



OHAUS Measurement Experiments

GROW YOUR OWN BEAST!

Objective: To predict, observe, and measure how the Gro-beast undergoes a physical change within a given time frame and to graph the results.



NATIONAL STANDARDS

National Science Standards Alignment: Science as Inquiry, Properties and change of properties in matter

National Math Standards: Measurement Standard

BACKGROUND INFORMATION

The Gro-Beast is made from a polymer that readily absorbs water. Materials of this type are said to be hydrophilic, water loving. Materials with the opposite property are said to be hydrophobic, water fearing.

SCIENCE CONCEPTS

Mass –amount of matter in an object

Weight-measure of force of attraction between two objects due to gravity

SI –International System of Units (Metric System)

Physical Change – doesn't change the identity of the substance

Chemical Change –changes the identity of the substances

MATERIALS

- Gro-beast, plastic container to fit the Gro-beast as it grows
- Graduated cylinder • Ohaus Compact Scale (200g x 0.1g)
- Ruler • Distilled or bottled water • Data sheet • String

PROCEDURE

1. Estimate the mass and length of the Gro-beast. Now measure the mass and length. You may measure the length from head to tail or wingtip to wingtip, whichever is greater.
2. Ask students to estimate how large the Gro-beast will become.
3. Place the Gro-beast in a container of water. Record the mass and length every 10 minutes for 30 minutes. Record the data on the data sheet. (Time may be adjusted according to the needs of the class. Allowing more time between recordings will offer greater variance.)
4. Tell students to give the Gro-beast a name and write a story about its life.
5. Design a bar graph using the data. Y axis is the time and x axis is the mass. (cont'd)



ASSESSMENT

- Write a conclusion about the activity reflecting on what you have learned and how you would change the activity.
- Use the data to complete a graph.
- Teacher and student generated scoring tools or rubrics, questioning, data chart results and graphing

LITERATURE CONNECTIONS

How Tall, How Short, How Far Away by David A. Adler

Dinosaurs by Kathleen N. Daly

Zack's Alligator by Shirley Mozelle

What Is A Scientist? by Barbara Lehn

How to Think Like a Scientist by Stephen P. Kramer

EXTENSIONS

Instruct students to:

- Graph their data in a bar/plot graph
- Give their gro-beast a name and write a story about their gro-beast as they watched it grow.
- Research polymers that are used daily both natural and man made.
- Compare and contrast type of dinosaurs.
- Develop an investigation using a gro-beast.
- Measure the volume of the gro-beast.

Contributed by Ruth Ruud, Presidential Awardee for Excellence in Science Teaching, 1993