

SCIE1302: Science Teaching Strategies for Center-Based Preschool Educators Course Syllabus

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| Course Details | This course is part of the PBS TeacherLine suite of self-paced courses. |
| Course Description | <p>This course will introduce you to four key strategies for teaching science concepts to preschool children ages three to five-years old. 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 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> |
| Course Goals | 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 classroom 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. |
| Course Design | This is a self-paced professional learning opportunity that should take 1 hour to complete. Participants can digest the course reading, watch videos, and assess learning with multiple choice questions all at their own pace. |
| Target Audiences | This course is intended for pre-service and in-service preschool teachers who work with children ages three to five-years old in classroom settings. |
| Standards | The pedagogical approach taken in PEEP’s professional development, as well as its science curriculum, align with the Head Start Child Development and Early Learning Framework. (See the Correlation Chart.) |

The PEEP curriculum also aligns with the Head Start Approaches to Learning, fostering initiative and curiosity, engagement and persistence, reasoning and problem solving.

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 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 classroom.

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

| Topic | Learning Objective | Coursework/Activities |
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| 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"> • Read and reflect on approach to this course • View one video |
| Learning Environments | Understand how to create intentionally planned learning centers – in standard and non-standard areas – that encourage children to explore with specific materials and | <ul style="list-style-type: none"> • Read backgrounder • View one video • Reflect on questions after viewing • Try the recommended activity to apply learning |

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| | learning goals in mind. | <ul style="list-style-type: none"> • Answer quiz questions correctly |
| 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"> • Read backgrounder • View one video • Reflect on questions after viewing • Try the recommended activity to apply learning • Answer quiz questions correctly |
| 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"> • Read backgrounder • View one video • Reflect on questions after viewing • Try the recommended activity to apply learning • Answer quiz questions correctly |
| Individualized Instruction | Discover why science is well suited to individualized instruction and review methods of engagement that respond to a child’s unique needs, abilities, and interests. | <ul style="list-style-type: none"> • Read backgrounder • View one video • Reflect on questions after viewing • Try the recommended activity to apply learning • Answer quiz questions correctly |