

# Scientist and Engineer in the Classroom Program



## The Science & Technology Hotline

# Educational Resource Guide 2012 - 2013

*The Praxis Science Network's vision is to provide positive science experiences to the residents of South East Alberta, especially our youth, through the provision of access to science and technology resources.*

Founding Member of



Praxis has a database of subject area experts that would like to share their knowledge with students in the classroom. They are very willing to come into your classroom to show your students the connection between what they are learning in the class and the "real" world. Hopefully, through this interaction students are better able to see the real life connection between Science, Technology, Engineering and Mathematics (STEM) and the classroom. When you request a "Scientist/Engineer in the Classroom", you will be asked to provide the following information:

Name:

School:

Phone Number (& ext):

Email Address:

- Date/Time (You must find a fit with the presenters schedule therefore it could mean that you may have to adjust your class schedule to meet their available time. A small price to pay considering the time and effort to locate a "free" guest speaker and the volunteer donates their time and specialized knowledge).
- Is more than one class and more than one teacher involved? If so how many students in each class and what are the teacher's names?
- Where is your school (address/directions) and where to park?
- School entrance and office location (school guests must report into the office):
- Where are the staff washrooms/lounge located (adult guests should use the staff facilities and not the children's washrooms)?
- What time to start/stop the presentation (recommend you keep it similar in length to your regular class period):
- Where is the class in this topic (beginning, middle or end):
- What has been covered thus far (if middle or end):
- What will the students learn/do in the next week or two in the topic:
- Any special activities in the topic that you and the students have done or will do?

To qualify guest speakers for insurance liability coverage, all subject area specialists are reminded that they must be booked through Praxis, so please let us help you locate and book speakers.

**Note: Try to request the Scientist/Engineer at least 6 weeks in advance. When booking a Scientist/Engineer, you agree to and are reminded that you must remain in the classroom the entire time the guest speaker is there. Guest speakers must not be left alone with the students.**

# Learning Kits



All of the educational resource kits contain resources in order to allow you, the educator to promote hands on learning. The kits contain information relevant to the Alberta curriculum specific topic. The learning kits are designed to be appropriate for their curricular grade levels but are easily adaptable by the teacher. Kit contents and development is dynamic so please check our website often for the most current information .

## Air & Aerodynamics

- Grade 6 - Unit B (Flight)

## Astronomy/Sky Science

- Grade 6 - Unit C (Sky Science)
- Grade 9 - Unit E (Space Exploration)

## Boats and Buoyancy

- Grade 2 - Unit B (Buoyancy & Boats)

## Building Things (Grade One)

- Grade 1 - Unit C (Building Things)
- Grade 3 - Unit C (Building Things with a Variety of Materials)

## Building Things/Levers and Gears

- Grade 1 - Unit C (Building Things)
- Grade 3 - Unit B (Building With A Variety of Materials)
- Grade 3 - Unit C (Testing Materials & Design)
- Grade 4 - Unit B (Wheels & Levers)

- Grade 4 - Unit C (Building Devices & Vehicles that Move)

## Conserving our Environment

- Grade 4 –Unit A (Waste and our World)
- Grade 9 - Unit D (Electrical Principles & Technologies)

## Digging For Dinosaurs

- Grade 3 - Unit A (Rocks & Minerals)
- All Grade Levels

## Electricity I and Electricity II

- Grade 5 - Unit B (Mechanisms Using Electricity)
- Grade 5 - Unit A (Electricity & Magnetism)
- Grade 9 - Unit D (Electrical Principles & Technologies)

## Evidence and Investigation/Forensics

- Grade 6 - Unit D (Evidence & Investigation)

## Exploring Liquids

- Grade 2 - Unit A (Exploring Liquids)

## Flubber Kit

- Grade 2 - Unit A (Exploring Liquids)
- Grade 5 - Unit C (Classroom Chemistry)
- Grade 7 - Unit C (Heat & Temperature)
- Grade 9 - Unit B (Matter & Chemical Change)
- Sc 10 - Unit A (Energy & Matter in Chemical Change)

## Gyro Kit

- Grade 6 - Unit B (Flight)
- Grade 6 - Unit C (Sky Science)
- Grade 9 - Unit E (Space Exploration)

## Hearing & Sound

- Grade 1 - Unit D (Senses)
- Grade 3 - Unit D (Hearing & Sound)

## Insects and Creepy Crawlies

- Grade 1 - Unit E (Needs of Plants & Animals)
- Grade 2 - Unit E (Small Crawling & Flying Animals)
- Grade 3 - Unit E (Animal Life Cycles)

## Light And Shadows

- Grade 1 - Unit A (Creating Colour)
- Grade 4 - Unit D (Light & Shadows)

## Magnetism

- Grade 2 - Unit C (Magnetism)
- Grade 5 - Unit A (Electricity & Magnetism)

## Plants

- Grade 1 - Unit E (Needs of Plants & Animals)
- Grade 4 - Unit E (Plant Growth & Change)
- Grade 7 - Unit B (Plants for Food & Fibre)

## Rocks & Minerals

- Grade 3 - Unit A (Rocks and Minerals)
- Grade 7 - Unit E (Planet Earth)

## Screaming Chickens

- Grade 3 - Unit D (Hearing & Sound)

## Senses

- Grade 1 - Unit D (Senses)

## Simple Machines

- Grade 4 - Unit B (Simple Machines)
- Grade 8 - Unit D (Structure and Forces)

## Trees and Forests

- Grade 6 - Unit E (Tree and Forest)

## Waste Binder

- Grade 4 - Unit A (Waste and Our World)

## Weather

- Grade 5 - Unit D (Weather Watch)

## Wetlands Discovery

- Grade 5 - Unit E (Wetlands Ecosystems)
- Grade 7 - Unit A (Interactions & Ecosystems)
- Grade 8 - Unit E (Freshwater & Saltwater Systems)
- Bio 20 - Unit C (Energy & Matter Exchange in Ecosystems)

## Demonstration Models

### Animal Cell Model

- Grade 8 - Unit B (Cells & Systems)
- Science 10 - Unit C (Cycling of Matter in Living Systems)
- Science 14 - Unit C (Investigating Matter & Energy in Living Systems)

### DNA Model

- Grade 9 - Unit A (Biological Diversity)
- Science 24 - Unit C (Disease Defence & Human Health)
- Science 30 - Unit A (Living Systems Respond to their Environment)
- Biology 30 - Unit C (Cell Division, Genetics & Molecular Biology)

### Fetal Pig Model

- Biology 20 - Unit D (Human systems)

### Incubator

- Grade 1 - Topic E (Needs of Plants & Animals)
- Grade 3 - Topic E (Animal Life Cycles)

### Plant Cell Model

- Grade 7 - Unit B (Plants for Food & Fibre)
- Grade 8 - Unit B (Cells & Systems)
- Science 10 - Unit C (Cycling of Matter in Living Systems)
- Science 14 - Unit C (Investigating Matter & Energy in Living Systems)

### Power House - Includes Solar Trap

- Science 9 - Unit D (Electrical Principles and Technologies)
- Science 10 - Unit B (Energy Flow in Technological systems)
- Science 24 - Unit B (Understanding Common Energy Conversion Systems)



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## Learning Kits

- Air & Aerodynamics kit
- Astronomy/Sky Science Kit
- Boats & Buoyancy Kit
- Building Things Grade One Kit
- Building Things / Levers & Gears Kit
- Conserving Our Environment
- Digging For Dinosaurs Kit
- Electricity Kit
- Evidence & Investigation Kit
- Exploring Liquids Kit
- Flubber Kit
- Gyro Kit
- Hearing & Sound Kit
- Insects & Creepy Crawlies Kit
- Light & Shadows Kit
- Magnetism Kit
- Plants Kit
- Rocks & Minerals Kit
- Screaming Chickens
- Senses Kit
- Tress & Forest Kit
- Waste Binder
- Weather Kit
- Wetlands Discovery Kit
- Seasonal Kit: Thanksgiving
- Seasonal Kit: Halloween
- Seasonal Kit: Christmas
- Seasonal Kit: Easter

# Fax/Mail Request Form

[www.praxismh.ca](http://www.praxismh.ca)

Facebook: [PraxisMedHat](https://www.facebook.com/PraxisMedHat)

Twitter: [@PraxisMedHat](https://twitter.com/PraxisMedHat)

## Demonstration Models

- Animal Cell Model
- DNA Model
- Fetal Pig Model
- Human Torso
- Plant Cell Model
- Power House

## Apparatuses

- Incubator
- Telescope
- Van der Graaff Generator

Note: All Learning kits and equipment are loaned FREE for **two week** period (one week for home school parents).

**Whenever possible please use our on-line form under our webpage SERVICES menu tab to speed up the ordering process:**  
[www. Praxismh.ca](http://www.Praxismh.ca)

Today's Date \_\_\_\_\_

Name: \_\_\_\_\_

School: \_\_\_\_\_

Email : \_\_\_\_\_

Phone #: \_\_\_\_\_

Grade level: \_\_\_\_\_ # of Students: \_\_\_\_\_

Date request for kit: \_\_\_\_\_

Request a Guest Lecturer: Yes / No