Educator Resource Center
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Equipment Loan Program

Carnegie Museum's Dinosaur Kit

Includes fossils, lesson plans, trade books, videos, and a variety of other materials to enhance a unit on dinosaurs. Also, there is a Polycom® video conferencing unit available for schools participating in the Distance Learning Program. For more information visit:http://www.carnegiemnh.org/doe/IDEA/

Echo the Bat

Demonstrate and educate your elementary students on remotely sensed imagery with hands-on activities and an interactive DVD.

Engineering Design Challenge: Thermal Protection Systems

Learn the engineering design process used by NASA engineers to complete model design challenges to solve real life problems you can run in the classroom. Space vehicles have thermal protection systems to protect against the heat of re-entry into Earth's atmosphere. See if you can build a model to withstand a propane torch.

Engineering Design Challenge: Launch Platforms

Learn the engineering design process used by NASA engineers to complete model design challenges to solve real life problems you can run in the classroom. The structural elements that hold together an aerospace vehicle must be strong and light to minimize the fuel needed. Build a thrust structure to launch a 1 liter bottle "rocket".

GLOBE: Water Quality Backpacks

The ERC is the WV coordinator for the Global Learning and Observations to Benefit the Environment Project and loans Hydrology backpacks, GPS, Soil Sampling/Oven, Surface Temperature (Infrared Thermometers), Compass, and Ozone meters to educators trained in those protocols.

GLOBE: Compass Kit

Includes compasses, CD ROM and lesson plans.

GLOBE: Environmental Probeware

This kit includes a set of 10 Pasco GLX handheld interfaces probes for each that allow instant collection of environmental data that can be reported to GLOBE or other projects: GPS, Dissolved Oxygen, Temperature, Conductivity, pH, Stream Flow, Infrared Thermometer, Barometric Pressure, Relative Humidity, and more. Data and graphs can be printed directly with the included printer, exported out to GIS or Google Earth, or downloaded to a computer for analysis.

GLOBE: Soils

This kit includes six tote bags and a soil oven that include all the tools to measure soil: Temperature, pH, Nitrogen, Phosphorous, Potassium (NPK), Bulk Density, Color, Texture, and Gravimetric Analysis.

GLOBE: Surface Temperature

This kit includes 8 handheld Infrared Thermometers (IRT), Thermal Shock Covers, Ruler and more to allow a class to collect and report GLOBE Surface Temperature data.

GLOBE: Heating Things Up

This kit contains samples of 8 different land cover types, lamps to simulate heating through radiation, and teacher guide on implementing this activity which is part of the Surface Temperature learning activities.

GLOBE: GPS

Global Positioning Systems can be used to present the mathematics of triangulation, to explore geography, geology, navigation, and to develop an understanding of latitude, longitude, and altitude. GPS are used with the GLOBE Program, GIS, and for Geocaching.

Haptics

Developed as part of the NSF funded ACTIVE Project, these devices enable visually impaired students to interact with NASA's remotely sensed imagery.

All ERC Equipment loans are FREE, require prior training/ certification, and are for a two week period.

Hydroponics

In support of the *Lunar Plant Growth Chamber* and *Plants in Space* educator guides, this kit includes three compact hydroponic sets (which are custom built hybrid Water Culture/Nutrient Film Technique models) each capable of growing 18 plants that include everything your students need to explore the variables of nutrient load, temperature, light intensity, light wavelength, and more.

Kindernauts

This is a station-based kit that includes trade books, posters and puzzles, child-sized space suits, Glove Box experiments and much more! This kit is designed especially for kindergarten age students.

Making the Invisible Detectable

Developed by the educators at the WJU Center for Educational Technologies this kit contains 6 stations for exploring the invisible parts of the electromagnetic spectrum.

Mars Student Imaging Project

Join the Mars Student Imaging Project and have a one-of-a-kind THEMIS image sent to your students. This kit includes resources for teaching geology, land forms, and the MARS BOUND game.

NEED Energy Kit: Kid Wind

Use inquiry activities from the Kid Wind Project to dispel myths about wind energy and electricity.

NEED Energy Kit: Science of Energy

This kit builds the foundation of energy types and transfers through activities.

NEED Energy Kit: Solar

Enable learners to explain the differences in series and parallel circuits, construct photovoltaic arrays, and understand PV as a potential energy source.

NEED Energy Kit: H_2Educate

This kit includes NEED's H_2 materials and fuel cell cars.

Robotics

This set contains First Lego ® League robot kits, six laptops with programming software, previous years' boards, and elevated test platform.

Rocketry

Pop rockets, bottle rockets, and air rockets. Learn the science of rockets as you experiment.

SkyScout

This kit is Star Party in a box and includes the amazing GPS enabled, MP3 playing, electronic compass and clinometers directed Sky Scout. This device lets teachers and students literally point at a celestial object and it will report out loud the history of the star, cluster or planet. It even includes tours of the night sky. The kit also contains star charts, binoculars, colored flashlights, external speakers and more.

Space Food

This kit contains samples of actual meals eaten by astronauts, a typical eating tray, and an educator guide with lessons and activities on living and working in space.

STARLAB

The portable planetarium is an innovative multidisciplinary educational tool that can motivate students to learn about Astronomy, Earth Science, and Life Science. The ERC has the following cylinders available: African Mythology, Biological Cell, Constellations, Earth, Ancient Egyptian Culture, Greek Mythology, Lewis and Clark Celestial Navigation, Maya Skies, Ocean Currents, Plate Tectonics, Solar System and Galaxies, Starfield, Urban Starfield, Weather, Moon. For descriptors and pictures of these cylinders please visit:www.starlab.com/slcyl.html.

Sunspotter

Your students can safely view the sun, eclipses, and for track the location and motion of sunspots, transits, and more with this Keplerian telescope.

Toys in Space

Toys are fun to play with here on Earth, but do they work the same in space? This kit allows students to investigate how a selection of toys operates in 1 g (Earth's gravity) and then in the microgravity environment of space. Several of these toys are easy to make in the classroom, so you can really get your students involved!