Field Trip Guide

Engineering and Simple Machines
Technology/Engineering

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Reinforce student learning by asking questions such as:
- What do you notice?
- How do you know?
- Why do you think that?
- Have you ever seen anything like this before?

Thank you for being a Museum chaperone!

Chaperone's Name:

Please Remember: Chaperones must stay with students at all times and are responsible for the safety of their students and the exhibits they visit.

Teacher Contact:

Students in Your Group:

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Departure Museum Lobby
Learn about Engineering and Simple Machines

Design Challenges

*Engineering Design Workshop*

*Blue Wing, Level 1*

20 minutes (check the Museum map/guide for presentation schedule)

Students learn about the engineering design cycle through hands-on activities that let them design, build, and test a prototype. Activities rotate throughout the week. (Also, be sure to explore the nearby Innovative Engineers and Current Science & Technology exhibits.)

**Starting Points:**
- What do you like best about your design?
- How did you change your design after testing it?

Nanotechnology

*Blue Wing, Lower Level*

Learn how scientists can manipulate matter on a very tiny scale to build materials and devices used in computing, engineering, medicine, and other fields. Also check out the Amazing Nano Brothers Juggling Show. For schedules, visit mos.org/nano.

**Starting Points:**
- What is nanotechnology?
- Have you ever used something that incorporates nanotechnology? How does it help us?

Science in the Park

*Blue Wing, Level 2*

Perform various physical activities in a park-like environment to explore universal laws of force and motion. Experiment with moving objects, make observations about balance, velocity, and friction, and examine how concepts of size, weight, and distance affect movement.

**Starting Points:**
- Experiment with weight and balance on the seesaw. Does it take more force to lift an object using a long lever or a short lever?
- Can you find any other simple machines in this exhibit?
What Did You Learn about Engineering and Simple Machines?

Please answer the following questions with your students, then return this page to the teacher.

Chaperone’s Name: ____________________________________________________________

As a group, write about three experiences or exhibits that you enjoyed.

1. ________________________________________________________________________
   ________________________________________________________________________

2. ________________________________________________________________________
   ________________________________________________________________________

3. ________________________________________________________________________
   ________________________________________________________________________

Choose two group members to draw or describe interesting things that you saw:

1. ________________________________________________________________________

2. ________________________________________________________________________

What is one question about engineering or simple machines that your group wants to learn more about?

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

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