

The ABC's of Classroom Science with Kids

A powerful presentation is:

- Age-Appropriate and Interactive
- Based in Real Science
- Confidence-Building

Age-Appropriate and Interactive

- Acknowledge varying **attention spans** and **social and motor skills**. Limit solo speaking to no more than 10 minutes. Use questions, demonstrations, and activities to break up monologues.
- Use only the **vocabulary** necessary to communicate clearly. Any science-related vocabulary that might be unfamiliar should be written on the board and defined.
- Include as much **interactive and hands-on experience** as you can: Try to include activities that give kids a chance to have an experience with the concept you're discussing. Ask leading questions to direct thinking: identify areas where students can have real input.
- **Build relationships through conversation**. Include time for questions and personal conversation about your experiences. Don't be afraid to show personality, whether you're a joker, musical, a storyteller...being **real** will gain kids' trust and attention.
- Have a clear **classroom management strategy**. What materials will you need? Will you be selecting student volunteers? Dividing into small workgroups?
- Be ready to respond to **restiveness**. Try changing course if you need to re-engage your audience (start an activity, tell a story, ask for participation). Feel confident about setting your boundaries in advance and sticking to them!
- Always allow more time than you think you need and **simplify, simplify, simplify!**
- **Expect the unexpected** – ask for help if you need it!

Based in Real Science

- **Choose topics you know** and care about. Your enthusiasm will engage kids' interest.
- **Model good scientific process**. If you're using an example or an activity, start by asking the kids "What do you think will happen?" Plan a test, draw conclusions.
- **Connect science to students' everyday lives**: real-world jobs, education, local community, or current events.
- Demonstrate the role that uncertainty and curiosity play in science and technology. Give examples of changing scientific ideas to **show how understanding evolves**.

Confidence-Building

- **Include all learners**. Start with the basics. Include a simple concept in every section and add structure in response to questions. Use different methods to communicate the same concepts: words they *hear*, demonstrations they *see*, physical activities they *do*, art they *create*, words they *write* or *say*, words they *read*. If possible, bring visual aids: posters, videos, overheads, or photos.
- **Acknowledge what you don't know**. Saying "I don't know" to an unexpected question can be an opportunity to engage kids. Students *and* teachers overcome their own uncertainties if you model an attitude of discovery.
- **Involve teacher and students** as appropriate and **ask for suggestions** to improve activities afterwards.
- **Treat learners equally** whether they are interested, helpful or a handful. Your encouragement and supportive feedback is more meaningful than you imagine. Remind them of how far they've come towards the goals for the session.
- **Have some fun! If you're enjoying yourself, your group will have a great time too!**

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