REDEFINING ENVIRONMENTAL EDUCATION for LIFE

PROGRAM PLANNING GUIDE

CLYDE M. YORK 4-H CENTER
UTEXTENSION
INSTITUTE OF AGRICULTURE
THE UNIVERSITY OF TENNESSEE

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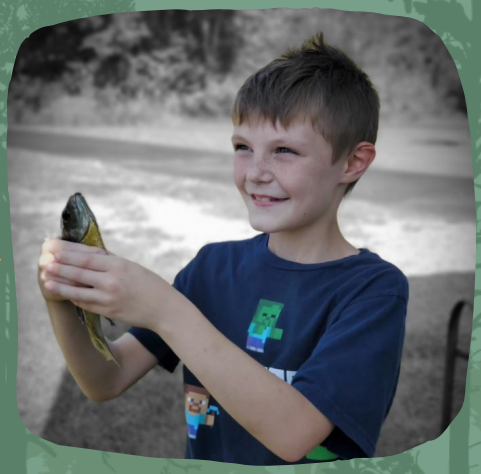
REEL PROGRAM

REEL Science for REAL Life

Mission

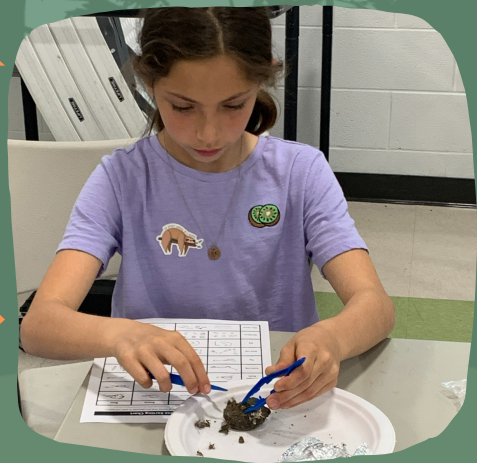
To engage youth and adults in experiential learning activities that foster social, emotional, physical, and cognitive growth. By using Environmental Education, Outdoor Experiences, and STEM principles, in place-based, and re-imagined ways.

Social Learning



Emotional Growth

Physical Activity



Cognitive Development

Letter from Clyde M. York 4-H Center's Program Director

Dear Educators,

First, I would like to personally welcome you to our program and give you some additional information that will make your planning process easier. We are beyond excited you are considering Clyde M. York 4-H Center's REEL Program for your class this year! We know that you are invested in your student's education and so are we. The fact you are entrusting your class' learning experience with our staff is an honor, and we want your time spent with the REEL Program to reflect that.

Please feel free to call and discuss REEL Program opportunities, meal options, schedules, night time activities, or other requests with me. The Clyde M. York 4-H Center strives to build unique experiential learning opportunities that suit your schedule and academic needs. We offer a few different basic schedule options to start the planning process. The HIGHLIGHT REEL Schedule (short or extended) allows you to pick and choose your activities and spend a half or full day at the center. Our REEL EXPERIENCE (full day – leave after dinner) where we guide your class through a fluid, free form schedule, investigating all the components of an interconnected system like Wildlife, Water, or Forest Ecology in a hands-on experiential way. We also offer our 2-3 day (1-2 nights) REEL FIELD STUDIES experience where students spend their first day in indoor and outdoor lab classes learning real life scenario STEM skills and developing a mindset for scientific strategies and problem solving. During the second day of Reel Field Studies, students will apply skills learned from the previous day to facilitate hands on research and data collection. The third day option offers a half day (leave after lunch) spent in review and reflection activities and an Outdoor Experience like Zipline, Archery or Rifles. Each of these three programs offer the options for customization to better suit your class's needs like: food, overnight accommodations added, etc. This document contains REEL Program experience possibilities and some information to help start your planning process.

After we have completed the planning process and the schedule has been set, we will send you a follow-up email containing preparation details specific to your REEL Program experience, and the forms packet to fill out and to hand out to your students. We will also include a completed schedule with time line, a list of proper attire, foot wear, etc., closer to your arrival date.

We look forward to your visit and we are so excited to work with you and your students!

Morgin Arms
Program Director

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"An environment-based education movement--at all levels of education--will help students realize that school isn't supposed to be a polite form of incarceration, but a portal to the wider world."
— Richard Louv,
Last Child in the Woods: Saving our Children from Nature-Deficit Disorder

R.E.E.L.
REEL SCIENCE FOR REAL LIFE

REEL Program
Field Trip Options

REMEMBER: If you do not see the grade standards for your grade, or have one that you would like covered, please contact the Clyde M. York 4-H Center to discuss inclusion. All programs can be tailored to grade, age, and academic standards.

HIGHLIGHT REEL

Abbreviated OR Extended Day - allows you to pick and choose your activities and spend a half or full day at the center. Build your schedule by selecting options from the Highlight REEL list. Pick Staff led or Teacher led activities and customize you field trip.

REEL EXPERIENCE

Full Day - where we guide your class through a fluid, free form schedule, investigating all the components of an interconnected system in a hands-on experiential way, while highlighting key academic standards. The experience allows us to focus on one theme throughout the day to truly understand how it works.

REEL FIELD STUDIES

Multi-Day Experience - an immersive science based learning experience with intensive standard based instruction. Where students spend their first day in indoor/outdoor lab classes learning real life STEM skills and developing a mindset for scientific strategies and problem solving. The second day of Reel Field Studies, students will apply skills learned from the previous day to facilitate hands on research, data collection, and analysis. You can also add a half day spent in review/reflection activities and an outdoor experience like zip lining.

REEL PROGRAM

REEL Science for REAL Life

HIGHLIGHT REEL

Example Schedule
One Day - Abbreviated

This schedule allows you to pick from the HIGHLIGHT REEL activity list and choose your favorites. It also allows you to build in travel time to and from your school without the need for overnight accommodations.

Included:

- **Center Staff led activities or Teacher led activities (if desired)**
- **Standard based instruction (if applicable)**
- **A flexible build your own schedule**
- **Lunch**

8 AM	Arrival & Orientation
9 AM	**REEL ACTIVITY ONE**
10 AM	**REEL ACTIVITY TWO**
11 AM	**REEL ACTIVITY THREE**
12 PM	Lunch
1 PM	**REEL ACTIVITY FOUR**
2 PM	Departure

This is an example schedule, the number of activities that can be covered varies and depends upon class size and time constraints such as arrival and departure times.

REEL PROGRAM

REEL Science for REAL Life

HIGHLIGHT REEL

Example Schedule
One Day - Extended

This schedule allows you to pick from the HIGHLIGHT REEL Activity list and choose your favorites. It also allows you to build in travel time to and from your school without the need for overnight accommodations.

Included:

- **Center Staff led activities or Teacher led activities (if desired)**
- **Standard based instruction (if applicable)**
- **A flexible build your own schedule**
- **Lunch & Dinner**
- **Can also include an evening program**

9:00 AM	Arrival & Orientation
9:30 AM	**REEL ACTIVITY ONE**
10:30 AM	**REEL ACTIVITY TWO**
11:30 AM	Lunch
12:30 PM	**REEL ACTIVITY THREE**
1:30 PM	**REEL ACTIVITY FOUR**
2:30 PM	Break
3:00 PM	**REEL ACTIVITY FIVE**
4:00 PM	**REEL ACTIVITY SIX**
5:00 PM	Dinner
6:00 PM	Departure

This is an example schedule, the number of activities that can be covered varies and depends upon class size and time constraints such as arrival and departure times.

REEL PROGRAM
REEL Activities

These activities correlate to, and can be selected for, the HIGHLIGHT REEL Schedules.

- **Facilitated by REEL staff OR teacher facilitated.**
- **May require small additional charge for supplies.**
- **Requires two REEL ACTIVITY spaces to complete instruction.**

Archery	A brief history of the bow and arrow will be taught. Students will learn about energy and physics while learning how to shoot a bow.	4.PS3.2 4.PS3.3 6.PS3.2
Canoeing	Instruction will be given on boarding, paddling, and disembarking a canoe. Student pairs will discover the importance of communication and teamwork while working toward a common goal.	5.PS2.1 6.PS3.3 8.PS2.3 8.PS2.5
Engineering	Students working in small groups will build the most intricate Rube Goldberg machine possible, learning about engineering principles along the way.	4.ETS2.1 4.ETS2.2 5.ETS1.1 5.ETS1.2 5.ETS1.3
BioBlitz	Students will learn about the environment around them, the part they plan in environmental matters, and how all things are connected.	4.ESS2.3 4.ESS3.2 4.ETS2.3 5.ETS2.3 6.ESS3.1
Fishing	Students will visit our fishing pond, learn proper fishing procedures, how to safely cast their lines, and learn about the species of fish they catch in the water.	4.LS2.3 4.LS2.4

Specialty programs may be available upon request, or ask about specific curriculum standards. A small additional fee may be required for materials when designing specialty programs.

REEL PROGRAM
REEL Activities

These activities correlate to, and can be selected for, the HIGHLIGHT REEL Schedules.

- **Facilitated by REEL staff OR teacher facilitated.**
- **May require small additional charge for supplies.**
- **Requires two REEL ACTIVITY spaces to complete instruction.**

Forestry	By identifying characteristics such as leaves, flowers, fruit, and bark, students will be introduced to the common tree species found within a temperate deciduous forest.	4.LS2.1 4.LS2.4 6.LS2.2 7.LS2.1
GPS	Students will learn how to read and understand a map key, read topographic grid lines, and be able to locate a specific destination using a GPS unit.	5.ETS2.2 5.ETS2.3 8.PS4.3
Money Bridge	Students will use a kit of building materials to construct the strongest and most efficient model of a bridge possible. Creating the safest bridge that uses the least resources.	4.ETS2.1 4.ETS2.1 4.ETS2.2 5.ETS1.1 5.ETS1.3
Wildlife	Students will be given the opportunity to explore wildlife through their natural habitat and by skulls, pelts, and tracks.	4.LS2.2 4.LS2.3 4.LS2.4 5.LS1.1 6.LS2.3
Soil Science	Students will discover soil properties such as texture and color. They will have the opportunity to paint with soil and take their own natural creation home.	4.LS2.1 4.ESS3.2

REEL PROGRAM
REEL Activities

These activities correlate to, and can be selected for, the HIGHLIGHT REEL Schedules.

- **Facilitated by REEL staff OR teacher facilitated.**
- **May require small additional charge for supplies.**
- **Requires two REEL ACTIVITY spaces to complete instruction.**

Owl Pellets	Students will learn about the owl's diet, how it acquires its food, and how it fits into the ecosystem by dissecting owl pellets in small groups.	4.LS2.2 4.LS2.3 6.LS2.3
Pond Ecology	By observation, sampling, and the use of test kits, students will become familiar with pond characteristics while exploring a pond ecosystem.	4.LS2.2 4.LS2.3 4.LS2.4 4.LS2.5 6.LS2.1 6.LS2.3 6.LS4.1
Robotics	Students will be introduced to basic concepts of circuits and engineering while building and improving their own bristlebot.	4.PS3.2 4.PS3.3 4.ETS2.1 4.ETS2.2 4.ETS2.3 5.ETS1.1 5.ETS1.3 5.ETS2.2 6.PS3.3
Rockets	Students will construct a rocket out of a paper and launch their rockets into the air. Students will learn how to measure altitude of their rocket, and learn about Newton's Laws of Motion.	4.PS3.2 4.PS3.3 5.PS2.1 6.PS3.2 8.PS2.5
Rifle	Students will be taught the parts of a bolt action .22 rifle, shooting safety rules, and range commands. Firing at targets will be facilitated from a shooting bench.	4.PS3.2 4.PS3.3 5.PS2.1 6.PS3.2 8.PS2.5

REEL PROGRAM
Outdoor Activities

These activities correlate to, and can be selected for, the HIGHLIGHT REEL Schedules.

- **Facilitated by REEL staff OR teacher facilitated.**
- **May require small additional charge for supplies.**
- **Requires two REEL ACTIVITY spaces to complete instruction.**

Zip Line	Take a chance to travel across our two zip lines, crossing over our boating lake. As we suit up, we'll discuss safety information and how best to encourage each other.	4.PS3.2
Swimming	Students will be given an opportunity to swim. Certified life guards will be on duty at the pool. Alternate recreational activities are available for non-swimmers. *availability based on season & staff*	
Wood Working	Students will learn about the safe operation of woodworking equipment as they cut, sand, and paint wood in our Woodworking Shop.	
Team Building	Students will learn to trust themselves and their own abilities, as well as to trust others. Self-confidence, self-reliance, and group interaction skills will be developed while participating in recreational challenges.	PSR.3.4 PSR.5.4/5 PSR.4.7 VPA.2.8
Leather Craft	Participants will be introduced to various leather-working tools as they design and decorate a leather project.	

REEL PROGRAM
Evening Activities

These activities correlate to, and can be selected for, the HIGHLIGHT REEL Schedules.

- Facilitated by REEL staff OR teacher facilitated.
- May require small additional charge for supplies.
- Requires two REEL ACTIVITY spaces to complete instruction.

Night Hike	Take a hike into the darkness to see how our senses adapt. Then students will discuss how animals' senses work differently in the darkness.	6.LS2.7
Campfire	Spend some time at our campfire ring, making s'mores, singing songs, and listening about our camp's history.	
Minute To Win It	Travel in groups to different stations, attempting feats of dexterity, skill, and silliness.	
Movie Night / Dance	Relax after a long day of camp with a popular movie from the past year. Fountain drinks and popcorn available. -OR- listen to music, and learn some new line dances.	
Camp Skits	Students will work together to write a story, building concepts and characters. Students will then choreograph their story and preform their skit for their classmates.	

Evening Activities happen after dinner and are optional activities you may select for your class if staying after dinner or staying overnight.

REEL PROGRAM

REEL Science for REAL Life

REEL EXPERIENCE

One Day - FULL DAY

Description: You choose one of our listed REEL EXPERIENCE Days and our staff will do the rest. The free form style of the REEL EXPERIENCE schedule is crafted to allow as much one-on-one student/instructor time as possible and removes the hurry of a time restricted rotation schedule. The students work as a group to move through the information and REEL activities. Content in the REEL EXPERIENCE is holistic and flows as the students understanding grows and evolves while engaged in the information. The REEL EXPERIENCE utilizes indoor and outdoor teaching and investigation led learning.

Included:

- **Center Staff led activities**
- **REEL EXPERIENCE data collection sheets**
- **Standard based instruction**
- **Lunch & Dinner**
- **Optional evening program (after dinner)**

8:00 AM	Arrival & Orientation
9:00 AM	**FIRST BLOCK: REEL EXPERIENCE INVESTIGATION STUDY**
10:30 AM	1st Break
10:45 AM	**SECOND BLOCK: REEL EXPERIENCE INVESTIGATION STUDY**
12:00 PM	Lunch
1:00 PM	**THIRD BLOCK: REEL EXPERIENCE INVESTIGATION STUDY**
2:30 PM	2nd Break
3:30 PM	**FOURTH BLOCK: REEL EXPERIENCE INVESTIGATION STUDY**
5:00 PM	Dinner

Teachers can make standard/topic request lists, to highlight any topics you would like us to cover or focus on more in-depth.

REEL EXPERIENCE

Theme Options

R.E.E.L.

REEL SCIENCE FOR REAL LIFE

REMEMBER: You can only pick ONE THEME from the list below. Each theme includes various activities to cover multiple parts and functions of the selected theme.

Wildlife: Topics to learn about or investigate can include, native species vs. non-native invasive species, wildlife habitat components, tracks & tracking, BioBlitz, food web, wildlife observation, camouflage & adaptations, etc. Topics based on schedule, teacher requests, and number of participants.

Water: Learn about the water cycle, components of water quality, macroinvertebrates, etc. Topics based on schedule, teacher requests, and number of participants.

Forestry: Learn about the natural environment of the forest, how its used and why it is so valuable. Topics based on schedule, teacher requests, and number of participants.

Orienteering: Learn how to interpret maps, keys, and directions on the map. Use the compass to orientate, learn to use the map and compass to locate objects and travel distances. Topics based on schedule, teacher requests, and number of participants.

Zip Line Engineering: Test the laws of motion and gravity while designing and constructing a miniature model of a zip line, then test to see if those findings are true on the real zip line course. Topics based on schedule, teacher requests, and number of participants.

Survival Science: Students learn skills like fire starting, shelter building, fishing, etc., all while learning about the science behind how it works and why it can help you survive in the wild. Topics based on schedule, teacher requests, and number of participants.

REEL PROGRAM

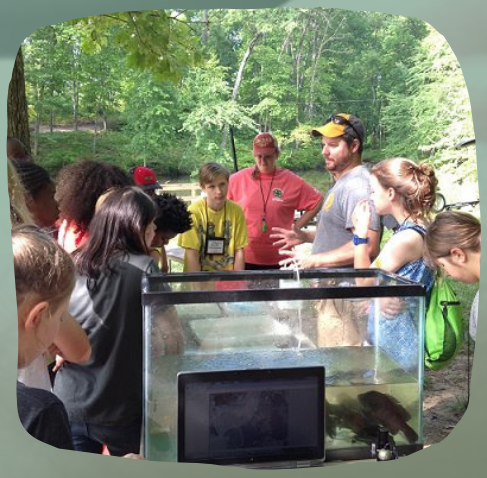
REEL Science for REAL Life

REEL FIELD STUDIES

2 DAYS & 1 NIGHT

Extra night and half day option available

Description: You choose one of our listed REEL FIELD STUDIES and our staff leads your students in a wide range of interconnected topics. This multi-day visit is perfect to teach STEM and Environmental Education topics. Students spend their first day in indoor and outdoor lab classes learning real life scenario STEM skills and developing a mindset for scientific strategies and problem solving. During the second day of Reel Field Studies students will apply skills learned from the previous day to facilitate hands on research and data collection.



Included:

- **Center Staff led activities**
- **Intensive standard based instruction**
- **1 breakfast, 2 lunches, 2 dinners OR 2 breakfasts, 3 lunches, 2 dinners**
- **Optional evening program (after dinner)**

Day One: Arrival and Lab Day

8-9:00 AM	Arrival & Orientation
9:30 AM	**REEL FIELD STUDIES LAB WORK (Section 1)**
10:30 AM	Break
11:00 AM	**REEL FIELD STUDIES LAB WORK (Section 2)**
12:00 PM	Lunch
1:00 PM	**REEL FIELD STUDIES LAB WORK (Section 3)**
2:30 PM	Break
3:00 PM	**REEL FIELD STUDIES LAB WORK (Section 4)**
4:00 PM	Recreation/Free Time
5:00 PM	Dinner
	Optional Evening Program

Day Two: Field Day

8:00 AM	Breakfast
9:00 AM	**REEL FIELD STUDIES (Intro to Field Work)**
10:30 AM	Break
11:00 AM	**REEL FIELD STUDIES (Investigation)**
12:00 PM	Lunch
1:00 PM	**REEL FIELD STUDIES (Data Collection)**
2:30 PM	Break
3:00 PM	**REEL FIELD STUDIES LAB WORK (Data Analysis)**
4:00 PM	**REEL FIELD STUDIES (Problem Solving)**
5:00 PM	Dinner
	Optional Evening Program OR Departure

You can and an optional half day to make it 2.5 days & 2 nights.

Day 3: Adventure (Half day)

8:00 AM Breakfast

9:00 Field Day Reflection

10:30 AM REEL ACTIVITY (Selected from HIGHLIGHT REEL list i.e. Zip Lining or Rifles)

12:00 PM Lunch

Departure After Lunch

REEL FIELD STUDIES

Theme Options

R.E.E.L.
REEL SCIENCE FOR REAL LIFE

REMEMBER: You can only pick ONE THEME from the list below. Each theme includes immersive hands-on labs, activities, and data collection to cover multiple parts and functions of the selected theme. Includes intensive standard based instruction.

Wildlife Ecology:
On the first day we will spend time discussing our native wildlife and various ecological components through indoor and outdoor investigation labs. We will learn ways to evaluate those components and how research is conducted to solve problems. On the second day we will spend the full day in the field looking for wildlife, collecting data, comparing habitats and using our new knowledge to problem solve for real life solutions.

Forest Ecology:
On the first day we will spend time discussing our forest type, how we use technology to evaluate forests, and various ecological components through indoor and outdoor investigation labs. We will learn ways to evaluate those components and how research is conducted to solve problems. On the second day we will spend the full day in the field identifying trees, collecting data, and using our new knowledge to problem solve for real life solutions like a forester.

Fresh Water Ecology:
On the first day we will spend time discussing chemical properties of water, how we monitor water quality, fish species, and various ecological components through indoor and outdoor investigation labs. We will learn ways to evaluate those components and how research is conducted to solve problems. On the second day we will spend the full day in the field testing the water, analyzing data, and using our new knowledge to problem solve for real life water solutions.

Land Navigation:
On the first day we will spend time discussing orienteering and navigation, how we interpret maps, mapping, and their keys. Learn how to orientate yourself and how to use a compass or GPS unit through indoor and outdoor investigation labs. On the second day we will spend the full day in the field using navigation technology to solve directional problems and test our new navigation skills.

Survival Science Academy:
On the first day we will spend time discussing survival techniques, skills, and the science behind how and why they work in the wilderness. Learn how to build a stable fire, engineer shelters, sterilize water of pathogens, etc. On the second day we will spend the full day in the field using our new science knowledge to problem solve real life survival situations.