For example, teachers might guide younger children to discover the reason an item sinks is not because it is too big or, with older children, because it is too heavy. Teachers understand the complexity of concepts in science, and they take care to address the scientific process to help children understand those concepts. Teachers know what level of scientific terminology is challenging yet attainable for children of a given age. Teachers design learning experiences that help children uncover for themselves the counterintuitive nature of many scientific principles. Accomplished teachers understand that deep discussions can transform a class of children into a community of future scientists.

Accomplished early childhood teachers know that children need to know scientific facts as well as to practice scientific inquiry, and they create a program that balances both elements. They help young children become aware of the scientific nature of their questions, pursue multiple paths to investigate a problem, and raise new questions. Teachers also allow children to take control of investigations and extend them if they wish. Rather than having children simply execute prefabricated experiments, accomplished teachers use probing questions to steer children toward discoveries.

Accomplished early childhood teachers understand ways of using inquiry to engage children in hands-on science that supports the learning of scientific concepts and processes. They know that engaging children in science is foundational for developing children’s ability to ask questions, conduct investigations, collect data, and seek answers. Teachers provide sufficient time to instill in children a deep understanding of essential scientific concepts rather than simply providing children with a superficial acquaintance with isolated facts. They help children develop acute observational skills and support children’s emergent reasoning and problem solving about what they experience through their senses. In addition, they incorporate ongoing exploration, investigation, and inquiry in science as a consistent part of their curriculum. Teachers systematically plan instructional activities, some of which focus solely on science and some of which integrate science with other subject areas. Teachers are also adept at using teachable moments to steer children toward new knowledge. Accomplished teachers constantly research new knowledge bases and use technology and best practices to enhance children’s learning in science. Accomplished teachers ensure that all children have an equal opportunity to engage in science as a means to understand better and enjoy the natural world.

Social Studies

Accomplished early childhood teachers know that social studies is the vehicle through which young children acquire knowledge of the past and the present and prepare for the future. They know that for young children, understanding social studies begins with fundamental questions about who they are and where they live. While supporting individual development and identity, accomplished teachers move children into and out of a variety of social groups in school and the broader community as a way of developing the sense of social identity essential for understanding social studies. Teachers nurture children’s abilities to work collectively and make informed
decisions for the common good. Teachers’ ultimate goal is to help children become responsible, productive citizens of their local communities, their nation, and the world.

Accomplished teachers are knowledgeable about the fields of history, geography, civics, and economics. They understand the connections among these fields and effectively integrate the scope and sequence of social studies across the curriculum in developmentally appropriate ways. Teachers take advantage of children’s natural curiosity about the world to introduce them to the ways in which social science promotes understanding of different cultures, people, and places. Teachers know the common misconceptions children have within the social studies. For example, children might think that George Washington and Abraham Lincoln were friends or that all Native Americans live in teepees. Teachers are adept at teaching skills and concepts in ways that ensure the social studies are not viewed simply as factual recall. Accomplished teachers plan for active and authentic learning experiences; whenever possible, they use field trips, reenactments, and play to make social studies come to life. Through the innovative use of literature, technology, artifacts, and data from places such as historical societies and museums, teachers provide children with valuable opportunities to gain a sense of human existence in the past and the present. Accomplished teachers also encourage children to make predictions about the future.

Accomplished early childhood teachers strive to use children’s natural curiosity to help them understand the concept of history. Teachers know that children need to understand their place in time and begin to comprehend how their lives are rooted in historical events. They use children’s ability to recount stories as routes to understanding the concept of chronology. Teachers of younger children might ask them to develop a timeline listing the events of a day, week, or even a whole school year in chronological order as a way of giving children insight into the concept of how people, objects, and experiences change over time. Teachers of older children might focus on the technological advances made throughout history, such as innovations in transportation or communication. Accomplished teachers might use examples of how people have mailed letters over time, from the pony express to e-mail, to illustrate some of the ways that science and technology changed the lives of children’s ancestors and continue to affect society today. Teachers help children develop a historical perspective on how our world is continuously evolving, and yet remains the same in many ways.

Accomplished early childhood teachers use developmentally appropriate strategies to help young children develop geographic concepts, and they provide opportunities for children to consider spatial relationships as a precursor to understanding the concept of location. Teachers find concrete ways to explain how people all over the world are connected to one another, including through the global economy. Teachers might prompt children to examine the labels on items such as their backpacks or their clothes to identify where they were made, and then pinpoint the items’ sources on a globe or a map. Teachers might take children on walks to learn about their neighborhood, using directional words such as “left” and “right” or “north” and “south” to describe the orientation of traffic signs, buildings, and people.
To make these experiences even more meaningful, teachers might help children subsequently construct a model or map of the neighborhood and discuss what they observed.

Accomplished early childhood teachers use the concepts of civics and government to help children understand that in their learning communities, just as in their homes, there are rules, rights, and responsibilities that allow the members of the group to interact successfully. Teachers might regularly schedule meetings in which children interpret the classroom codes of conduct and discuss how to resolve issues. Teachers might guide children through the process of creating their own set of behavioral expectations and appropriate consequences for the classroom.

Accomplished early childhood teachers know that young children may be aware of and concerned about problems in their neighborhood or issues they have heard about through various media. Teachers help younger children begin to understand the role that local agencies such as fire and police departments play in addressing such problems. Teachers of older children help them understand the levels and functions of government and envision their role as citizens. Addressing issues related to governance helps children learn to solve problems in a way that benefits both themselves and the community.

Accomplished early childhood teachers help young children explore the principles of economics in the context of familiar experiences. For example, teachers might organize play stores, restaurants, and other appropriate economic venues to illustrate principles related to resources and consumption. Teachers might prompt children to create a class town with its own monetary system designed by the children, or might set aside certain days on which children are allowed to set up a business to sell something such as a craft item. Accomplished teachers hold discussions on such concepts as trade, wants and needs, supply and demand, and consumers and producers in order to help children understand that economics is part of everyday life.

Visual Arts

Accomplished early childhood teachers sensitively interpret the ways young children use symbols and patterns of artistic expression to communicate their ideas and feelings. They promote children’s awareness and creation of the visual arts in ways that are developmentally and culturally appropriate. Teachers have a broad background in the arts which allows them to make visual arts an integral part of the early childhood curriculum; they are familiar with the unifying concepts of the visual arts, which include color, texture, line, symmetry, light, and shape. They are also familiar with various visual media, including drawing, painting, sculpture, and film, and they know some of the history of art in cultures throughout the world.

Accomplished early childhood teachers understand that creativity is at the heart of children’s artistic expression. They provide opportunities for each young child to experiment with various tools, processes, and media, and they mirror children’s joy and excitement as children share their resulting artwork with others. Teachers use art