KOHL CHILDREN'S MUSEUM

THE PLACE WHERE AWESOME LIVES

TRAVELING EXHIBIT OVERVIEW

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Overview

Young children become scientists in the new *Science + You* Exhibit as they learn about human health and nutrition, scientific tools and scientists through problem solving, investigation and experimentation. Help clear the bloodstream from germs using antibodies and watch a white blood cell eliminate a germ from the body. Solve problems using a glove box, beakers and test tubes. Manipulate machines to mix and separate substances and investigate objects using microscopes. Create a healthy soup in a test kitchen and explore healthy lifestyles. Share your discoveries with others through creative collages.

The immersive, open-ended exhibits provide children ages 2 through 10 with opportunities to play, explore, discover and experiment. Ideally suited for a children's or science museum, the exhibition is complemented by educational materials and activities.

Developed by:	Kohl Children's Museum of Greater Chicago in conjunction with scientists at AbbVie, a global health care company.
Size:	1,200 – 2,000 square feet (112 – 185 square meters)
Components:	Eleven (11) interactive elements Eight (8) wall graphic panels (2 sided) 28 educubes (flexible stools for seating)
Target Audience:	Children ages 2 through 10, their parents, caregivers and teachers
Languages:	Exhibit text is in English. All text on graphic panels are in both English and Spanish
Staffing Requirements:	One exhibit guide to reset components and interact with visitors
Support:	Marketing Materials(press releases, advertisements, photographs), Site Support Manual (installation and maintenance guide), and evaluation report



Exhibit Goals

- To increase global appreciation for the value science brings to improving health.
- To immerse visitors in an interactive environment that encourages investigation, problem solving, analytical thinking and role play focused on the science of health.
- To increase awareness and understanding of the role science and scientists play in the health and wellness of children and adults throughout the world.

Key Concepts/Big Ideas

Through play and exploration in the exhibit and associated activities, children and adults will increase their awareness and understanding of the following concepts or big ideas.

- Scientists conduct research to discover how to improve human health.
- Scientists use technology and machines to create and innovate.
- Scientists use many different resources to explore and solve problems.
- Science shows us that people need balanced nutrition, exercise and rest to stay healthy.

Audience

Science + You is targeted to children ages two to ten and their caregivers, including school groups. The activities maintain enough flexibility to accommodate both individual and group interactions. The exhibit elements are designed to offer safe and inviting experiences for the youngest visitors while offering challenges for older children. Adult caregivers and teachers are addressed specifically through text and graphics which highlight the exhibit's educational messages.

Exhibit Components

The exhibit consists of 11 interactive elements that can be explored in any order based on children's interests. The layout is designed to be flexible and can be configured in many ways to accommodate between 1,200 and 2,000 square feet of space.

Entry Way

Main Concept: Scientists need clean environments to work.

Young visitors come into the exhibit through the laboratory entry where they prepare themselves for the work they will be doing as scientists. First they must clean their shoes, wash their hands, take a pretend shower and put on their lab coat, all in preparation for the important work ahead!

Elements:

- Freestanding exhibit logo/credit panel
- Entry structure, pretend shower
- Two pretend singing hand washing sinks, three floor gel pads (simulate shoe cleaning)

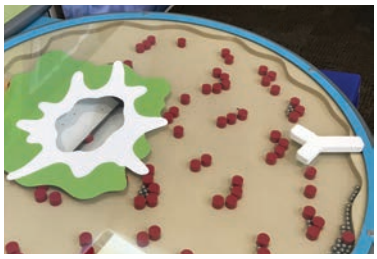
Test Kitchen

Main Concept: People need balanced nutrition to stay healthy.

Visitors use oversize puzzle pieces that represent the food groups (vegetables, fruits, protein [meat/beans], grains, and dairy). They select appropriate combinations of ingredients to make a healthy soup. A play soup table encourages younger visitors to make soup using faux food. Recipe cards encourage healthy combinations.

Elements:

- Two soup pots with pretend burners
- Multiple puzzle pieces
- Food group charts
- Play soup table
- Audio feedback



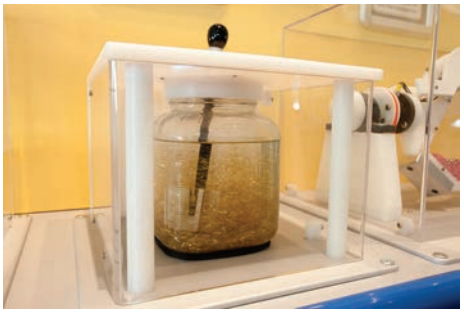
Antibodies/Germs

Main Concept: Antibodies protect people from germs.

This activity mimics what antibodies do in the body - eliminate germs that could make us sick. Visitors collaborate using magnetic devices (antibody) to capture germs and feed them to a white blood cell.

Elements:

- Four magnets to manipulate the antibody to catch germs
- Audio feedback



Glove Box

Main Concept: Scientists use glove boxes to contain substances and protect themselves.

Scientists sometimes use tools that help them work with things that may need protection. At the glove box, young scientists can feel for themselves how challenging it is to use this type of tool in the laboratory as they attempt to solve mathematical problems by measuring, pouring and sifting.

Elements:

- Five stations (ADA height)
- Holder for clean and used gloves
- Three problems to solve

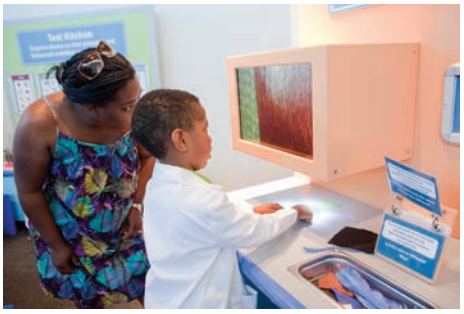
Machines that Stir

Main Concept: Scientists use machines to mix substances.

Scientists use machines to help stir materials to mix them. The magnet stirrer and V tube are machines that stir mixtures. Visitors compare the effectiveness of these machines to stirring by hand.

Elements:

- Enclosed container using magnets that stir water and glitter; controlled by a push button
- Enclosed container that stirs water and glitter using a spoon
- A V-tube that mixes solids (metal balls and plastic balls) and then separates them using electromagnets; controlled by a push button
- Large photograph of child or adult conducting science experiments on back side of unit



Machines that Separate

Main Concept: Scientists use machines to separate substances.

Scientists use machines to help separate materials. A centrifuge and sieve demonstrate some ways this is done in a real laboratory. Visitors compare these methods to separating by hand.

Elements:

- A spinning container that separates two different sized balls; controlled by a push button
- A three section sieve that visitors manipulate by turning to separate three different sized balls
- A tray with magnet discs that visitors separate using a magnetic stick
- Large photograph of child or adult conducting science experiments on back side of unit

Microscopes

Main Concept: Scientists use microscopes to magnify objects for observation and evaluation.

The microscope helps scientists see things too small to be seen with their own eyes. Visitors use the microscopes to view their hands, fabric, natural objects (sticks, leaves, grass, etc.) as well as slides with smaller objects such as insects and plant parts. A flip book with ideas for comparing objects sits at each station.

Elements:

- Two Video scope stations with object bins and objects for viewing (1 ADA height)
- One Wentzscope station with 15 slides to view

Test Tube Peg Board

Main Concept: Scientists look for patterns to solve problems.

Our youngest scientists will create patterns and sort by size and color using replicas of test tubes on this giant pegboard.

Elements:

- Peg board
- Three colors of test-tube pegs filled with resin (some ½ full and some full)

Balanced Lifestyle

Main Concept: Science shows us that people need a balanced lifestyle.

Visitors select puzzle pieces representing meals, exercise and rest to show a balanced lifestyle by lighting up a human form.

Elements:

- Puzzle Table
- Six puzzle bins
- Puzzle pieces providing options for choices
- Audio feedback
- Large photograph of child or adult conducting science experiments on back side of unit

Demo Area/Poster Design

Main Concept: Scientists use a variety of tools to do their work

Visitors can design different scientists by choosing different magnets to create a scientist of their own. Their work can be displayed on a magnetic board for all to see.

This exhibit also doubles as a demonstration area for local scientists and museum staff to conduct programs with visitors.

Elements:

- Three work tables with storage bins for magnets
- Magnetic images of scientists and their tools
- Reversible display board with galvanized steel coating to display designer magnetic scientists
- Three table tops to convert tables to flat demonstration space

Curriculum Connections and Programs

The exhibit draws on and supports the US National Science Standards for Young Children; the National Association for the Education of Young Children's Program Standards; 21st Century Learning Skills; and The National Science, Technology, Engineering and Math (STEM) Standards.

Kohl Children's Museum of Greater Chicago develops programs that extend the exhibit experience into the home, childcare setting or classroom. Programs for *Science + You* will include:

- Two focused field trips for childcare or school groups to learn more about the concepts in the exhibit.
- Pre- and post-field trip activities for childcare or school groups to prepare for and extend exhibit experiences.
- Five family activities that support the key concepts that can be conducted using household objects.
- Four science demonstrations to occur in the exhibit space and be conducted by visiting scientists or museum staff.
- These elements will be provided with the exhibit when it is shipped. Electronic version of documents requested in advance.
- Early childhood educator workshops for teachers or childcare providers to learn effective ways to create strong frameworks for science learning through discovery based hands-on activities.

Contact Information

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