



# Northeastern Utah Educational Services

## Media Resources

### NUES Educational Kits Resource Booklet

Educational Kits in partnership with:

Natural History Museum of Utah

Red Butte Garden

The Living Planet Aquarium

Clark Planetarium

Vernier Go Direct Science Probes/Sensors

STEM Action Center - Lego Robotic Library

Breakout EDU Kit

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[www.nucenter.org](http://www.nucenter.org)

**2021-2022**

## What is NUES?

**Northeastern Utah Educational Services**

aka: NUES (“news”); N U Center

[NUES Home Page](#)

**NUES is a state funded education entity created to provide support and training services at no cost to you.**

**Serving these Rural Utah LEAs:**

**Daggett, Duchesne, Morgan, North Summit, Park City, Rich,  
Soldier Hollow CS, South Summit, Terra Academy, Uintah, Uintah  
River, Wasatch, Weilenmann School of Discovery, Winter Sports School**

Northeastern Utah Educational Services (NUES) is one of Utah's four [Regional Service Centers](#) established to assist school districts in providing equitable and cost-effective services and programs for students in rural Utah to match those offered to students on Utah's urban Wasatch-front.

NUES provides cooperative services and assists school districts in delivering efficient, equitable and quality educational programs that empower educators to increase student achievement and learning.

*All Students Achieving Their Potential*

**The NUES BOARD consists of all District Superintendents and Charter School Principals and Directors.**

## What is NUES media?

[NUES Media](#)

**NUES Sora Digital Library:** NUES Sora Digital Library is available for our students and educators to borrow eBooks and Audiobooks from our digital collection.

**NUES Educational Kits:** The NUES regional service center in Heber is a partner location housing Educational Kits for the STEM action center and four Utah museum’s outreach programs. As a benefit to our educators, NUES offers delivery and pick-up of these kits directly to your school. NUES also has 25 Vernier Go Direct Science Probes/Sensors available for check-out.

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The NUES regional service center in Heber is a partner location housing Educational Kits for the STEM action center and four Utah museum's outreach programs. As a benefit to our educators, NUES offers delivery and pick-up of these kits directly to your school. NUES also has 25 Vernier Go Direct Science Probes/Sensors available for check-out.

**TO PLACE AN ITEM RESERVATION AND SET A DELIVERY DATE, PLEASE SEND REQUEST TO DAWN: [dawn@nucenter.org](mailto:dawn@nucenter.org)**

**Delivery schedule** (weather permitting):

- Tuesdays (twice a month) - Duchesne, Uintah, Uintah River & Terra Academy
- Thursdays - Morgan, North Summit, Park City, South Summit, Soldier Hollow, Wasatch, Weilenmann & Winter Sports School
- By Appointment - Rich and Daggett

**Items will be delivered to and picked up from the school's front office.**

**Delivery:** Items being delivered will be dropped off to the front office by the end of the school day on check out date.

**Pick-up:** Because of varying delivery schedules please have your item in the front office, ready for pick-up, at the beginning of the school day on its due date.

### ***The Utah Museum of Natural History***

#### **Rocks & Minerals Toolbox**

The Crate contains rock and mineral specimens that can be handled and touched by teachers and students.

#### **Digging Dinosaurs Toolbox**

This toolbox provides teachers with one-of-a-kind Museum casts of dinosaurs unearthed by Utah paleontologists.

#### **Box of Bones Kit**

Learn about animals by studying bones and skulls.

#### **Insects Toolbox**

Dozens of mounted entomological specimens to help students understand the incredible variability and beauty of insects.

#### **Land Adventures / Field Tools Toolbox**

This Teaching Toolbox contains everything you need to effectively take your classroom investigations outdoors.

### ***Red Butte Garden Botany Bins***

**Conserving Water In The Desert** - Provides information and activities for students to explore the water resources in Utah and the Western United States.

**Ethnobotany: People and Plants Kit** - A study of how people interact with plants in their environment.

**Patterns and Partnerships** - Discover the incredible ecosystems found within Utah's mountains

### ***Utah's Unique Environments - Classification Kit - The Living Planet Aquarium***

Students will obtain an understanding of what characteristics make up different environments in Utah.

### ***Seasons & Moon Phases Activity Kit - Clark Planetarium***

This hands-on activity will challenge students' common misconceptions by using observation, data collection, analysis and comparison to allow the students to discover the real reason behind the seasons.

### ***Probes and Sensors - Vernier Go Direct***

Our mission is to inspire scientific curiosity in students around the globe. We strive to increase student learning and to support science educators by pioneering technologies used to collect, analyze, and interpret scientific data.

### ***Robotics Kits: Bee-Bots; Ozobots; Lego Mindstorms EV#3 - The STEM Action Center***

STEM Action Center: Utah's leader in promoting science, technology, engineering and math through best practices in education to ensure connection with industry and Utah's long-term economic prosperity.

# Rocks & Minerals Toolbox



## *The Utah Museum of Natural History*

The Rocks and Minerals Field Crate contains rock and mineral specimens that can be handled and touched by teachers and students.

Examine the differences between rocks and minerals and learn how each was formed. Discover how rocks and minerals are important in our everyday lives.

Compare specimens in the different stages of the rock cycle.

Lessons included are in both English and Spanish.

Teaching Toolboxes include relevant curriculum tied to Utah State Core Curriculum Standards.

Contents include: Teachers resource, Books, Minerals, Igneous, Metamorphic, Sedimentary...

[Rocks & Minerals Toolbox | Natural History Museum of Utah](#)



# Bones Toolbox



## *Natural History Museum of Utah* Box of Bones Kit

Learn about animals by studying bones and skulls. Try to distinguish how animals are uniquely adapted for survival by observing differences in jaws, teeth, eyes, and other structures of the skull.

The Teacher Toolbox is intended as a supplement to your existing curriculum.

Materials included in the binder are not meant to be comprehensive or give specific lesson plans, but to provide ideas and enrichment activities.

Many of the skulls are real bone that is very dry and brittle--please treat it gently to avoid breakage. Bone work within the nasal cavity is especially fragile and should not be touched.

Teaching Toolboxes include relevant curriculum tied to Utah State Core Curriculum Standards.

### What's in the Bones Toolbox?

Specimens: Pond Turtle shell, Snapping Turtle Skull, Black Bear skull, Beaver skull, Coyote skull, American White Pelican skull, Domestic Duck skull, Red-Tailed Hawk skull, Snake skeleton, Fish skeleton

Printed materials: Talking Skulls Lab, Comparative Animals Skulls, Animal Skull Identification, Skulls and Brains Lab, What Can a Skull Tell Us?, Bears by Deborah Hodge; Beavers by Deborah Hodge; Land Predators of North America by Erin Pembrey Swan; Navajo Coyote Tales by William Morgan, Hildegard Thompson

[Bones Toolbox | Natural History Museum of Utah](#)

# Digging Dinosaurs: Discovering Utah's Fossils Kit



## *Natural History Museum of Utah*

This toolbox provides teachers with one-of-a-kind Museum casts of dinosaurs unearthed by Utah paleontologists.

Teaching Toolboxes include relevant curriculum tied to Utah State Core Curriculum Standards.

### **What's in the Digging Dinosaurs Toolbox?**

*Fossil Specimens:* *Allosaurus* upper jaw bone with teeth, *Tyrannosaurus rex* tooth, *Utahraptor* hand claw, *Grallator* track (footprint), Black bear jaw, Elk jaw, Coyote jaw, *Diabloceratops* skull, frill piece, & horn, *Apatosaurus* hip bone with tooth marks, *Tarbosaurus* toe bones, Dinosaur egg, Modern and fossilized seashell, Modern and petrified wood

*Books:* *DK Eyewitness: Fossil* by Dr. Paul Taylor, *DK Eyewitness: Dinosaur* (with CD & Poster) by David Lambert, *Bones Rock!* by Peter Larson & Kristin Donnan, *Dinosaurs of Utah* by Pat Bagley, *Digging Up Dinosaurs* by Alike *Other materials:* DVD—*A Fossil's Journey*, NHMU, Measuring Tapes (5), Hand Lenses (5), Laminated Dino Fact Cards (for each dinosaur fossil cast in crate) (8), Laminated Deep Time Maps – World and Utah (23), Meet the NHMU Paleontologists (2 bios), *Utah's Newest Dinosaur Discoveries* (articles & photos), *Rules for Collecting Fossils in Utah*, *Utah in the Age of the Dinosaurs*, *Where to see fossils in Utah – Utah Museums, Quarries, Tracksites*, *List of good websites*, *Care of Fossil Casts Sheet*

[Digging Dinosaurs Toolbox | Natural History Museum of Utah](#)

Digging Dinosaurs Discovering Utah Fossils Kit YouTube Video

# Insects Toolbox



## ***Natural History Museum of Utah*** **Insects Teaching Toolbox Kit**

Dozens of mounted entomological specimens to help students understand the incredible variability and beauty of insects. Learn to classify and to identify unique adaptations.

Teaching Toolboxes include relevant curriculum tied to Utah State Core Curriculum Standards.

*Contents include:*

*28 insect specimens*

*Other resources:* *Magnifying lenses*

*Printed materials:* *Hands of Nature: Introducing Insects, The Handy Bug Answer Book, Insectlopedia, Insectos!Bugs!, My First Pocket Guide: Insects, Peterson First Guide: Insects, Usborne's The Big Bug Search, How Do Flies Walk Upside Down?, What is an Insect?*

[Insects Toolbox | Natural History Museum of Utah](#)



# Land Adventures / Field Tools Toolbox



## ***Natural History Museum of Utah***

This Teaching Toolbox contains everything you need to effectively take your classroom investigations outdoors.

### *Field Tools:*

*Gloves, trowels, pipettes, petri dishes, collapsible kick net, insect nets, quadrats, plant presses, Garmin eTrex Ventures with rechargeable batteries, Kestrels (monitors air, water, snow temperature, wind speed, humidity, etc.), monoculars, streak plates, Dino-Lite Digital Microscope, Brock Magiscopes with multiple powered eye pieces, hand lenses, bags (so your students can carry around all this amazing stuff!), tape measurer, rulers, petri dishes, and reusable ziploc bags.*

### *Books:*

*The Nature Handbook, Schoolyard-Enhanced Learning, No Student Left Indoors, Dig-In! Hands on Soil Investigations, Watersheds*

[Land Adventures Toolbox | Natural History Museum of Utah](#)

# Conserving Water In The Desert

## *Red Butte Garden Botany Bins*



1st grade standards: 2.1b, 3.2c

2nd grade standards: 3.2a, b 4.1a,b

3rd grade standards: 2.2e 3.2a

4th grade standards: 1.1a, b, c, d, 1.2c, e. 1.3b, d. 3.3d, 2a, c

6th grade standards: 6.3.1. 6.4.1. 6.4.5

8th grade standards: 8.4.1,3,4

The Conserving Water in the Desert Bin examines water through the lens of Utah's Core standards. Students are introduced to water essentials, sources of water, how it is collected and then how to use that knowledge to engage in community science and create solutions both locally and worldwide.

The Conserving Water in the Desert Bin is being fully aligned with SEEd standards for the 2022/2023 school year.

[Botany Bins](#)

[Spanish Version: Conserving Water in the Desert](#)

# Patterns and Partnerships

## *Red Butte Garden Botany Bins*



6th grade SEEd standards 6.4.1-5

5th grade Core standards 5.1.A, D, E 5.2.A-D

The Patterns & Partnerships Bin is filled with phenomenon-based, 3D investigations and lesson plans that explore Utah's mountain ecosystems. Covering all 5 of the 6th grade life science SEEd standards, this bin includes customizable curriculum, over 100 specimens, drone footage, scientific tools, and more! 5th grade Core standards are covered with phenomenon-based investigations of the traits of plants and animals found in Utah's mountains, with a special focus on canines.

This Bin is often adapted for use in other grade levels, especially 8th grade.

The Patterns & Partnerships Bin is being fully aligned with SEEd standards for the 2022/2023 school year.

[Botany Bins](#)

# Ethnobotany: People and Plants Kit

## *Red Butte Garden Botany Bins*



4th grade science Core standards: 5.1a, 5.1b, 5.2, 5.2c, 5.3

4th grade Social Studies Core standards: 2

The Ethnobotany Bin explores the classification, habitats, and uses of Utah's plants by indigenous peoples and settlers. This popular Bin ties together life-science and social studies standards with inquiry-based, hands-on activities and materials, including over 40 plant specimens, books, magnifying glasses, and more.

This Bin is often adapted for use in other grade levels, especially 3rd grade.

The Ethnobotany Bin is being fully aligned with SEEd standards for the 2022/2023 school year.

[Botany Bins](#)

[Spanish Version: Ethnobotany](#)



# Utah's Unique Environments - Classification Kit



Student will obtain an understanding of what characteristics make up different environments in Utah. They will learn the importance of each of these environments and the amazing animals and plants that live in these habitats. Students will observe their own environment up close, learn how to ask questions, and employ scientific studies to help answer their questions. By using several inquiry-based and role playing activities, students will refine their science process and thinking skills. Classroom sets of material will be helpful in transforming the classroom into a young naturalist's headquarters.

The unit on Utah's Unique Environments created by ***The Living Planet Aquarium*** is intended to be a complete unit teaching **all four objectives of Standard V in the fourth grade science core**. Additional lessons and activities can be inserted if desired. Most lessons will build off student's knowledge and thus, lend themselves to a certain order.

*Contents: Teacher Packet and CD-Rom (with background information and a thirteen lesson unit plan with cross-curricular connections), and a FREE Classroom Materials Kit that contains: 2 Plant Presses, 1 Example of a Pressed Plant, 4 Tree "Cookies," Laminated Wetland Plant Pictures, Laminated Animal & Plant Pictures, 2 Student Field Binoculars, 30 Hand Lenses, 30 Insect Jars, 10 Peterson Insect First Guides, 10 Peterson Birds First Guides, 4 Peterson Trees First Guides and 3 Cloth Supply Bags.*

[UUE / Loveland Living Planet Aquarium | Draper, UT](#)

# Seasons & Moon Phases Activity Kit



## **Clark Planetarium**

This hands-on activity will challenge students' common misconceptions by using observation, data collection, analysis and comparison to allow the students to discover the real reason behind the seasons. Students will work together in small scientific groups to research and collect data and convene with the greater scientific community (classroom) to share data and draw conclusions. Students will 1) measure the amount of direct sunlight at specific locations on the globes; 2) estimate the highest point reached by the Sun and also 3) estimate the number of hours of daylight various parts of the Earth receive at different times of the year.

## **Seasons and Moon Phases – Curriculum for Utah 6th grade SEEd 6.1.1**

Exploring Eclipses Activity  
Seasonal Constellations Activity  
Reason for the Seasons Activity  
Phases of the Moon Activity  
Angle of Incidence Activity



*Clark Planetarium offers several **professional development workshops for teachers**. Seasons and Moon Phases –Now updated for 6th grade SEEd standards, this workshop includes training on using the “Seasons and Moon Phases” teacher resource kits distributed several years ago. Teachers will learn how to use the kits to demonstrate the phenomena of seasons and moon phases, then guide their students in investigations of the causes. [clarkeducation@slco.org](mailto:clarkeducation@slco.org).*

[For Educators - Clark Planetarium](#)

[MASTER Seasons and Moon Phases Kit Curriculum \(Download PDF document\)](#)



## VERNIER EQUIPMENT

**Go Direct Temperature Probe**

**Go Direct EKG**

**Go Direct Gas Pressure Sensor**

**Go Direct Respiration Belt**

**Go Direct Light and Color Sensor**

**Go Direct Radiation Monitor**

**Go Direct 3axis Magnetic Field Sensor**

**Go Direct Drop Counter**

**Go Direct Voltage Probe**

**Go Direct Colorimeter**

**Go Direct Motion Detector**

**Go Direct Spectrovis Spectrophotometer**

**Go Direct Energy Sensor**

**Go Direct Consistent Current System**

**Go Direct Sensor Cart**

**Go Direct ORP Sensor**

**Go Direct pH Sensor**

**Go Direct Wide Range Temperature Probe**

**Go Direct Force and Acceleration Sensor**

**Go Direct Sound**

**Go Direct CO2 Gas Sensor**

**Go Direct Rotary Motion Sensor**

**Go Direct O2 Gas Sensor**

**Go Wireless Heart Rate**

**Go Direct Optical Dissolved O2 Sensor**

**Go Direct Acceleration Sensor**

**Go Direct Surface Temperature Sensor**





*Robots brought to you by a grant from the Utah Stem Action Center. Utah's leader in promoting science, technology, engineering and math through best practices in education to ensure connection with industry and Utah's long-term economic prosperity.*

[STEM Action Center | A Division of the Department of Cultural & Community Engagement](#)

## BEE-BOT ROBOT

Bee-Bot's simple and child friendly layout is a perfect starting point for teaching control, directional language and programming. With a wide range of cross curricular mats to program with, and fun accessories to personalize, Bee-Bot is the must have programming resource for any KS1 classroom. Bee-Bot can accurately move in steps of 15cm, turn in 90° turns, and remembers up to 40 steps! In this teaching guide we show how easy to use the lovable Bee-Bot is. [Bee-Bot - a teacher's guide](#)



## OZOBOT ROBOTS KIT

Ozobot is a robotic platform that empowers coding and STEAM education for grades K–12. Kids of all ages can take command of Ozobots with 2 Ways to Code: with screens with OzoBlockly and screen-free with Color Codes. OzoBlockly , powered by Google's Blockly, offers five skill levels for beginning to master coders. Color Codes , made with markers or stickers on paper, teach basic coding concepts, debugging, and critical thinking through hands-on lessons and activities. Codes: Speed, Direction, Timers, Cool Moves, Counters, Win/Exits  
Kit includes 10 Ozobot Edu Robots



<https://ozobot.com/> [Ozobot Educator's Guide](#)

## LEGO MINDSTORMS EV3

**LEGO® MINDSTORMS® Education EV3** Core Set is a hands-on, cross-curricular STEM solution that engages students by providing the resources to design, build and program their creations while helping them develop essential skills such as creativity, critical thinking, collaboration, and communication.

[LEGO® Education Support](#)

