there should be general consensus that this observation demonstrates:*

4A3, 4&5 (Science/Scientific Skills and Methods): Begins to participate in simple investigations to test observations, discuss and draw conclusions and form generalizations. Develops growing abilities to collect, describe and record information through a variety of means, including discussion, drawings, maps and charts. Begins to describe and discuss predictions, explanations and generalizations based on past experiences.
4B1 (Science/Scientific Knowledge): Expands knowledge of and abilities to observe, describe and discuss the natural world, materials, living things and natural processes.
5B1 (Creative Arts/Art): Gains ability in using different art media and materials in a variety of ways for creative expression and representation.
8A3 (Physical Health & Development/Fine Motor Skills): Progresses in abilities to use writing, drawing and art tools including pencils, markers, chalk, paint brushes, and various types of technology.

Next steps for large group instruction:

**Help participants make connections between what they learn from the assessment and the next steps they want to take in instruction. If suggestions for instruction extend activities to new areas of learning, ask participants to consider what aspects of children's progress they would assess and how they would do so during those extension activities.*

Ask: What would you recommend that Ms. Carol do next for the whole class?

**Responses will vary but might include:*

- Ms. Carol can extend the lesson on avocados to encourage the development of children's scientific skills and knowledge. She can ask students to taste or feel an avocado at snack time and talk about its texture (for example, the inside is smooth and soft but the outside is hard and bumpy). Ms. Carol might also start to grow an avocado tree by suspending the pit in a glass of water. The children can watch the pit grow roots and shoots and draw multiple pictures over time so they can document how the pit changes. Ms. Carol could take photos to compare with the children's pictures, allowing her to assess scientific, creative arts, and fine motor skills.

- Ms. Carol might extend the lesson to address other areas of development. For example, provide children with a chance to sample both a slice of avocado and guacamole. To encourage mathematical

thinking, have children report which they prefer and create a graph with the results.

- To further, encourage children's development in science, Ms. Carol can bring in different vegetables and fruits (for example, watermelons or pumpkins) and give children as a group a chance to predict what is inside. Compare and contrast across the fruits and vegetables. To encourage children's ability to represent what they observe in the environment, she can ask them to draw seeds, fruits, and vegetables of various shapes and sizes. To assess children's ability to represent objects on paper, she can collect work samples or develop a checklist tracking what sizes and shapes of seeds the children are able to draw well and if they are able to represent differences in size.

Next steps for individualized instruction:

Ask: What would you recommend that Ms. Carol do next for individual students?

** Responses will vary but might include:*

- Ms. Carol might sit with Angel and ask him to describe what he sees and write it on the back of the paper. This would both encourage language development and allow Ms. Carol to more fully assess his scientific skills. There may be more nuance in his drawing than is apparent to the adult eye.
- Ms. Carol might ask why he has chosen orange for the rind, and not a different color. She might also ask questions about the shape of the avocado, or what else he might like to include in his drawing. She could ask Angel where he thinks he would find the pit of the avocado.

Additional Notes: If possible, extend the lesson by sending home an avocado along with a recipe for guacamole. Ask parents to make guacamole with their children using the recipe provided or their own family recipe, and to talk both about the steps in making guacamole and about how the avocado changes. By connecting parents to the classroom, children reinforce what they have learned at school and parents are able to share rich language interactions with their children around events for which they were not necessarily present (for example, whether or not they make guacamole, parents might ask children to talk about what they did with avocados in class).