MTSS Service Delivery Framework for Young Children:
Example of a general education science activity conducted in a classroom in a blended ECE/ECSE program model

Table 4
Examples of Adaptations during the Science Experiment for Children With Special Needs and Children Who Are English Language Learners

- A child with fine motor delays writes the results of his or her science experiment using pencils with foam grips to improve grasping and writes on large sheets of paper that are placed on a clipboard to hold them stationary.

- A child who is nonverbal makes predictions about the experiment by holding up a Yes or No card or presses the Yes or No button on an augmentative communication device that says yes or no when pressed.

- A child with an individualized education plan (IEP) goal to initiate and respond to peers and who has cognitive delays helps Brandi show the plate of mixed ingredients to other children and then is paired with a peer partner when conducting the experiment in the science center. Together they document the results of the experiment.

- A child works on early math skills and letter identification skills by counting the number of Y (yes) and N (no) marks on the experiment results form.

- The teacher varies the type of questions he or she poses and the type of answer he or she requests to allow children with diverse communication and linguistic abilities participate. For example, he or she (a) asks one child for only yes–no answers and another for two word answers, (b) provides two choices (e.g., “Big bubbles or little bubbles?”) versus open-ended questions (“What size are the bubbles?” or “What just happened?”), and (c) asks questions and accepts answers in a child’s native language.

- A child with an IEP goal to listen to and follow directions works with an adult as he or she conducts his or her own experiment. The adult provides 1- to 2-step directions and provides other forms of scaffolding assistance, such as questioning, prompting, and modeling as needed.

- A child who is visually impaired (with low vision) uses multiple senses to identify if there are bubbles by getting close to, touching, and listening for bubbles after the two items are mixed. The teacher also works with this child before the activity to explain the concept of bubbles and to give him or her experience looking at, feeling, and hearing bubbles. The individual prediction sheet that this child uses to record the results of the experiment has words and pictures written with high contrast between the words or pictures (e.g., very dark black) and paper (e.g., white) in order to make use of the child’s functional vision.
• The teacher provides a set of sequenced picture cues that indicate the steps to be followed in completing the individual experiment for a child with autism who has problems following multistep verbal instructions.

• A child who is learning English also uses pictures cues that include words written in English and in the child’s native language. The teaching assistant also answers questions and provides assistance using the child’s native language as needed. The child’s experiment recording sheet also is written in English and the child’s native language so that the child’s family can review the activity with the child at home.

• A child with cognitive delays who is not yet writing or copying words draws pictures of the results of his or her experiment and then describes to the teacher what he or she has drawn. The teacher then writes the words under the pictures.

• The speech pathologist provides a child with expressive language delays opportunities to use his expressive and sequencing skills by asking the child simple questions about his experiment, such as “What do you need to do first, second, etc.?” or “Are there bubbles?” and then waits for an answer. If the child does not answer, the speech pathologist models the answer and asks the child to repeat the answer.

Each of these adaptations would allow children with varying abilities and needs to participate in the science experiment activity and to practice early language and literacy skills and/or other identified skills.