

General methods

- Most importantly – let them try out the lessons and activities!
 - They need time to play and engage with the materials to feel prepared to introduce it to their class. This means having enough materials for stations or each teacher.
- Recognize that they are the experts in their classroom
 - Give them time to reflect on materials and ask how they would adapt an activity for their classroom.
- Suggest adaptations
 - Before the workshop come up with modifications of the activities that may work if the children are younger or also extensions of the activities that may get the children moving or outside.
- Build on their experience
 - Ask what activities they already do relating to science or a particular unit and build upon that.
- Ask them for what they need help with or what they find most challenging
 - If one person finds something challenging, most likely others will as well. As a group you could brainstorm the best way to address these challenges or it is something you can follow up with after the workshop.
- Encourage them to learn from one another
 - Ask them to share experiences and ideas. Promote conversations between teachers to help them brainstorm and learn together.
- Play an improve game
 - This will help teachers be relaxed, in the moment, and open-minded.

Instructional methods

As part of the collaborative we have shared our tips and tricks to teach teachers new activities and lessons during professional development workshops. Number of teachers, space available during the workshop, and available supplies will all influence which method is best for your workshops.

Below are the methods used by our partners:

- Modeling
 - Walk through the activity as if you are the teacher and the workshop participants are the children.
 - This is beneficial for teachers to hear science talk, open-ended questions, and how to engage children overall. It is especially good for teachers who are uncomfortable with science content. It is important to let teachers interact with the materials after you have modeled the activity.
- Hands-on station rotations
 - Set up activity stations around the room and ask teachers to walk through each one.
 - This is a great way for teachers to have hands-on experience with the material and think about how each activity may work in their classroom. Have teachers share out or spend time preparing activities afterwards to make sure they are ready for the activities.
- Jig-saw strategy
 - For this strategy, have teachers grouped together at tables. You should try to have the same number of activities as teachers at each table. So you will review 4 activities; have about 4 teachers at each table. Then each teacher is responsible for going to one activity station and learning how to do the activity. Afterwards the teachers return to the table and teach the others the activity they just learned.
 - If you have more than 4-5 activities it may be best to break it up into two rounds.
 - This is a great way to get the teachers involved and talking to one another about what an activity looks like, what they think about it, and brainstorm how to implement the activity.
- Fishbowl strategy
 - Depending on the number of participants and training stations lead by a facilitator, you will break up teachers between those interacting and doing the lesson with those who are observing the lesson.

- This is great because teachers will have the opportunity to both watch how a lesson is lead and also interact with the materials and content as if they are students.

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Developed by the Sciencenter for the Collaborative for Early Science Learning.

Contact: Lauren Van Derzee, lvanderzee@sciencenter.org

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