

## SCIE1304: Science Teaching Strategies for Family Child Care Educators Course Syllabus

---

<b>Course Details</b>	This course is part of the PBS TeacherLine suite of self-paced courses.
<b>Course Description</b>	<p>This course will introduce home-based child care educators to four key strategies for teaching science concepts to the young children in their programs. The content includes video-based professional development as well as related reading, expounding on the four strategies—setting up learning environments inside and outdoors to encourage science exploration, how to get children thinking and talking about their investigations, how to document children’s science experiences to help them understand and think more deeply about them, and how to tailor teaching for a child’s individual needs, age, and abilities.</p> <p>The training is part of a suite of multimedia educational resources developed as part of the <i>PEEP and the Big Wide World</i> early childhood STEM initiative developed by Boston’s PBS station, WGBH. The PEEP STEM initiative is funded the National Science Foundation.</p>
<b>Course Goals</b>	This course will help you see your role as a co-investigator in young children’s STEM explorations. As teacher, you do not need to be a science expert with all the answers. After viewing other home-based educators exploring science topics in these teaching strategy videos, you will come away with a better understanding of your role in supporting children’s science play.
<b>Course Design</b>	This is a self-paced professional learning opportunity that should take one hour to complete. Participants can digest the course reading, watch videos, and assess learning with multiple choice questions all at their own pace.
<b>Target Audiences</b>	This course is intended for early child care educators who care for young children in their home.
<b>Standards</b>	The pedagogical approach taken in PEEP’s professional development as well as its science curriculum align with the National Association for Family Child Care’s <a href="#">Quality Standards for Accreditation</a> under Science and Math (3.67 to 3.69) and Television and Computers (3.79 to 3.83). The approach to including media in young children’s science investigations is

also consistent with the [joint position statement](#) of the National Association for the Education of Young Children (NAEYC) and the Fred Rogers Center

**Schedule** This course is estimated to take one hour to complete. However, it is a self-paced experience and learners may work at their own pace and according to their individual schedules. Participants will have access to this course for one year after the enrollment date.

**Evaluation** All learners working for a certification of completion must complete all quizzes with a score of 100% in order to receive the certificate.

**Course Content and Assignments** During this self-paced course, participants will cover the how-to for and importance of four key strategies when teaching science concepts to young children and should be able to apply those strategies in their programs.

In order to receive a course certificate, participants must successfully complete four separate multiple-choice quizzes.

Topic	Learning Objective	Coursework/Activities
Introduction	Get an overview on the four teaching strategies explored in this course, while understanding that this training is part of a suite of multimedia educational resources – including a preschool science curriculum—from the public television initiative, <i>PEEP and the Big Wide World</i> .	<ul style="list-style-type: none"> <li>• Read and reflect on approach to this course</li> <li>• View one video</li> </ul>
Learning Environments	Understand how to create intentionally planned learning centers – in standard and non-standard areas of the home – that encourage children to explore with specific	<ul style="list-style-type: none"> <li>• Read backgrounder</li> <li>• View one video</li> <li>• Reflect on questions after viewing</li> <li>• Try the recommended activity to apply learning</li> </ul>

	materials and learning goals in mind.	<ul style="list-style-type: none"> <li>• Answer quiz questions correctly</li> </ul>
Science Talk	Learn the power of open-ended questions posed to children to engage them in conversations about their science investigations. Understand other approaches that help develop children’s abilities to listen, reflect, and communicate.	<ul style="list-style-type: none"> <li>• Read backgrounder</li> <li>• View one video</li> <li>• Reflect on questions after viewing</li> <li>• Try the recommended activity to apply learning</li> <li>• Answer quiz questions correctly</li> </ul>
Documentation and Reflection	Recognize the importance of recording science investigations so children may revisit and reflect on what they did and learned. Identify different methods of documentation.	<ul style="list-style-type: none"> <li>• Read backgrounder</li> <li>• View one video</li> <li>• Reflect on questions after viewing</li> <li>• Try the recommended activity to apply learning</li> <li>• Answer quiz questions correctly</li> </ul>
Individualized Instruction	Discover why science is well suited to individualized instruction and review methods of engagement that respond to a child’s unique needs, age, abilities, and interests.	<ul style="list-style-type: none"> <li>• Read backgrounder</li> <li>• View one video</li> <li>• Reflect on questions after viewing</li> <li>• Try the recommended activity to apply learning</li> <li>• Answer quiz questions correctly</li> </ul>