museum of science+industry chicago

NAME

1

MEASUREMENT AND MODELS

Museum Exploration Guide

INSTRUCTIONS
When printing, make sure to check the “actual size” option in the printer’s dialogue box. Cut pages, assemlbe in numberical order and staple to form a booklet.

Measuring Size

2

There is a reason why every object is a specific size. For example, a car cannot be wider than the lanes on the road and a butterfly’s wings have to be the right size to allow it to fly.

Measure something in the Museum using the ruler on the front page.

WHAT DID YOU MEASURE?

HOW LONG IS IT IN CENTIMETERS (CM)?

Why do you think the object you just measured is that specific length?

Measuring Size

3

Measure another object that is much smaller than the first thing you measured.

WHAT DID YOU MEASURE?

HOW LONG IS IT IN CENTIMETERS (CM)?

Why do you think the second object is smaller?

Measuring Movement

4

Objects are not only measured by their size. For example, when a car is moving it can also be measured by its speed, the distance it traveled and many different types of forces.

Draw something in the Museum that can be measured by its movement **and** size.

Small Models

5

Because size and movement can sometimes be hard to see or describe to others, scientists and engineers often use models.

For example, if you want to show something that is too small to see with just your eyes, you could use a larger model instead.

Find a model in the Museum that shows something that is normally very **small**.

WHAT DID YOU FIND?

Why do you think a model was used instead of the object at its real size?

Large Models

6

Models can also be used to show very large objects at a smaller size, such as, a volcano or a very tall building.

Find a model in the Museum that shows something that is normally very **large**.

WHAT DID YOU FIND?

Why do you think a model was used instead of the object at its real size?

Draw a Model

7

Draw and label your own model of something that is normally very large or very small.

Models

8

Models are also used to show how something works. For example, a diagram of a plant can show what it needs to grow and what it makes or releases.

Find a model in the Museum that shows **how something works**.

WHAT DID YOU FIND?

Draw your own model of how you think something works. It can be anything! use your imagination.