

Study Guide



Professor Gizmo's Fun & Science Show meets National Science Education Standards (Science as Inquiry) and has been carefully structured for easier learning.

Professor Gizmo Shows Students HOW:

- to form a **hypothesis**
- animals use **camouflage**
- plants use water, **carbon dioxide** & sunlight
- **carbon** becomes a diamond
- **ENERGY** makes things happen
- Scientist **classify** animals into groups
- **water vapor** cools to form clouds
- our **pupil** helps us to see in the dark
- **Bernoulli's Principle** enables birds to fly
- to **reduce, reuse** and **recycle**

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Vocabulary Words



Hypothesis - An unproved theory or an "educated" guess. Predicting the answer to the problem.

Experiment - A test designed to confirm or disprove your hypothesis.

Photosynthesis - The word photosynthesis means "putting together by light". During the process, plants collect energy from sunlight. They use this energy to turn water and carbon dioxide into a simple sugar called glucose.

Energy - Energy makes things happen, from a bolt of lightning to trying a shoe-lace. Nothing could live or move without energy. All of our energy traces its source to the sun.

Carbon Dioxide - A heavy, colorless, odorless gas; it passes out of the lungs in respiration. It's the stuff we make when we breathe.

Pollution - Substances, such as waste chemicals from factories, that damage or poison our air, land and water.

Animal Classification - Birds come in many shapes, sizes, and colors. But whatever their size or color, they all have feathers and wings, and they all lay eggs.

Minerals - All the land on our planet rest on a layer of rock made up of minerals. Diamonds are the hardest mineral on Earth. Talc is the softest mineral.

Eye Parts - Rays of light first pass through your **cornea**, a transparent covering on the outside of your eye. Next light goes through the **pupil**, which is a whole in the middle of the **iris**. The iris, the colored part of your eye, helps the pupil open and close. After light rays pass through the iris, they go through the **lens**. The lens focuses light rays onto the surface at the back of the eyeball, called the **retina**. Inside the retina, light rays change into electrical signals. These signals travel along the **optic nerve** to your brain.

Recycling - Experts estimate that 75% of our waste is recyclable.

Reading List



**What if: Mind-Boggling
Science Questions for Kids**

Robert Ehr
John Wiley & Sons, Inc., 1998

**Photosynthesis: Changing
Sunlight into Food**

Bobbie Kalman
Crabtree Publishing Co., 2005

What is the Animal Kingdom

Kathryn Smithyman
Crabtree Publishing Co. 1998

Science In Seconds for Kids

Jean Potter
John Wiley & Sons, Inc. 1995

Time for Kids Almanac

Time for Kids Media Group
Published By Time, Inc. 2008

Magic Science for Kids

Jim Wiese
John Wiley & Sons, Inc., 1998

**The New 50 Simple Things
Kids Can Do to Save the Earth**

Sophie Javna & Earthworks Group
Andrews McMeel Publishing 2009

**101 Things Every Kids Should
Know About the Human Body**

Samantha Beres
Published by Lowell House, 2000

**The Weather Detectives: Fun
Facts & Experiments for Kids**

Mark Eubanks & Mark Hicks
Gibbs Smith Publishing, 2004



Links

www.billnye.com
www.beakmansworldtv.com
www.tryscience.org
www.howstuffworks.com