



## A Scientist's Guide to Making Classroom Visits

Adapted from, The Scientist's Guide to Making Classroom Visits – Witness the Arctic, Autumn 2001, ARCUS.

### Scientists in the classroom can help students

- Understand how science is used in the real world
- See scientists as real people and role models
- Develop a sense of how science and other subjects work together
- Understand the role of science in day-to-day living
- Appreciate science as an exciting and viable career choice.

### Before your visit

Discuss with the teacher:

- How your topic fits in with what the class is currently learning
- How it will be discussed before and after your visit
- Background information already covered
- Exactly what you will present to the class

You may want to suggest resources, provide the teacher with background material to introduce before your visit, or develop a worksheet or activity (e.g. quiz) to follow up on your presentation.

Have the teacher get the students to develop two or three questions each about your topic to stimulate discussion.

Tailor the length and style of your presentation to the age group of the class.

Level	Duration	Style
Kindergarten	Up to 20 minutes	This group especially likes hands-on items and activities and will ask lots of questions.
Grade 1-3	20 to 30 minutes	Visuals and hands on objects or activities always engage students. Expect questions and stories. Try to incorporate your talk with a physical activity i.e relay race, treasure hunt, bingo game (using keywords or images).
Grade 4-6 Grade 7-9	45-60 minutes	A 30 min. talk punctuated with activities. Consider including a short assignment (worksheet) or question/answer session. Props (instruments) are very useful.
Grade 10-12	50 + minutes depends on class schedule	Try to incorporate your work within the framework of their curriculum. Connect to them as future scientists – discuss some of the opportunities for students in your field. Important to treat high school students as young adults – do not speak down or assume that they are not able to understand.



### **Hints:**

The more engaging your activities and items, the more interactive the students will be. “Wiggles” by any grade level indicate a need for a change in pace or activity.

Bring along cool gadgets, items that you work with – instruments, samples, pictures.

- Pictures should be large enough to be seen
- Objects for handling should be safe.

Try to include relevant cartoons.

Tie into their pop culture – eg address the myths portrayed in movies about the Arctic or climate change.

‘Freebies’ or giveaways are always very popular –check with your institution to see if they have posters, pens, etc.

If you are representing a university, bring along 3-5 calendars from the university and identify the relevant programs for high school students who might be interested in science and doing work in the Arctic.

### **During your presentation**

Introduce yourself and the institution (university or research agency) you represent

Tell the class why you are visiting.

Tell them what to expect out of your visit.

Do not stay in the front of the room, move about the entire room – this may require a remote mouse or pointer for your presentation.

Ask basic questions to determine what they already know about the topic e.g “what is the difference between climate and weather?” “What do you think climatologists do?”

Tie your topic to what they have been studying.

Be sure to discuss why you became a scientist.

- How did you get hooked on science? Describe the path that got you from high school to research – note that it is good for students to hear that it was not necessarily a linear path from school to research.
- What makes you excited about the work you do? Share your passion.

How does your work affect their lives? Give an example and ask them for more.

Discuss how technology is a part of your work – recognize that science and technology interact with and advance one another.

Discuss how your work contributes to the broader study of climate change and ArcticNet.

Review as you go – make connections about what you said and did by asking questions.

Have them make connections.

Provide a way for the student to use the information you have presented them – try to make it locally relevant.

Have them do an experiment, play a game, do a worksheet, that you and /or the teacher developed for that purpose

Work directly with students if you engage them in an activity



### **At the end of you presentation:**

Ask students three or four review questions and have them tie in personal experiences or share a stories.

Leave contact information.

If you want, invite students to visit your research lab or go online to the website to ask more questions or see other research activities.

Most of all – remember the enthusiasm and curiosity that drove you to become the scientist you are today - remember to have fun!

\*This document was prepared to provide you with suggestions on how to gear your presentation to a student audience. It is not a ‘recipe’ for making a successful presentation, some techniques and ideas will be appeal to you and others will not.

Feedback that Schools on Board has received from students can be summed up in a few key recommendations: The key to a good presentation is:

- Preparedness
  - organized and geared to the level of the audience
  - does not rely only on powerpoint
- Enthusiasm of the presenter

We hope that this document will assist you in preparing your presentation.

If you have other ideas that work well, let us know and we will share them in the next update of this document.

Contact us with your feedback and let us know when you include School on Board material in your presentations so that we are able to track the outreach of this program.

Lucette Barber  
Program coordinator  
Schools on Board - ArcticNet  
Center for Earth Observation Science  
Clayton H. Riddell Faculty of Environment, Earth and Resources  
125 Dysart Rd  
Rm 498 Wallace Bldg, University of Manitoba  
Winnipeg, MB, CANADA  
R3T 2N2

Tel: (204)272-1542  
Fax: (204)272-1532  
Cell:(204)799-7328  
Email: barberl@cc.umanitoba.ca