Coach's Corner

SCIENCE

"Every kid starts out as a natural-born scientist." – Carl Sagan

There is so much truth to the quote above. Think about the children in your care. Before the world gets in the way, children are naturally curious about EVERYTHING! One of the best things we can do in the classroom is to let their curiosity guide our lesson plans. When we explore topics in which children show interest, they are more likely to be engaged.

Typically, when we think about the concept of science, we tend to think about experiments and other planned activities. Science for young children is so much more than that! Opportunities to expose children to science are all around us. Sometimes, as educators, we need to take a step back and stop thinking about the different domains of learning only in terms of planned activities.

Integrating Science throughout the Classroom and Daily Schedule

We have many resources available to us that detail what types of science toys and materials we can provide to young children. This is a great start for incorporating science into your classroom, but we want to take things a step further! At the heart of science is "inquiry". As stated earlier, children are naturally curious about the world around them. Our job as educators is to build on that curiosity. One way to do that is through inquiry. When children show interest in a particular topic or activity, encourage them to think more deeply. Here is an example:

Let's imagine that we have a child, three-year-old Logan, playing in the block area. Logan has built a ramp for his cars with the blocks and is engaged in driving different cars and trucks down the ramp. Ms. Jamie, his teacher, observes Logan playing for a few minutes. Ms. Jamie approaches Logan and says, "Wow Logan, you have built a really cool ramp for your cars. I wonder what would happen if we made a taller ramp with some more blocks." Logan considers this and proceeds to grab more blocks to construct the next ramp. Ms. Jamie sits down to help him. After the taller ramp is built, Ms. Jamie says, "Okay Logan, do you think the cars will move faster or slower down this taller, steeper ramp?" Logan and Ms. Jamie work together building different ramps and making predictions about which ones will have the cars going faster.

This is a simple activity in which an educator helped the child extend his thinking about an activity that was already of interest to him. Asking questions and making predictions is a great way to start thinking about science throughout the classroom.

Looking at outdoor time is another way to include science in your daily schedule. October is the perfect month for outdoor conversations about science! Talk to the children and ask them questions about the leaves changing colors and falling from the trees. Have the children collect some leaves and bring them in the classroom. Put some of the leaves in the art center and encourage the children to do some leaf rubbings. Also, the weather is getting cooler which provides an opportunity to talk about seasons and how we have to change how we dress when it gets colder.

Science for Infants and Toddlers

Adding science materials to an infant or toddler environment can be as simple as adding some realistic animal figures or board books about animals and nature. Touch and Feel books are great for discussing the sense of touch. Also, consider adding a plant or a small fish tank to the classroom. Be sure to talk to the children about these items. Bring the babies over to the window in the classroom and talk about what you see outdoors. Another way to incorporate science into routine times is to hang some pictures of animals, trees, flowers, seasons, etc. above or near the diaper changing area. Talk to the children about the images while you are changing their diapers. You can also rotate the pictures based on the seasons!

As stated previously, be sure to look for opportunities throughout the day to incorporate science concepts. Below is an example:

Let's imagine that 18 month old Lola is banging a block on a plastic container. Family child care provider, Nina, observes Lola playing. Nina finds an aluminum container and brings it over to Lola. Nina says, "Lola, I can hear you making sounds with that block and container." She places the aluminum container next to Lola. "What will it sound like if you bang your block on this container?" Lola smiles and begins banging her block on both containers. Nina talks with her about the different sounds.

Nina is using something that Lola is already interested in to talk about the sense of hearing. Start by looking around the classroom interest areas. Think about different topics that could be discussed with the materials. Also, look at your daily schedule and lesson plans. What activities would prompt some science discussions?

Science for Preschoolers

For preschoolers, it is important to have a mix of natural exploration and planned activities. Educators can also incorporate some technology by involving the children in doing research to find articles or videos on something they are interested in. The Environment Rating Scale (ERS) books give examples of different categories of science materials. Think about rotating your collections of natural objects based on the seasons. Encourage the children to collect things during outside time or bring things they find from outside of school. For living things, instead of just bringing in a plant, let the children choose a plant to grow, plant the seeds, and care for it.

Look at your daily lesson plans and see where there are opportunities for planned science activities or experiments. One experiment can be done using the water table or a large bin filled with water. Have the children grab different materials from around the room that can go in the water. Encourage the children to make predictions about which materials will sink and which will float. Using chart paper, write down the predictions. Have each child who wants to participate, put something in the water. Record whether each item sinks or floats. These types of activities make science fun and interesting to our little learners!

Hopefully some of these tips will help our educators with incorporating science into their day! For more information, please check out the resources and professional development opportunities below!

Resources

Books

Preschool Pathways to Science- Rochel Gelman,
Kimberly Brenneman, Gay MacDonald, Moises Roman
Science Arts- MaryAnn F. Kohl, Jean Potter
More Than Magnets- Sally Moomaw, Brenda Hieronymus

Websites

Head Start ECLKC

Professional Development opportunities involving science

Seeing Science Everywhere: Seasons and Weather
Seeing Science Everywhere: Habitats and Animals
Seeing Science Everywhere: How We Grow
Science Up: Birds and Bugs