



HELLO VOLUNTEERS!

Thank you for volunteering for our COSI On Wheels program! **It's Simply Chemistry** is one of five traveling assemblies / hands-on experiences for students in grades K-6. Students will explore some of the roles chemistry plays in their daily lives. Here are some things you can look forward to on the day of the event.

The students' day begins with a 45-minute assembly introducing the students to simple chemistry concepts and how chemistry affects their lives everyday. With the help of COSI's "chemistry detective," students will solve a mysterious crime by identifying acids and bases, determining unknown substances, and decoding an invisible message. This entertaining assembly is followed by hands-on activity sessions during which the students can further enhance their knowledge of chemistry with your help!

The COSI On Wheels experience is designed to get children to ask questions and explore science. Your role during the day will be to help guide students during the hands-on sessions. You do not have to be a science expert to be a COSI On Wheels volunteer! We would like everyone to have fun and learn on the day of the program, including you. Be sure to dress comfortably because you may be on your feet for the better part of the day!

Prior to the first assembly you will be given an orientation so that you can become familiar with the program's hands-on activities, which are listed on the back of this letter. It is important to be on time for this orientation because we have only 45 minutes to get to know each other and learn all of the activities and the scientific concepts behind them. COSI On Wheels has five different traveling programs, so we rarely bring the same program to a school two years in a row. Even if you have volunteered for us in the past it is important to attend the orientation to learn the new information about the all-new stations for **It's Simply Chemistry**.

Above all, you should know that you are a vital part of this COSI On Wheels experience. It is impossible for **It's Simply Chemistry** to be a success without you. We at COSI, as well as the students and faculty at your school, appreciate your time, energy, and support. Be prepared for a day filled with science, learning, and FUN!

Sincerely,

The COSI On Wheels Team

## Top 10 Things Every COSI On Wheels Volunteer Should Know

- 10) Get excited! The students get out of the experience what the volunteer puts into it. Your energy is contagious, as is theirs!
- 9) Wear comfortable shoes! You may be standing, stooping, bending, or leaning for long periods of time.
- 8) Layer, layer, layer! Sometimes the gym feels like you've just stepped off an airplane at the equator, while other times your lips turn blue from the frosty air. You can never tell what the temperature in the gym will be!
- 7) Bring water. You will be talking with the students all day, and it is quite refreshing to have something to wet your whistle throughout the day.
- 6) Ask questions! To the students, yourself, and the Educator. You are not expected to know all of the answers. In fact, it is a much more rewarding experience to have the students discover the answers through experimentation. You will be surprised at how a student will jump right into something to try to answer their own question.
- 5) Keep your hands clean. This can be a tough one, but make sure it is the students that are doing the experimenting, and the clean up!
- 4) Don't underestimate the abilities of the students. It's okay for them to try and fail, then try again.
- 3) Have fun! This is an informal setting with very active experiments. The kids love trying things for themselves while learning at the same time!
- 2) Learn! Regardless of your experience, there are plenty of opportunities to learn new things. This is a very fun way to expand your brain.

**And the #1 thing you should know is.....**

- 1) Thank you, thank you, thank you! We could not do this without you. Your time and effort is very much appreciated and you have really made a difference in a child's life!

## IT'S SIMPLY CHEMISTRY HANDS-ON ACTIVITIES

<b>A Closer Look:</b>	Using microscopes, students will compare the textures of everyday household chemicals to identify mystery substances.
<b>Chemical or Physical:</b>	Exploring the differences between chemical and physical changes, students will race to put their knowledge to the test.
<b>It's a Secret:</b>	Students will explore the science behind secret messages as they create their own from phenolphthalein solution and invisible ink.
<b>Solid-Liquid-Gas:</b>	Mixing solids and liquids, students will witness the explosive creation of a gas sending corks flying from the top of a test tube!
<b>pH:</b>	Using universal indicator, students will explore common liquids and measure their pH levels to identify acids, neutrals, and bases.
<b>Light the Night:</b>	With precise measurement, students will watch a chemiluminescent chemical react with water to produce a glowing light without heat.
<b>Sink or Float:</b>	Students will investigate density and how it relates to weight and mass as they predict what will sink and float in the testing tank.
<b>Super Slime:</b>	Measuring two chemicals and a choice of color, students will create their own sticky, slimy, non-Newtonian substance to take home!
<b>Way Cool:</b>	Students mix chemicals to create exothermic (heat-producing) and endothermic (heat-absorbing) reactions they can feel.