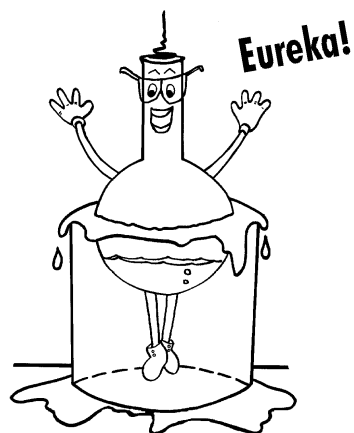


Professor Beaker's Learning Labs

For Grades 1, 2, and 3



Science and Technology for grades 1, 2, and 3

Energy
Matter
Liquids & Solids
Structures & Systems
Movement
Simple Machines
Complex Machines

Comprehensive science teaching resources for the classroom

Professor Beaker's Learning Labs
147 Stewart Drive
Sudbury Ontario
P3E 2R6

email: pbeaker@vianet.on.ca

some sample pages available on the Professor Beaker website
www.professorbeaker.com

for US prices email or check the website

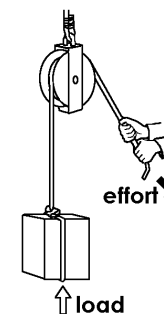
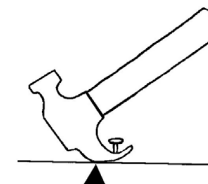
30 day satisfaction guarantee

Professor Beaker's Simple Machines Book

All six simple machines and complex machines are presented at grades 1, 2, and 3 levels

Features of this book:

- ◆ Background science for the Educator
- ◆ Chapter titles:
 - Lever
 - Inclined Planes
 - Wedges
 - Screws
 - Wheels and Axles
 - Pulleys
 - Complex Machines
- ◆ Reproducible work sheets/blackline masters
- ◆ 84 activities and experiments
- ◆ Experiments employ proper scientific methodology
- ◆ Science expectations addressed per activity
- ◆ Mathematics concepts addressed
- ◆ Science process skills addressed
- ◆ Technology that uses each simple machine
- ◆ Student reflection pages
- ◆ Take-home pages with relevant activities



204 pages, spiral bound, b/w illustrations

Order code: **SmB-1**
\$45.00 + S&H + gst

www.professorbeaker.com
email: pbeaker@vianet.on.ca

Characteristics of Objects and Properties of Materials

(designed for Grade 1)

Unit features:

- ◆ Background science for the Educator
- ◆ Chapter titles:
 - Objects and Materials
 - Properties of Materials
 - Materials in Objects
 - Comparing the Properties of Materials
 - Changing Properties of Materials
 - Design & Construct using Materials
 - Recycling & Construct using Materials
- ◆ Reproducible work pages/blackline masters
- ◆ 90 demonstrations and hands-on activities
- ◆ Mathematics extensions
- ◆ Student reflection pages
- ◆ Take home pages with relevant activities
- ◆ Group work self-evaluation page for students



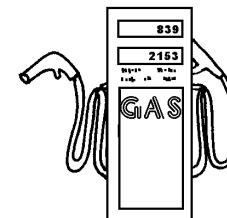
187 pages, unbound, pre-punched pages, b/w illustrations
Order code: **Mm-1 = \$41.95** + S&H + gst

Energy in Our Lives

(designed for Grade 1)

Unit features:

- ◆ Background science for the Educator
- ◆ Chapter titles:
 - Energy and Sources of Energy
 - Forms of Energy and Devices
 - Conserving Energy
 - Building Devices that Use Energy
 - Glossary
 - Appendix
- ◆ 50 demonstrations and hands-on activities
- ◆ Science expectations addressed by each activity
- ◆ Mathematics concepts addressed
- ◆ Tracking sheets
- ◆ Student reflection pages
- ◆ Take home pages with relevant activities

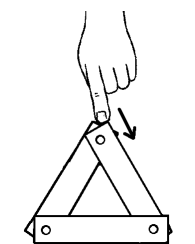


124 pages, unbound, pre-punched pages, b/w illustrations
Order code: **Ee-1 = \$31.95** + S&H + gst

Everyday Structures and Systems (designed for Grade 1)

Unit features:

- ◆ Background science for the Educator
- ◆ Chapter titles:
 - Introduction to Structures
 - Features of Structures
 - Shapes and Patterns in Structures
 - Analyzing and Comparing Structures
 - Designing Systems
 - Systems
 - Glossary
- ◆ Reproducible work sheets/blackline masters
- ◆ 50 demonstrations and hands-on activities
- ◆ Science expectations addressed by each activity
- ◆ Mathematics concepts addressed
- ◆ Tracking sheets
- ◆ Student reflection pages
- ◆ Take home pages with relevant activities



122 pages, unbound, pre-punched pages, b/w illustrations
Order code: **Ss-1 = \$31.95** + S&H + gst

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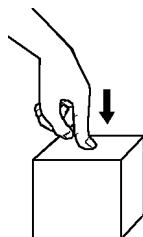
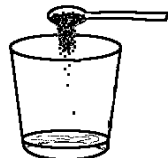
Professor Beaker's Learning Labs
147 Stewart Drive
Sudbury ON Canada
P3E 2R6

Liquids and Solids

(designed for Grade 2)

Unit features:

- ◆ Background science for the Educator
- ◆ Chapter titles:
 - States of Matter
 - Changes of State
 - Liquids
 - Properties of Solids
 - More about Solids
 - Designing
 - Glossary
- ◆ Reproducible work pages/blackline masters
- ◆ 70 demonstrations and hands-on activities
- ◆ Science expectations addressed by each activity
- ◆ Mathematics concepts addressed
- ◆ Tracking sheets
- ◆ Student reflection pages
- ◆ Take home pages with relevant activities



154 pages, unbound, pre-punched pages, b/w illustrations

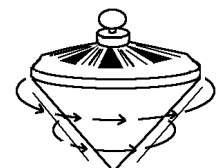
Order code: **Ms-2 = \$41.95** + S&H + gst

Movement

(designed for Grade 2)

Unit features:

- ◆ Background science for the Educator
- ◆ Chapter titles:
 - Simple Machines
 - Mechanisms
 - Position of Objects
 - Motion of Objects
 - Wheels and Moving Loads
 - Designing and Building
 - Glossary
- ◆ Reproducible work pages/blackline masters
- ◆ 60 demonstrations and hands-on activities
- ◆ Science expectations addressed by each activity
- ◆ Mathematics concepts addressed
- ◆ Tracking sheets
- ◆ Student reflection pages
- ◆ Take home pages with relevant activities



162 pages, unbound, pre-punched pages, b/w illustrations

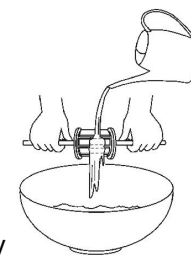
Order code: **Mm-2 = \$41.95** + S&H + gst

Energy from Wind and Moving Water

(designed for Grade 2)

Unit features:

- ◆ Background science for the Educator
- ◆ Chapter titles:
 - Energy
 - Wind Energy
 - Energy from Moving Water
 - Appendix
 - Science expectations met per activity
 - Mathematics concepts addressed per activity
 - Tracking Sheets
 - Student reflection sheet
- ◆ 20 Reproducible work sheets/blackline masters
- ◆ 22 hands-on activities
- ◆ Take home pages with relevant activities



65 pages, unbound, pre-punched, b/w illustrations

Order code: **We-2 = \$25.00** + S&H + gst

Qty	Code	Title	Unit Price	Total
			Subtotal	
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			5% GST	
			Total	

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more information at www.professorbeaker.com

Learning Labs - Science Mini-units

(designed for Grades 1, 2, and 3)

Each Learning Lab includes:

- An experiment or demonstration featuring a science concept
- Reproducible work pages and assessments
- Student assessment pages
- Background science information
- Take home page
- Learning focus questions
- Student reflection page
- on average 20 unbound pages, b/w illustrations

more details at www.professorbeaker.com

Learning Lab titles available:

Simple Machines

Wedges: A wedge and rectangular block prove that the wedge makes physical work easier \$5.00

Screws: A constructed paper screw proves that a screw is a form of inclined plane \$5.00

Wheels & Axles: A constructed wheel & axle prove that physical work is easier or faster when using a wheel & axle \$5.00

Inclined Planes: A ramp is used to prove physical work is easier using an inclined plane \$5.00

Levers: A constructed lever proves that physical work is completed more easily with a lever \$5.00

Pulleys: Students construct a pulley to show that physical work is completed more easily with a pulley \$5.00

Light

Light - Travel in Straight Lines: Cards and a flashlight demonstrate that light travels in a straight line \$5.00

Refraction: Use simple materials to show that light bends when it passes from water into air \$5.00

Light and Colour: A beam of sunlight is split into component colours using a small mirror and a bowl of water \$5.00

Weather Series

Water Cycle: Demonstrations and constructed models reinforce the science behind the water cycle \$5.00

Wind: Demonstrations and constructed models reinforce the science behind wind \$5.00

Forces

Friction - Smooth and Rough: Soup cans are used to explore the effect of surface roughness on friction \$5.00

Friction - Weight and Pressure: weights are pulled across a surface to show the effect of weight on the force of friction \$5.00

Magnetic Force Fields: Magnets and iron powder prove that a magnet is surrounded by a magnetic force field (we sell magnets and powder) .. \$5.00

Magnetic Attraction: Explore magnetic attraction with a magnet and a variety of objects (experiment requires a magnet) \$5.00

Changes of State

Condensation: Change of state from gas to liquid is demonstrated with a glass of ice water \$5.00

Evaporation: Change of state from liquid to gas is shown using wet cloths exposed and not exposed to air \$5.00

Water

Density: Objects of different density are categorized and compared with the density of water \$5.00

Displacement: modelling clay is used to show that the amount of displaced water varies with size of the immersed object \$5.00

Water Pressure: A plastic bottle is pierced and filled with water to show that water pressure varies from top to bottom \$5.00

Surface Tension: Various substances added to water show the effects on surface tension \$5.00

Energy

Solar Heating: Containers of differing colours are filled with water and left in the sun. Variation in temperatures demonstrates solar heating \$5.00

Wind Energy: Two windmills are constructed and compared using the wind from an electric fan (required) \$5.00