

NEW!



for

Kendall Hunt

**GLOBAL
SCIENCE**

EARTH/ENVIRONMENTAL SYSTEMS SCIENCE

And Other Lab Science Programs

Materials Overview

KENDALL HUNT
**GLOBAL
SCIENCE**
EARTH/ENVIRONMENTAL SYSTEMS SCIENCE

Seventh Edition

Kendall Hunt and Hands-On Labs Have Partnered to Bring You LabPaqs

These complete and flexible materials kits are designed for use with the current and previous editions of *Global Science*.

LabPaqs address the varying needs of the *Global Science* classroom, whether using the complete curriculum or individual eUnits available in *Flourish*, Kendall Hunt's digital learning network.

Pick the Paq That Meets Your Needs

ClassPaq

The **ClassPaq** contains the equipment required for one class of 25-30 students to perform all 22 *Global Science* core labs and activities. Pond snails, vinegar, and immersion heaters are not included.

ReplacementPaq

Contents of the **ReplacementPaq** are designed to serve as replacements for expendables in the ClassPaq or to address the needs of an additional classroom using a ClassPaq.

Coming Soon

UnitPaq

The **UnitPaq** contains the equipment a class of 25-30 students requires to complete the core lab activities in a *Global Science* unit. eUnit lab kits can be implemented with small groups or with an entire classroom. Call 800-542-6657 for pricing and availability.



The 22 Core *Global Science Lab Activities*

Activity 1.3: Modeling the Weathering Process

Activity 1.9: The Search for Patterns in Nature (Measuring Aluminum)

Activity 2.3: Investigating Ecosystems

In this directed investigation, students set up a variety of simple ecosystems in capped vials that are placed in both lighted and dark areas. The indicator bromthymol blue is analyzed and used to study the relationships between photosynthesis and respiration. The final task is to summarize the roles of photosynthesis and respiration into ecosystems. (Due to the unreliability of shipping live materials, schools provide aquatic plants and pond snails.)

Activity 3.11: Let's Have Tea!

Activity 4.11: The Importance of Minerals

Activity 5.1: Modeling Exponential Growth

Students use a supply of 200 dice to generate the data and graphs which reveal the major properties of exponential growth. They work around a table in groups of up to six. They also plot a graph of world population vs. time from 1650 to the present and compare that to dice generated data. What is learned from the dice is then applied to human population growth and consumption related issues.

Activity 5.5: Analyzing the Demographic Transition

Activity 6.6: Natural Selection: Competing to Survive, Surviving to Compete

Activity 7.1: Soil Investigation

Three different soil samples are tested for pH, nitrogen, phosphorus, potassium, and texture. Loam soil and sand are provided. Teachers/students supply a local soil. After data is collected and pooled, each student is required to select the best soil for agriculture and justify their answer.

Activity 7.4: Connecting Seeds and Human Nutrition

Activity 7.6: The Politics of Hunger

Activity 8.6: Coal and Synthetic Fuels

Samples of the four main types of coal are examined. This information is then focused on text materials, illustrations,

maps, and charts to help students understand why coal is a major energy source and how it is obtained. Students then examine a diagram of the coal gasification process and samples of oil shale and tar sands to speculate on the potential and problems related to the expanded use of fossil fuel based on synthetic fuel.

Activity 8.7: Electric Power Generation

Activity 9.1: Resource Depletion

Activity 10.5: Investigating Half Life

Dice are used to simulate the decay of a radioactive sample. These are the same dice used in the Modeling Exponential Growth activity. Data is generated and then plotted on both ordinary graph paper and semi-log graph paper. The results are then related to the problem of radioactive waste disposal (both from nuclear reactors and mine sites).

Activity 11.5: Analysis of a Solar Collector

Activity 11.7: Solar Cells

Activity 14.1: Testing Water Quality

Students analyze both local tap water and a water sample collected outside in their community for DO, pH, Nitrates, Phosphates, and presence/absence of Coliform Bacteria. The data is related to accepted standards and used to judge the quality of the water samples. The point is made: You can't make major assertions based on limited data and crude equipment. However, you can discover some things that on occasion might require further investigation.

Activity 15.4: Acid Rain-Just the Facts!

Activity 15.7: The Greenhouse Effect Model

Activity 16.7: Conducting Solutions

Students use simple laboratory equipment to investigate the electrical conductivity of tap water, salt solution, and sugar solution. After analyzing their data, students define conductor, conducting solution, ion, electrolyte, nonelectrolyte, toxic, and waste. They are then asked to think about possible toxic wastes in their homes or neighborhood and how they might be disposed of.

Activity 16.8: Copper Plating

LabPaqs are Fast, Easy, Convenient, and Affordable!

LabPaqs Help You Successfully Teach a Lab Science Without:

- a large budget for lab equipment
- running water
- gas jets
- a fume hood

There's A Paq for Every Purpose:

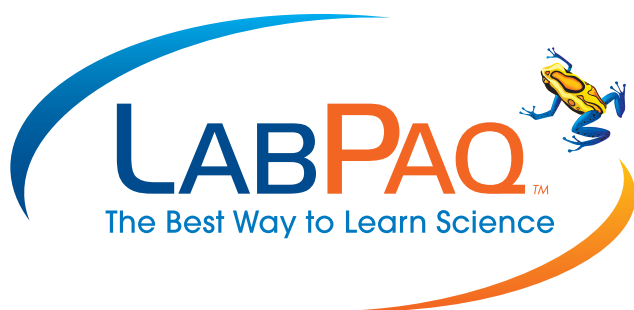
- Environmental Science
- Earth Systems Science
- Integrated Science
- Biology
- Chemistry
- Physics



Call **1-800-542-6657**

to learn which Paq is right for your classroom.

Visit kendallhunt.com/globalscience to order online.



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