Middle/High School Biology

Experiment	Description
Do Seeds Metabolize?	Measuring carbon dioxide production in seeds before and during
Mammalian Diving Reflex	Decreasing the heart rate when submerged in cold water to prese
City Microclimate	Measuring temperature and humidity in green areas and around
Acid Rain	Determining the pH of acid rain and understanding the effects of
Lambert-Beer Law	Measuring percentage transmittance of solutions at different con
Sweat Production	Measuring temperature and humidity changes relative to perspira
Our Heart Rate	Measuring our heart rate at rest and after physical activity
Temperature Variation Between Night and	Measuring thermal oscillation and luminosity during a full day
Photosynthesis	Measuring air pressure inside an active photosynthetic system
Photosynthesis - Dissolved Oxygen	Measuring dissolved oxygen inside an active photosynthetic syst

Middle/High School Chemistry

Experiment	Description
Titration	Using the technique of acid-base titration to find the concentratio
Endo/Exothermic Reactions	Performing different measurements to examine which reactions r
Specific Heat	Heating different liquids to the same temperature (70 degrees ce
Water Phase Changes	Analyze temperature changes in water as a result of a physical s
Boyle's Law	Measuring air pressure in a closed container while verifying the r
Liquid Conductivity	Studying the relationship between dissolved ions and the conduc
Lambert-Beer Law	Measuring percentage transmittance of solutions at different con
Candle Flame	Measuring the temperature of a flame according to the "three zor
How Acidic are the Things we Drink?	Measuring the pH of different beverages
How Does Atmospheric Pressure Vary?	Measuring atmospheric pressure at different levels above sea lev

Middle/High School Environmental Studies

Experiment	Description
Exploring our environment	14 hands-on environmental science experiments
Water Quality	Measuring and comparing the turbidity of different water sources
UV and Sunblock	Measuring and comparing the levels of ultraviolet radiation throu
Cloud Detection	Measuring infrared temperature from the environment to charact
Greenhouse Effect	Using a greenhouse to model the effects of the atmosphere on th
Liquid Conductivity	Studying the relationship between dissolved ions and the conduc

Acid Rain	Determining the pH of acid rain and understanding the effects of
Variation of Light Intensity	Measuring the light intensity of different light sources
City Microclimate	Measuring environmental temperature and humidity in green are
Photosynthesis	Measuring air pressure inside an active photosynthetic system
Photosynthesis - Dissolved Oxygen	Measuring dissolved oxygen inside an active photosynthetic syst
Temperature Variation Between Night and	Measuring thermal oscillation and luminosity during a full day

Middle/High School Physics

Experiment	Description
Earth's Magnetic Field	Measuring the Earth's magnetic field at a given location
Newton's Second Law	Studying the behavior of a propelled car
Elastic Pendulum	Observing changes in the elastic force excerted by a spring actin
Biot-Savart Law	Studying the magnetic field intensity variations around an inducti
Hooke's Law	Studying the elongation produced in springs
Ohm's Law	Exploring Ohm's Law in parallel and series circuits
Change in Momentum	Demonstrating the conservation of momentum
Speed of Movement	Measuring the speed of a moving object in different situations
Free Fall	Observing and analyzing the free fall motion of a bouncing ping-p
Lenz Law	Verifying the Lenz Law by measuring the electric current flowing
Boyle's Law	Measuring air pressure in a closed container while verifying the r
Sound Waves	Recording sound waves and sound wave interference
Variation of Light Intensity	Measuring the light intensity of different light sources
Friction	Investigating static and kinetic friction of a body on different surfa

Grades 3-5 experiments for the Mini (NGSS-correlated)

Experiment	Description
Air Pressure	Measure the air pressure inside a plastic bottle
All Charged Up	Compare the voltage and current output of different sized batteri
Conductors and Insulators	Measure the amount of electrical current flowing through differen
Coping with a Warm Environment	Measure environmental temperature and humidity
Feel the Beat	Record heart rate before and after exercise using an ear clip sen
Make Your Own Battery	Measure the electricity produced by four different types of home-
Right on Target	Record heart rate before and after exercise using an ear clip sen
Sources of Heat other than Sunlight	Measure heat created by mechanical and electrical sources
Temperatures Around Us	Measure environmental temperatures from a variety of locations

The Sun's Effects	Measure the temperatures of a 10 different locations around the
Weather and Climate	Measure daily weather conditions including temperature, humidit
What's the Weather Like Today?	Measure daily weather conditions including temperature, humidit
What's the pHuss	Measure the pH of a variety of substances
A Walk in the Park	Measure ambient temperature and humidity to see how the pres

Project based learning

Experiment	Description
Project GLOBE	Build a student weather station at your school and use the Labdi: weather conditions in your area.
Project Nest Box	Collect data on light, humidity and sound as well as temperature
Turn-Down the Noise	Measure the impact of noise pollution in your community and sha
What's It Like Out There	Include a Labdisc GenSci or Labdisc Enviro as part of the payloa balloon to record temperature, air pressure, sound and GPS loca balloons ascent and descent.

Elementary School

Experiment	Description
Light Absorbance	Check and compare the light absorbance of different pairs of sur
Our Heart Rate	Recording heart rate before and after excercise
A Walk in the Park	Recording temperature changes at a city's busy intersection and
Night and Day	Examine temperature and light changes over a full day
How Loud is Sound?	Measure the decay of sound level over distance
The Temperature Around Us	Recording the temperature of different substances
What is Distance?	Examine the relationship between speed time and distance and