

UNDERSTANDING THE SCIENCES

Though scientists generally utilize the same scientific method when conducting research, they are often divided into specialized disciplines which focus on particular aspects of the natural world or particular phenomena. The Siemens Science Day Activities are organized by three of these disciplines: physical science, earth science, and life science. Below are brief descriptions of each discipline.

Physical Science

Physical science is the scientific study of the nonliving world including physics and chemistry. It deals with the physical and chemical properties of matter. Examples of Siemens Science Day Physical Science Activities include ***It's a Drag*** (students test the effectiveness of different parachute designs); ***Hole-in-One*** (students design a miniature golf hole and then determine the ball's path to get a hole-in-one); and ***Recycled Again*** (students design a procedure for separating five types of recyclable materials based on their physical properties).



Earth Science

Earth science is the scientific study of the Earth and its neighbors in space. It is an exciting science with many interesting and practical applications. The four basic areas of Earth Science study are geology, meteorology, oceanography, and astronomy. It can also include geophysics, glaciology, and soil science. Siemens Science Day Earth Science Activities include ***Get Cooking*** (students build a solar cooker); ***Keep It Up*** (students design a bridge and test it during a simulated earthquake); and ***Bounce*** (students measure the elasticity of several rubber balls).



Life Science

Life science is the scientific study of anything that has to do with living organisms. This can include the origin of life, cells, reproduction, plants, animals, and the human body. Siemens Science Day Life Science Activities include ***Blueprint for Life*** (students extract DNA from living cells); ***Epidemic*** (students play a game to simulate the outbreak of disease in a human population); and ***It's a Gas*** (students produce different chemical reactions with yeast).

