Introduction to volunteering in schools
Many opportunities exist for visiting a school and working with students, and all can be very rewarding—whether you are volunteering at a Career Day or other school event, participating in IBM-sponsored programs such as National Engineers Week, or engaging schools in IBM programs such as MentorPlace or technology camps for girls. This resource is designed to help you work directly with students to support their learning. Today’s classroom environment is very likely different than what you experienced when you attended school.

The following tips, basic questions, and information are designed to help you better understand today’s school environment, some of the challenges facing educators, and the state of public education in general.

You might begin by working with your child’s classroom or in a neighborhood school, or you can volunteer first through one of IBM’s education outreach programs that benefit students of all ages.

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**Education is IBM’s number one social commitment. In addition to its grant programs, IBM encourages employees to volunteer in their local schools—which yields benefits and enjoyment to children and volunteers alike.**
Think about why you want to volunteer and what you have to offer a student, classroom, school or district. Volunteering takes many forms: helping on field trips, for example, or hosting a student for a job shadow at IBM, or presenting a hands-on activity that ties into students’ classroom learning.

Once you decide this type of volunteering is for you, look at the Activity Kits offered by IBM for classroom activities that can help make your school visits a success.

Examine what you have to offer: special skills, hobbies, job interests, etc. Don’t worry if nothing in particular springs to mind. Often just having an extra “pair of hands” helping out in the classroom is much appreciated by the teacher.

There are many types of general volunteering that are valuable to the schools.

- If you want to work directly with students, what are the key messages or experiences you want to leave with them?
- If you are open to any number of hands-on activities, consider how you can best support the teacher’s instructional goals.
- How do you think the students will benefit from your visit?
- What would you like to get from the experience?

How do I find a school that needs my help?

If you need assistance identifying a school that fits your interests, contact your local IBM Corporate Citizenship Manager.
How does IBM support public education and volunteering in schools?

IBM contributes its expertise and knowledge to improve schools throughout the world. One primary example is its Reinventing Education grant program, which from 1994 to 2009 contributed more than $100 million in technology and services to 25 school districts and states in the United States as well as twelve other countries: Australia, Italy, Ireland, Japan, Singapore, the United Kingdom, Vietnam, Mexico, Brazil, Germany, India, and China. Reinventing Education produced new applications of technology to accelerate school reform and to assist in higher student achievement. More than 70,000 teachers and 7 million students participated.

IBM also contributes via other education outreach programs that benefit students of all ages. Depending on your location, these might include:

**MentorPlace**, mentoring of students using secure Internet technology

**Teachers TryScience**

**Engineers Week**, a US-based school outreach to expose students to technical careers through hands-on activities

You might also support a local school with the help of IBM-sponsored educational tools such as **KidSmart**, **TryScience**, or **Reading Companion**. All of these programs are supported by **volunteer activities kits** found on On Demand Community.

Contact your **IBM Corporate Citizenship Manager** or check your local w3 pages to find out what IBM-sponsored programs are available in your country or area. IBM also supports your volunteer commitments with international programs such as the **Community Grants** and the **Matching Grants** program in the United States and Canada.
It’s likely that the schools in which you will volunteer look and feel different from what you remember as a student. In many places, new research into teaching and learning, as well as a renewed focus on educational accountability and success for all students, has led to changes in the ways teachers organize and deliver instruction. There might be new curricula and syllabi or changes in funding.

It is important to understand that these changes are responding to the need to plan successful instruction for all students, regardless of cultural background, language, and learning style.

This section applies principally to changes that have been taking place in U.S. schools, but is useful for understanding how education is evolving in many places. You should try to be aware of any high-profile issues, debates or media coverage about education in your town, state or country. You might search the Internet for materials on your local or national educational authorities.

What are research-based teaching strategies?

Research-based teaching practices have led to learning arrangements such as cooperative learning, school-to-career programs, project-based learning, problem-based learning, as well as more hands-on applications of literacy and math. Teachers today have great expectations placed upon them to understand the educational skills and needs of each child, and the responsibility to meet those needs with an inclusionary classroom.
Here are a few research-based teaching practices you might encounter:

- **Cooperative learning.** Students may sit in groups facing one another and are asked to solve problems in a collaborative fashion. Discussion and cooperation are expectations for the learning environment. If students are familiar with this type of environment, use this in your planning. Think about ways to have the teams use and/or discuss the information you are sharing in collaborative ways.

- **Project-based learning** helps students understand content by shifting from short, isolated, teacher-centered lessons to learning activities that are long-term, interdisciplinary, student-centered, and integrated with real-world issues and practices. If the teacher is working on a project-based activity, you may be able to connect your activity to what the students are working on.

- **Problem-based learning** involves solving real-world problems by constructing, not merely receiving, knowledge. The teacher’s role changes from knowledge provider to guide and learning facilitator, and the student’s role changes from knowledge receiver to active researcher. Give the students, as part of your activity, a chance to apply what they are learning from you.

**How has U.S. public education been changing?**

In addition to the changes that you will see in instruction, teachers are also required to be knowledgeable of established instructional standards and to teach in accordance with them. (In the United States, more information on standards in each state is available at [www.achieve.org](http://www.achieve.org).)

There is a real need to set clear, high academic standards for everyone – not just for some – and to monitor progress, intervening as necessary to ensure all students succeed.
Tips

It’s important to create and maintain a classroom environment that feels comfortable and safe, and encourages learning. Educators call this “classroom management,” and it includes setting appropriate behavioral standards, as well as understanding the best way to instruct students. As a volunteer, you aren’t expected to know exactly how classroom management works, but you can still benefit from techniques for managing a classroom, interacting with students, and conducting activities.

The Resources tab includes a chart of behavioral characteristics of children at different ages, which is also useful background.

What are techniques for managing a classroom?

The best way to create a positive learning environment is to keep students engaged and busy. But you still may run into some challenging situations. Here are some tips that can help:

- Realize that you can’t be friends with the students and still be the “teacher.” It’s a fine line, but it’s an important distinction to make to keep the focus on the activity at hand.
- Use nonverbal communication to deal with minor behavior problems. You can use hand gestures or eye contact to quickly deal with small issues, like students talking or tipping back in their chairs, without interrupting the whole class.
• Watch for signs of burnout and fatigue. Try to give students a break from intense learning and allow them to reenergize by doing something interactive or giving them a short break from the activity.

• Be aware of any cliques that are developing and try to separate these students in subtle ways. For example, instead of letting students form groups on their own, have them count off or separate them so that groups are formed randomly. This will encourage students to spend time getting to know different people.

• When doing activities, circulate and help students stay focused on their task.

• Even when working with individual students, frequently scan the room to help you pick up on and address any potential problems.

Remember that different students learn in different ways and a single approach won’t work for all. You may have to tailor activities for different learning styles and maturity levels. For example, less mature students respond well to extra attention, while others may be able to work more independently.

Don’t be afraid to ask for help when you need it. No one expects you to come into the classroom knowing as much as a trained educator. Teachers or other volunteers may be able to provide you with helpful suggestions and strategies for handling specific situations, such as when a child asks a question and you don’t know the answer. (It’s OK to admit that you don’t know; just say that you don’t know the answer but that you can work together to find it.)

What should I know about interacting with students?

Every teacher and volunteer has special tips and techniques for getting and keeping students’ attention, maintaining behavioral standards, and creating an environment that’s conducive to learning. You will probably learn many of these techniques “on the job,” but here are some basic tips:

• Show respect for each child. Also remember to respect diversity, which means much more than race or culture; consider students’ backgrounds and home life.

• Be open and friendly and inclusive. Smile and make eye contact with the students.

• Avoid talking too much. Remember that activity is what keeps students interested and engaged.

• Be a good listener. Let students talk without interrupting and show that you value their point of view and appreciate their participation.

• Decide how you want the students to address you. Do you feel comfortable being called by your first name, or not?

• Be prepared for personal questions students may ask such as, “How old are you?” or “Where do you live?” These questions may seem harmless, but they can easily lead to more inappropriate ones, so it’s best to be prepared to deflect any that are too personal.

The Resources tab includes a list of typical questions you might be asked in a classroom.
What techniques can help with classroom activities?

- Develop a plan for each activity, but also remain flexible. You may find it helpful to have a "filler" activity that you can use in case you find yourself with extra time or an activity that you can abandon if time runs short.

- Start with an icebreaker activity to engage the students with each other and with you. Use an activity that helps you learn students’ names.

- If a lesson or activity isn’t working, try something new. For example, if students are having a hard time understanding a particular concept and are starting to feel frustrated, put it aside for a while and change to something that the class will find engaging.

- Give clear oral and written directions, and provide demonstrations as appropriate.

- Avoid acronyms and jargon, but do use scientific terminology (prepare vocabulary lists or use the chalkboard to document them).

- Wait until you have finished giving instructions or explanations before you distribute any handouts.

- Select “assistants” to help hand out or collect materials.

- Plan more time than you think is required for handing out and collecting materials.

- Provide paper and pencils or markers when required, or arrange to have students come prepared with these items.

- Don’t worry about glitches—they happen all the time, and students love to help when things go wrong!

What are typical questions students ask?

These questions most likely can be answered from your personal experience:

- Do you like what you do and why?
- What qualifications do you need to do your job?
- What classes/subjects did you need to take in high school? Were they hard? Did they seem relevant at the time?
- Do you use math a lot? Do you have to be good at it?
- What do you do when you don’t know the answer to a question?
- Have you ever had a problem you couldn’t solve?
- Do you have to travel a lot in your job?
- Do you have to be a “brain” to work in the IT field?

Here are some more potential questions with possible answers:

- Are there a lot of jobs in the IT industry?

Many of the fastest-growing occupations are in the IT industry. IBM employs more than 300,000 people worldwide in a wide variety of jobs—not only in programming, engineering or other technical fields. IBM needs people who like technology but might enjoy selling it, or helping customers learn how to use it, or managing how we build and deliver products around the world, and much more.

- How much money do you make? How much money do IT workers make?
Tell students that you prefer not to answer with your personal information, but that salaries depend on many different things: the kind of job you have, your degree, your experience, and where you live. IBM and many other companies pay bonuses for outstanding work, while pay for salespeople is typically based on how much they sell each year. In the technical fields, beginning IT professionals can earn salaries starting at $41,000 and up, depending on their degree, experience, and location.

- What’s the difference between a scientist and an engineer?

Scientists are thinkers who are generally creative and observant. They like to find explanations for things. Engineers, while also creative, are builders who like to tinker with things. They tend to be more visually oriented.
Now that you have decided that you want to share your expertise and talents with students, it's important to prepare in advance so you can make the most of your visit and make a real impact with students, teachers and school staff.

**How should I prepare for my visit?**

Identify your point of contact – the classroom teacher, principal or a designated assistant. Arrange to have a brief conversation with that person (even a phone call will do). Be upbeat and positive, express your enthusiasm for this opportunity and assure the school that you are there to help. Be aware that for the school or the teacher, having a volunteer requires an investment of valuable time to support and guide you. If they’re really busy, they may not be able to take immediate advantage of your offer.

Once you have contacted the teacher, you may want to talk with other, experienced volunteers. This is one of the best ways to feel prepared to take on the challenge of volunteering with students.

The following questions will help you make the most of your visit:

- What are the school hours? What is the best time to work with or talk to a class, or to meet with students before or after school?
- Are there any special events (holidays, testing schedule, etc.) you should consider when scheduling your visit?
- What is the school's demographic makeup: languages/backgrounds, socio-economic, achievement, etc.?
- What are the timely and important things going on in the school and community that relate to the classroom?
What should I ask the teacher/instructor?

Once you and the teacher have decided how you can best spend your volunteer time at the school, you may want to review the following questions to prepare for the visit. If your initial point of contact is the classroom teacher, then your first conversation may have already included these items. If not, discuss them with your contact:

- If you are doing an activity with the class, review its purpose and establish the results that the teacher expects for the students.
- Ask the teacher to remain in the classroom for your activity. You can include the teacher as a resource if you need an extra pair of hands.
- Find out how much time you will have in the classroom. Remember, many classes have set durations (often 45, 50, or 80 minutes) so leave time for questions and answers at the end of your presentation. Also, school schedules are generally inflexible, so stick to the time allotted and don’t expect the teacher to make changes in the school day.
- Find out about the students: class size and ages, interests, some of the topics or themes they have recently covered. Are they experienced in working in groups? Use answers to these questions to structure your presentation to be engaging and relevant to the students.
- Are there students with special needs?
- Are there any suggestions and/or needs about which the teacher would like you to be aware?

If you are conducting an activity with the class, ask about the location where you’ll be working and about logistics such as:

- type of room – regular or computer classroom, library, auditorium (will you need/have space for small group activities?)
- number and location of electrical outlets
- available audio/visual equipment (screen, overhead projector, LCD projector, TV hookup, computer)
- the setup of tables, desks and chairs
- Other than checking in at the office on the day of your visit, are there other security procedures that volunteers must follow? (Many schools and districts are required by law to conduct background security checks for volunteers who are in the classroom on a regular basis.)
- Get travel directions to the school, the location of the school office, and the exact classroom location. (On the day of the visit, make sure that you check in at the school office.)

How do I prepare a classroom lesson?

- Develop a hands-on activity when working with children of any age. Talking “at” them is not an effective strategy. The On Demand Community site includes sample presentations you might consider. You can filter the list of Activity Kits to focus on students and on specific topics.
- Know your audience. For example, a 7-year-old has a shorter attention span than a 14-year-old. In the Resources tab you will find a chart of thinking and behavioral characteristics of children ages 5 through young adult.
• Do what works for you. Don’t worry about borrowing from others (but make sure you’re not repeating what’s been done before).

• Practice with a timer and tape recorder. You might even ask your co-workers or children to be your test audience. Allow time for questions.

• Visual aids are useful but need to be used appropriately—too many can be as bad as too few.

• The more relevant your presentation is to the students’ lives, the more they’ll be able to connect with what you are saying.

• Have back-up materials on hand. Despite all your planning, things sometimes go wrong at the last minute.

• Have printouts of your presentation and any handouts you want to leave with the students.

• Determine if the school has a dress code or dress-down day. Dress accordingly.

• Consider recruiting a colleague to partner with you. If your team is diverse in terms of culture and gender, it will better represent IBM’s diversity, give students role models they can relate to, and demonstrate that IT careers are open to all.
Children’s thinking and behavioral characteristics

Every child is different, but there are some common developmental and behavioral characteristics that children exhibit at different ages. A working knowledge of some of these characteristics can help you be more prepared for your volunteer experience because you’ll have a better idea of what to expect and how to best help children learn. Knowing what children are like at different ages will help you plan activities and lessons that are developmentally appropriate, fun, and engaging. Below you’ll find some common characteristics for children between the ages of 5 and 19.

<table>
<thead>
<tr>
<th>Ages 5-7</th>
<th>Cognitive</th>
<th>Emotional</th>
<th>Physical</th>
</tr>
</thead>
</table>
| • learns through manipulation  
• sees parts rather than whole  
• believes what he/she sees  
• doesn’t understand that making physical change in an object doesn’t change its amount | • open and curious  
• adventurous  
• eager  
• loud and energetic  
• expressive  
• concerned with self  
• wants to please adults  
• difficulty regulating behavior  
• loves praise and attention | • 10-15 minute attention span  
• requires frequent change of pace |
### Introduction to volunteering in schools: Resources

#### Ages 8-10
- Cognitive
  - believes what he/she sees but beginning to understand concepts
  - understands classification systems
  - understands and can perform simple mathematical operations
  - can to a certain degree generalize and formulate hypotheses
  - likes to memorize and learn facts

- Emotional
  - understands and likes to follow rules
  - likes group activities
  - is eager to socialize and fit in
  - considers fairness to be important
  - takes initiative and is self-motivated
  - perfectionist
  - avoids opposite sex

- Physical
  - 30-40 minute attention span

#### Ages 11-13
- Cognitive
  - hypothesizes
  - creates propositions
  - evaluates and conceptualizes
  - beginning to understand probability and multiple causation
  - has developed an understanding of ethical principles
  - thinks in concrete terms

- Emotional
  - restive
  - emotional
  - sensitive
  - eager to get going
  - loyal
  - challenges rules and routines
  - challenges authority
  - does better in small rather than large group activities
  - vulnerable ego
  - very self-conscious
  - concerned about how he/she is perceived by others

- Physical
  - 10-15 minute attention span
  - requires frequent change of pace
### Cognitive
- hypothesizes and extrapolates
- understands probability
- thinks creatively
- has a personal code of ethics

### Emotional
- personal identity is emerging
- preoccupied with discovering own identity
- looks to peer group for approval
- strong identification with friends
- may have poor self-esteem
- beginning to mature and think like an adult

### Physical
- 40-60 minute attention span

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**See also these Web sites for theories and background about childhood development:**

Jean Piaget – [http://webspace.ship.edu/cgboer/piaget.html](http://webspace.ship.edu/cgboer/piaget.html)

Erik Erikson – [http://www.ship.edu/~cgboeree/erikson.html](http://www.ship.edu/~cgboeree/erikson.html)