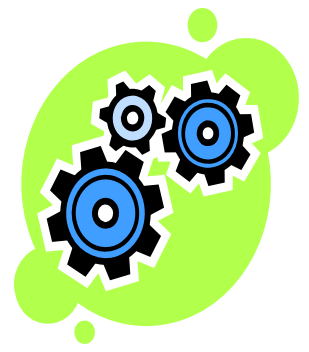


Challenger Learning Center

Flight Directory Activity Guide



Flight Director Activities are hands-on science demonstrations and activities that can be tailored to your individual groups. Please contact our Group Sales Coordinator at 850.645.7777 or Susan Borland at 850.645.7788 if you need additional information or are interested in scheduling a flight director activity.

Please note: flight Director Activities are 45 minutes unless otherwise noted and the fee is \$2.50/student with a \$75 minimum unless otherwise noted

Aerodynamics (K-12)

Includes:

- Wind tunnel demo
- Bernoulli's principle demo
- Wind tubes
- Bernoulli straw demo
- Balloon Rockets
- Air resistance demo
- Gravity demo

Barany Chair and Neurovestibular Demo; (6-12)

The perfect addition to your mission. Learn how microgravity affects the senses of the astronauts. Using a rotating platform, see how the ears are affected by motion. Students will take a spin in the Barany Chair and try vision distortion goggles.

Build your own Electric Motor (Grade; 4-12; \$10/student; Minimum 15 students)

Students build their own electric motor to take home in this 90 minute activity. This includes some of the electromagnetic demonstrations. This is a stand alone flight director activity or can be added to the Electromagnetic demo flight director.

Build your own Flight Director Activity

Pick activities from the above to come up with 45 minutes of demos specially designed for your class. Contact the Challenger Learning Center for the times associated with each activity to help build your own flight director activity.

Electro magnetic demo; (Grade; 4-12)

Includes:

- Lots of Van de Graff generator demos
- Gravity induced electric generator
- Copper pipe magnet demo
- Electric motor demo
- Magnet demos

General Physical Science (K-12)

Includes:

- Air Pressure (Why do you need a space suit?)
- Bell Jar/Vacuum pump (Balloon, shaving cream, marshmallow man)
- Kinetic and Potential Energy demos
- Gyroscope
- Satellites in space
- Van de Graff generator (1 demo)
- Bell in a vacuum (sound)
- Laser demonstration of sound waves

Light & Optics (Grades 8-12)

Includes:

- Lasers (How do they work? Different types of lasers)
- Lenses (Concave, convex, Fresnel, Snell's law)
- Prisms
- Polarizers
- Wave structure of light

Make your own Bernoulli Straw (K-8: \$8/student; Minimum 15 students)

- 90 minute presentation
- Additional Bernoulli principle demonstrations
- Students construct their own Bernoulli straw that they can take home

Motorized Mechanisms (3-5: \$15/student; Minimum 15 students)

Build a motorized machine while exploring simple machines. Watch your creation move in amazing ways.

Electro magnetic demos (Grades 4-12)

Includes:

- Lots of Van de Graff generator demos
- Gravity induced electric generator
- Copper pipe magnet demo
- Electric motor demo
- Magnet demos

Robotics (6-12: \$20/student; Minimum 15 students, Maximum 30 students)

Build your own NXT Lego robot and watch it work. Program the robot using LEGO software for a variety of functions and tests, including motion detection and sound.

Rocketry (4-12: \$20/student; Minimum 15 students, Maximum 30 students)

This exciting 90 minute activity teaches rocketry principals and Newton's laws of motion. Students will use alka-seltzer and paper rockets.

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