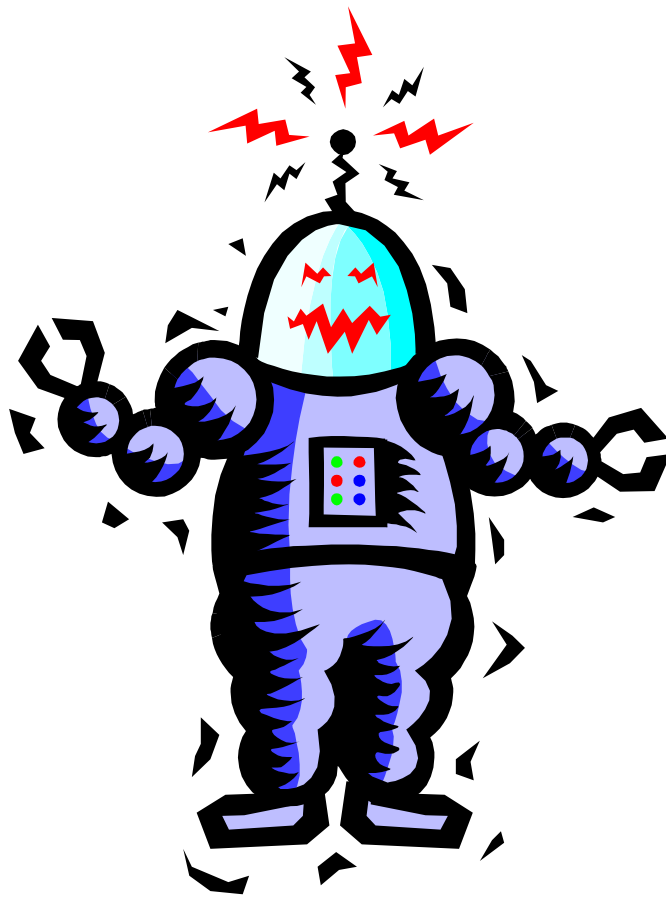


National Engineers Month Volunteer Instructions

Amazing Robots



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Tips by grade level

http://www.businesseducationlinks.org/pdxhome/nem/tips_by_grade_level.pdf

Best Practice Tips

http://www.businesseducationlinks.org/pdxhome/nem/best_practices.pdf

IBM Tried-And-True Classroom Activity Instructions

AMAZING ROBOTS!

This activity originated from www.tryscience.org -

http://www.tryscience.org/experiments/experiments_robot_athome.html

- For our volunteers we created a large floor mat using a disposable blanket/tarp and made a 12x12 grid using black tape. This is what I would suggest a volunteer use. another idea would be to bring blue painters tape to a classroom and find a clear spot to create a grid in the room. This type of tape is easy to peel and leaves no mess behind.
- Index cards with robot instructions are also required and we made these using card stock index cards. These could also be created online and printed/cut out. Since students will break into groups for this activity creating 5 sets of the same cards usually works best.

Activity Provided Courtesy of IBM:

Long-time leader and advocate for National Engineers Month

For More Information Contact:

Linda Wilson Bauer

IBM Corporate Citizenship/Affairs and Communications for Oregon

liwilson@us.ibm.com

(503) 578-3749

T/L 775-3749

(503) 543-8918 Home Office

(503) 578-3749 fax

15300 SW Koll Pkwy

Beaverton OR 97006

Suggested presentation timings (40 minute class)

Start time:	End time:	Time spent (elapsed time)	Activity
		5 mins (5)	Class arrives and settles. Introductions (slide 1)
		5 mins (10)	What is an engineer? How do people become engineers? (slides 2-7)
		5 mins (15)	What is a robot? (slides 8-11)
		5 mins (20)	Explain amazing robots activity. Groups prepare their "program"
		5 mins (25)	Groups demonstrate their "programs"
		15 mins (40)	What happened? Review final slides. Hand out give-aways, if time, or leave with the teacher. (slides 13-17)

Suggested presentation timings (50 minute class)

Start time:	End time:	Time spent (elapsed time)	Activity
		5 mins (5)	Class arrives and settles. Introductions (slide 1)
		10 mins (15)	What is an engineer? How do people become engineers? (slides 2-7)
		10 mins (25)	What is a robot? (slides 8-11)
		5 mins (30)	Explain amazing robots activity. Groups prepare their "program"
		5 mins (35)	Groups demonstrate their "programs"
		15 mins (50)	What happened? Review final slides. Hand out give-aways, if time, or leave with the teacher. (slides 13-17)

Presentation Pointers

It's much more important to make contact with your audience than to slavishly follow the presentation and speaker's notes.

- Ask questions to involve your audience.
- Make eye contact.
- Use the slides and speaker's notes as a guide. You don't need to read every word or explain every point.

When you ask questions, you'll probably need to wait longer than you expect for answers.

Don't encourage distractions:

- It's good to allow questions during the presentation but request that students put their hands up to ask or answer questions.
- If the students are not paying attention, ask them to listen and then wait for their attention. If you try to present over the noise you'll probably hurt your voice.
- Give activity instructions before you hand out the materials.

If appropriate, give personal examples of why you work in engineering.

Have fun!!