# On T.R.A.C.K.S.

Teaching Resource Activities and Conservation to Kansas Students

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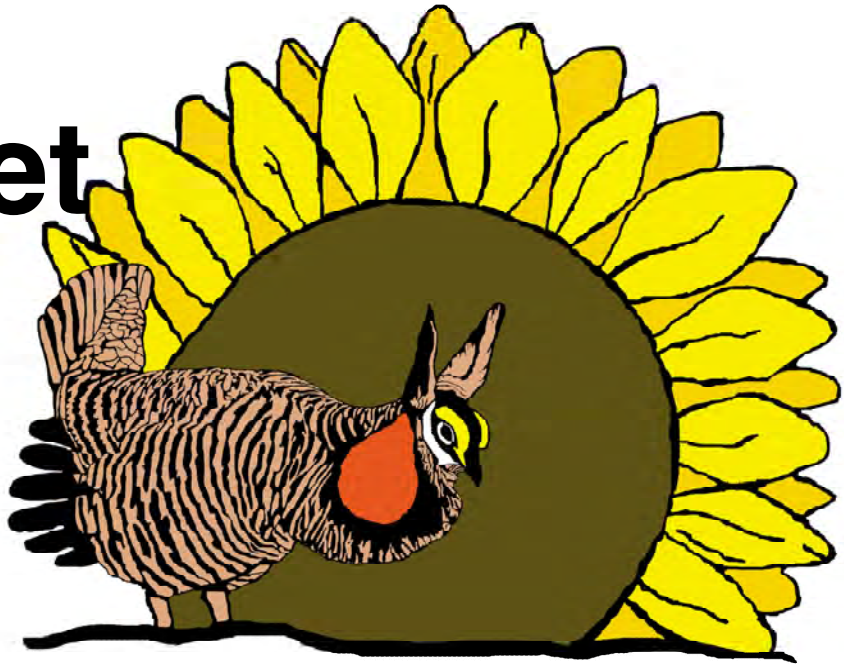
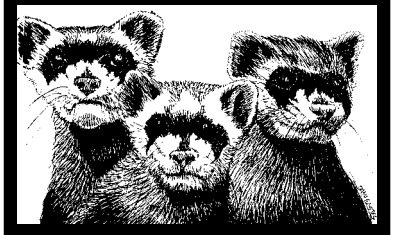
# ECO-Meet Primer



## INSIDE...



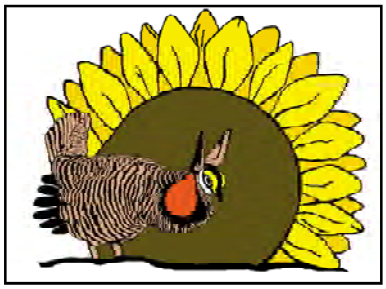
## Don't Miss Our Next Issue:



**Black Footed Ferret Reintroduction in Kansas**

# What is an ECO-Meet?

***The mission of ECO-Meet is to challenge and inspire an interest, appreciation and understand - ing of the natural sciences and the Kansas environment through interscholastic competition.***



An ECO-Meet is a one day environmental competition geared for students from grades 8-12. Regional ECO-Meets currently take place in 9 facilities across the state. Following the regional competitions is the state competition which invites the top three teams of each regional to a "best of the best" showdown. Teams consist of three to four individuals and the competition is divided into four areas: wildlife knowledge (two events), scavenger hunt, and interpretation. Questions for these events are based only on Kansas flora and fauna

The wildlife knowledge tests are identifying activities set up similar to a college lab final. A variety of bones, furs, mounts, footprints, scat, live animals, and models are placed on tables with questions accompanying each specimen. All questions are multiple choice and there are 100 questions, worth one point each, on each test.

Every two years, the topics covered by the tests change. One test is an ecosystem test and the other test is a " focus" test. The ecosystems covered range from shortgrass prairies to woodlands or tallgrass prairies to aquatic environments.

The focus test emphasizes a specific group such as mammals, birds, reptiles and amphibians, or invertebrates. Questions relating to the focus test are not used on the ecosystem test, i.e. if birds are the focus test, questions about birds from the focus test will not be found on the ecosystem test. Recognizing that the focus test can cover a number of species (ie there are over 400 birds species in Kansas), the study lists for each have been divided and split by years to make them more manageable. In some cases the lists are halved or cut into thirds or fourths.

Each team member takes the test and a team score is given by averaging the members' scores. The lowest score is dropped from a four-person team. Individual awards are given to the first and second highest scores in the wildlife knowledge tests and these individuals qualify for the state competition even if their team does not.

The most popular of the events is the scavenger hunt, even though it is probably the most difficult. Teams are given a list of items to collect on a nearby natural area or nature trail with a time limit of 30 minutes. Most of the items are plants or parts of plants and points are given for each item correctly identified. One hundred points are possible.

The fourth event is the interpretive event.Teams are required to give a five-minute oral presentation and are judged on their technique and content. The setting is chosen by the students but they must develop a skit to interact as native animals and give information about their life histories (ie. how big, what they eat, description, etc). Costumes and props are encouraged and this event is worth 100 points.

# Kansas ECO-Meet Program

Kansas ECO-Meets are based on a program developed in 1976 by the Pittsburgh, PA District of the U.S. Army Corps of Engineers. The original ECO-Meet was developed for students from grades 1-12. The program was created to "stimulate a greater awareness of the environment" in students as well as aquaint area schools with the environmental resources available at Corps' lakes. The one-day competition consisted of several individual environmental events.

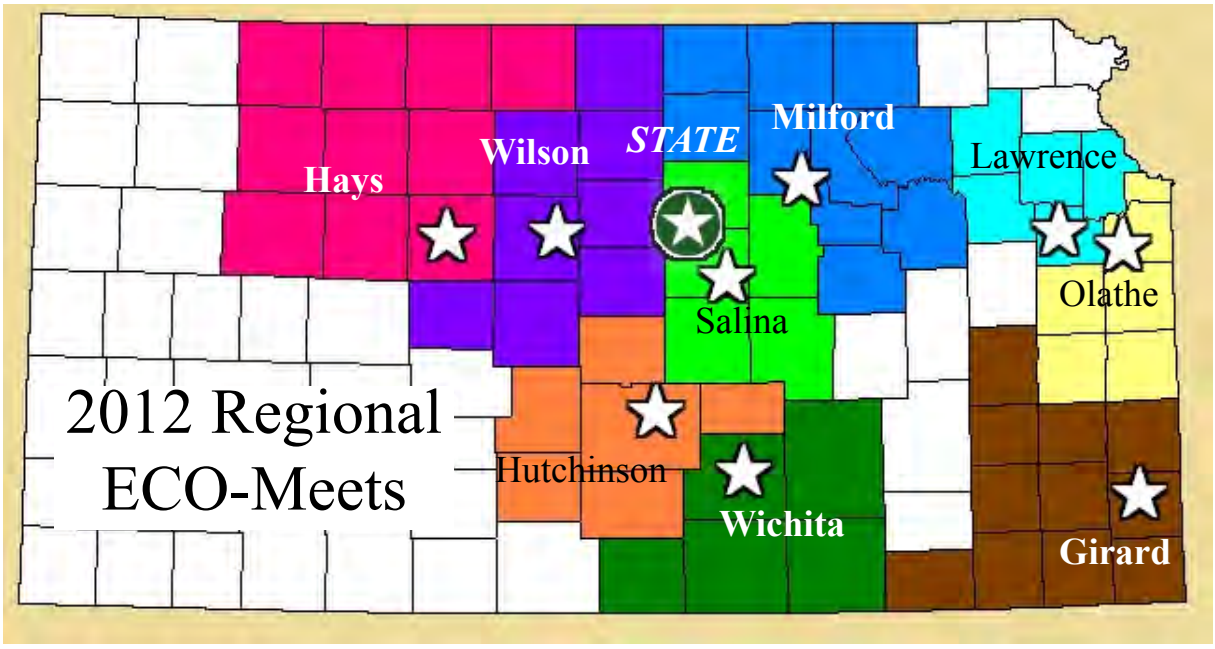
The Kansas version of an ECO-meet resulted from the cooperation of a Milford Lake Corp of Engineer Park Ranger and the Director of the Milford Nature Center getting together and discussing ways to increase visitation to each facility, especially among the high school age group. These students are not traditionally users of nature centers or Corp Lakes so reviving this 1970's era competition seemed a win-win situation.

The first Kansas ECO-Meet was held at Milford Lake near Junction City in October of 1991. Joining in the effort was another Corps Park Ranger from Tuttle Creek Lake and the Geary Co. Extension Agent. Participants were drawn from an eight-county area in north-central Kansas and seven teams competed the first year.

By 1994, scholarships were added to provide incentive to students and these have continued to this day. The scholarship fund was set up through the non-profit Kansas Wildscape Foundation and funds are held in trust until the student graduates from high school.

In 1999, two additional ECO-Meets were added. Wilson Lake and the Great Plains Nature Center came on board and consequently, the first statewide playoff among regional winners was also offered. Currently, there are nine regional ECO-Meets and one State ECO-meet offered each year. Organizers of each ECO-Meet meet regularly to discuss the program and make improvements. Each regional ECO-meet exercises some autonomy in deciding how to handle the schedule and registration, whether to offer lunch, whether to have t-shirts and scholarships, and what is on the scavenger hunt. Generally, however, the table tests and interpretive events follow standardized rules and, in fact, each test is the same at each regional. Scoring is also uniform.

Schools are free to attend any regional that best fits their schedule, however, they may only attend one regional. The top three teams from a regional are invited to state. Regional coordinators come together to man and host the statewide competition in early November. Larger scholarships are offered to the winners of the state competition.



# So You Want to Have An ECO-Meet Team?

## by Mike Rader, Wildlife Education Coordinator, KDWPT

The Kansas ECO-Meet program is meant to challenge and inspire Kansas students in the appreciation and understanding of the natural sciences and the Kansas environment through interscholastic competition. What does that mean to you as a potential coach or participating student?

As a potential coach, you need to see if you have students that have an interest in the Kansas out-of-doors. They don't have to be experts already, but they can't be scared or hesitant to go outside and learn about what Kansas has to offer. The students that excel in ECO-Meet are not necessarily the smartest kids in school, but they must have a willingness to learn. We certainly understand that teachers are busy and don't always have a lot of time to devote in the classroom to teach wildlife & plant identification, life history of the species occurring in the state, etc. but with the proper resources and students that show some aptitude in outdoor activities, they can do really well in competition.

**The students that excel in ECO-Meet are not necessarily the smartest kids in school, but they must have a willingness to learn and an interest in the Kansas out-of-doors.**

You as a coach/teacher, do not need to be an expert either. Check with your school librarian to see if any of the reference books we list are available. Many science teachers might already have some of the listed references in their own rooms or in personal collections. If you find the books are not available to you or your students, contact one of the Kansas ECO-Meet regional coordinators or one of the committee members. If your school does not have the means to acquire some of these materials, there is help available from other sources, such as the Wildlife Education Section of the Dept. of Wildlife, Parks & Tourism. Good ECO-Meet coaches don't have to spend a tremendous amount of time teaching if the kids show an interest and can work with each other as team members to study on the topics subject to be tested on in a particular year. Coaches need to be able to help with difficult questions students may have or at least point them in the right direction to find answers. It also helps to be able to lead them on field trips, especially dealing with plant identification. There are also local resource people (biologists, NRCS folks, state extension agents, etc.) that can also be called upon to help you and your kids prepare for competitions.

Obviously, if you are planning on starting a team(s) to participate in ECO-Meet, you need to secure the blessing of your school administration. The web site for Kansas ECO-Meet has an information section where it shows the correlation to current science standards, so the relevance to what is being learned is there. Kids have a good attitude about the events within the competition, even though they usually complain about the difficulty of the tests, being insecure or scared to do the Interpretive event, etc. After years of conducting evaluations, we still find kids really do have fun and also learn something about the native plants and animals of our state.

Once you have the administration of your school on your side, have a great group of students selected to be on your team(s), and collected the reference materials you will need, there are still some things to consider. One of the most important places that both coaches and participating students need to remember to go to is the web site: www.kansasecomeet.org This site has the history of the program, locations and contact information for regional competitions, rules of each of the events within the competition, study lists of relevant species for the current year events, reference material listings, information on the State Finals event, and much more. You need to be familiar with the information posted on the site. A map of the state is included, showing where regional events are held. Typically schools will go to the closest meet to their location, but there is some flexibility in that as we realize some dates are better than others for a particular school. If your school cannot attend a meet on a particular day, contact the regional coordinator of one that will

work and see if your students can attend it. Remember that schools can attend only one regional event in a season, with the top three teams from each regional qualifying for the State Finals competition.

Students interested in participating in ECO-Meet need to be aware of all the information listed previously for potential coaches. In some cases, a school might have students interested in participation in ECO-Meet competition, but do not have a teacher/coach that is willing or have the time to help them prepare or to attend a meet with them. In those instances, if there is a parent or other interested adult that is willing to help, that is allowed. Many times, we have parents that accompany teams on the day of an event, especially if the school has difficulty getting a substitute or having transportation issues in getting teams to a meet.

As a student preparing for participation in the competition, be extremely familiar with what species are to be tested on by reviewing and studying the lists provided on the web site. In preparation for the Scavenger Hunt event, you will also need to be very familiar with the plant species in the area of where the event is to be held, realizing that many of the plants are the same as what you might have around your home, town or rural area. Preparation for the Interpretive event is always a challenge too, with some students fairly comfortable speaking in front of a group of people, some not so much. Enlist the help of a drama coach, speech teacher, debate & forensics coach, etc. to help you become more comfortable with good techniques of public speaking. It is extremely important to be comfortable with the subject you are talking about as well, especially since the judges for the event have some working knowledge of species you are depicting in your presentation. Good preparation in advance and practice help to offset some of the potential embarrassment that can occur in an ill-prepared presentation. Usually "winging it" is a bad idea.

Some schools will take an entire class to a competition, while others take only a select group. Most regional competitions have a mix of both and it works pretty well. Each regional meet coordinator has the flexibility to set the total number of teams allowed from each school and the total number of teams they can handle in a day. The maximum is usually 28-30 and meets usually are not held for less than 5 teams. Some coaches have local "playoffs" within their school to see which students are best teamed together or would compete at the highest level at a meet. There is really no one "right" way, but coaches that have teams well-prepared have a system that works for them and how they get teams ready.

The Kansas ECO-Meet program is in place to help us reach students that are interested in what Kansas has in the outdoors. It is meant to help pique interest in native plants and animals and provide a way for students to excel. By offering scholarships and local recognition, we hope they can learn, possibly offset some financial obligations at college and have fun along the way. If you or your students have any questions, please contact any of the regional coordinators or members of the Kansas ECO-Meet committee.

# Why An Interpretive Event?

## by Lorrie Beck, USFWS, Great Plains Nature Center

Unless you plan to live and work on a deserted island, thereby interacting with no humans whatsoever, you will probably find yourself in an occupation that will require you to speak and interact with people. You may have to be persuasive in your career or be a fount of knowledge. You may have to speak in public and/or in front of their peers as part of your job.

While this event may be "scary" (speaking in front of your peers), it should not be a surprise to any on your team. As a team, you should have planned, prepared, and practiced your presentation so many times you are comfortable and confident in presenting the information to the judges and audience members (other schools/teams).

**How do we get started?**

Gather your team together and brainstorm! Be creative. Throw out ideas, the crazier the better in the beginning. Current events that have a tie to nature in Kansas are always great: zebra mussels spreading to western lakes; re-introduction of black-footed ferrets in Logan County (controversial and current); sightings of mountain lions; or wind turbines. Be creative and unique!

You may choose Kansas plants and animals that are considered non-native, such as zebra mussels or diamondback rattlesnakes, but you must refer to these introduced, exotic or alien species in the correct context (e.g., the diamondback rattlesnake population at Kanopolis Lake, or the presence of zebra mussels in various Kansas lakes).

Once you have your characters and storyline, consider using humor to develop your characters. Consider incorporating animal traits such as motions a fish might use, the buzzing sound a bee would make, preening motions of a bird, regurgitation or musk spray as a defense mechanism if it is true to your animal's behavior. Don't forget that if you are a plant, you will have some characteristics as well.

**What do we do during the Interpretive event?**

Each team member will select a Kansas plant or animal to portray during the team's 5-minute presentation. Human beings may not be one of the selections. During the presentation, each team member must fully participate and interact with the other members. At some point in the presentation, each plant/or animal must impart to the audience the following information about themselves:

1. What do you eat or how do you obtain our nourishment?
2. Where do you live or what habitat needs do you require?
3. How do you reproduce?
4. Do you have any special adaptations or characteristics?
5. What is your physical appearance?

The 5-minute presentation should have some type of storyline with a beginning, a plot or "story," and a conclusion.

**How is this event judged?**

Each heading is worth 5 points for a total of 25 points. There will be 4 judges each awarding 25 points for a possible total team score of 100 points.

***Time***

One point is given for each minute used. A two-minute presentation would receive 2 points; a five-minute presentation would receive all 5 points. Presentations running on or near the ? minute mark will be, at the judges' discretion, awarded the next highest point or the previous whole point. This decision will be based on the overall presentation and good usage of time in developing the other criteria. No ? points will be given.

Teams going over the 5 minute time period may be stopped, however, your team will receive a score of A5" for Time. Because you did not conclude your presentation in the allotted 5 minutes, you may

have failed to provide all the information required for each species or provide a solid conclusion. Judges may deduct points in other categories (e.g., Reached conclusion; Accuracy/Content) due to lack of information presented.

***Format***

•How well did you set up and develop your storyline?

•Was there an introduction, a story, and a conclusion?

•Did you develop your plant and animal characters, integrate them well into the story, and interact with each other?

***Accuracy and Content***

•Did you research your plant or animal carefully and present only factual information?

•Species portrayed must be presented true to their status in Kansas. Species that are extirpated in Kansas (i.e., not documented to currently exist in the wild in Kansas but were here at the time of European settlement; such as, but not limited to, gray wolf, grizzly bear, black-footed ferret, mountain lion, moose, and American bison), species that are extinct (such as the Carolina Parakeet) and introduced species (such as wild boar) must not be presented as normally abundant inhabitants. If the resident status of a species is not presented appropriately, points will be subtracted for factual inaccuracy.

•Before you start your presentation, tell the judges what plants or animals your team members will portray so the judges can concentrate on judging your presentation and not have to guess who you are. If it is important to the storyline to keep your identities a secret from your audience, you can pass a note to the judges informing them of your characters without giving it away to your audience. If, however, at the end of your presentation, your audience does not know your identity, points will be taken off for your failure to develop the format properly. The timing of your presentation will not start until after the introductions are completed.

***Enthusiasm and Creativity***

•Did your audience enjoy your presentation?

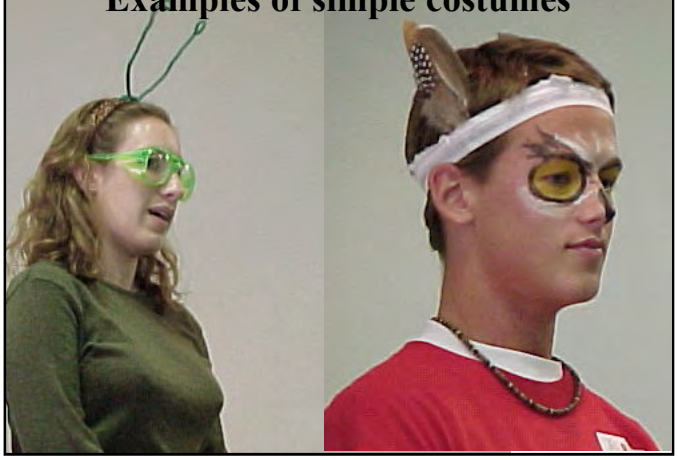
•Did they relate to you and the information that you presented?

•Did you teach them something?

•Did you have fun giving the information and did you enjoy your audience's reaction to your presentation?

•Did you use something to grab the attention of your audience?

**Examples of simple costumes**



Simple props, make-up, costuming, or other items are encouraged to enhance your plant or animal characters. Costumes also allow the judges to know which animal or plant you are portraying at any time during the presentation. Without costumes, it is often difficult for judges to mentally remember: "OK - Jane was a beaver and Jim was a skunk – now, which student is Jane and who is Jim?" Costumes, make-up, and props assist in preventing confusion to audience members, and it also adds interest and "pop" to the entire presentation.

•Did your presentation have pizzazz?

***General Interpretive Techniques***

·Did you make eye contact with your audience?

·Could they clearly hear what you were saying on the back row?

·Were you relaxed and giving the impression that you were enjoying what you were doing?

·Did your presentation connect with your audience or was your "story" outside of their realm of experience and knowledge?

One thing to keep in mind when being creative: the judges must understand the context that is being referenced. Keep in mind the judges may not be up-to-date on the most current television shows nor have seen the recent "tween" movie. Therefore, references to these current shows or movies may have

less impact because the judges may spend time thinking, "What's going on? What are they talking about?" and the presentation may not score quite as high.

·Were your actions and gestures meaningful or just distractions?

·Did you direct your presentation to the audience or your fellow team members?

Think "conversation." Team members do not have to provide all of their own information, and all the characters do not have to share the same information at the same time. For example, if a snapping turtle, opossum, and turkey vulture are talking at the edge of a highway, the opossum may comment on the "ugly" looks of the turkey vulture, and as the conversation continues, the snapping turtle may discuss the eating habits of the opossum. Each animal does not have to provide their own information. In fact, it is often more enjoyable if one character discusses an aspect of a different character.

Beware of "vomiting" information! Regurgitating all the information about your character at one time (e.g., habitat, food, reproduction, characteristics, unique fact, etc.) is rarely interesting, and while it may score points for the matrix (accuracy and content), your team will probably lose points on other aspects of the presentation, such as enthusiasm and creativity.

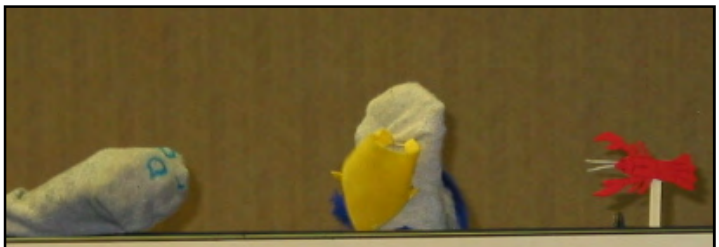
Reading your presentation off of note cards is not allowed. However, note cards are sometimes used in "game show" settings and the "host" may refer to note cards to ask the "contestants" various questions. Judges may ask to look at note cards to ensure the cards contain questions only and no "prompting" information.

Rude and/or offensive language will not be allowed, nor will crude humor and derogatory statements.

Make sure the judges can clearly hear, understand, and comprehend what you are saying. Points cannot be awarded if the judges are unable to hear and understand you. Check the acoustics of the venue, and make sure you and your team members can be heard and understood.

Most of all: have fun! The judges want to be entertained! They want you to succeed. Plan, prepare, and practice … and come to the ECO-Meet determined to excite, entertain, and educate!

During an ECO-meet, the Interpretive Event is a required team event. If a team attending a regional meet refuses to participate in the Interpretive Event, they will be disqualified from the competition both as individuals and as a team. This event is worth up to 100 points and makes up 25% of your total team score.



Example of interpretive event using puppets

Interpretive Judging Panel

**Interpretive Event Scoresheet**

**Name of School** _____ **Team** _____

**<u>Time</u> (use 5 minutes)** ____/5

4.5 – 5+ = 5, 3.5 – 4.5 = 4, 2.5 – 3.5 = 3, 1.5 – 2.5 = 2, <1.5 = 1
(Points are not awarded for information presented after 5 minutes)
Information presented after the 5 minutes has expired is not counted.

**Format /Characterization** ____/5

Established Setting (where, when, introduce group members)
Includes story line or plot and closing
Who is portraying which organism – identifiers help
Development of plant and animal characters
Integrated characters into the story

**Accuracy/Content** ____/5

Let the judges know in advance which organism you are portraying. Information related to the Kansas species must be factual. Consider gestures, props and costumes.

| | | | | |
|---|---|---|---|---|
| Species Portrayed | | | | |
| Food Sources | | | | |
| Description | | | | |
| Habitat | | | | |
| Life Cycle/ Reproduction | | | | |
| Information of Special Interest | | | | |

**Enthusiasm and Creativity** ____/5

Audience enjoyed the skit
Team had fun
Skit was new and fresh
Costumes, makeup or props
Character (plant or animal) roles believable

**General Interpretive Techniques** ____/5

Eye contact
Voice tone and volume
Relates directly to audience
Appears relaxed
Meaningful gestures

**Total Points** _____/25

# Preparing for ECO-Meet: Tips For Teachers

## by Elby Adamson, ECO-Meet Coach 20+ yrs, Clay Co. Schools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Success in theECO-Meet competitions as in any other endeavor requires dedication and adequate preparation. It is important for teachers to recognize that participation in ECO-Meets actually fits with the outcomes and objectives of Kansas standards for science.

ECO-Meet is something students enjoy that doesn't take away from time spent in learning. It reinforces learning and enhances students' educational experience.

For more than 20 years my students have participated in the regional eco-meets and based on my experience, I offer a few tips to teachers preparing students for this challenging competition.

First, for almost every teacher and student time is at a premium. You squeeze in time and practice opportunities where you can. For my students this has often been at 7:30 or so in the mornings before classes start. If you can find other times during the day or after school, great, but you will simply have to take what is available and make it work.

**What do you do with the time?**

The first ECO-Meet component I start my students on is the oral presentation. We begin by brainstorming ideas that will allow them to have four species of animals interact in an entertaining fashion that also conveys information about each species life cycle, habitat requirements and other relevant information.

When they finish their outline, I have them use the rubric to evaluate the presentation as the judges might during the actual competition. This helps to spot weaknesses or omitted information in the presentation. Lastly, if there is any opportunity for them to perform the oral presentation before a live audience, they do. This has included grade school classes, service clubs and other groups over the years.

We start with the oral presentation component because more than any other eco-meet event, it requires teamwork. Students will need to research this animal (or maybe plant) character work up appropriate dialogue and interactions and memorize their lines. The have to rehearse the final product and everyone needs to be present.

For many students this public performance event is the most challenging of the four, all the more reason to start by having students work on this event first.

In terms of studying as a team, the two events that require the least attention are the table test or pullout events. Students can study for these on their own whenever they can find a few minutes.

I have prepared a sort of study guide for students made up of several hundred-sample questions of the sort often found on the pullout tests. It is a self-paced guide with questions and possible answers on one page and on the next page are the correct answers. At some point in time I will probably convert this guide to a CD version that allows automatic feedback for correctness of an answer.

Questions in my study guide cover Kansas mammals, fish, insects, reptiles and amphibians as well as birds.

Typically, the questions are based on facts or unusual information found in reference material on our native species. For example, "What Kansas mammal always bears four young of the same sex"? Further on, there might be another question such as, "What mammal related to the anteaters has been expanding its range northward in Kansas"?

In some cases I have drawings including some of the fins of fish and questions about the drawings such as identifying various fins or even identifying a catfish by looking at a drawing of the caudal fin.

I also have boxes of skulls, bones, furs, turtle shells and even fresh water mussel shells that I use to reinforce what we've been reading about with hand-on opportunities. And yes, I have a stuffed nine-banded armadillo students can pick up if they want.

For teachers who don't have the time or interest in creating learning kits such as these, the Kansas Department of Wildlife, Parks and Tourism and some of the state's museums and nature centers have chests of materials you can borrow to use with students.

Ornithology has forced me to utilize technology


to do some things I couldn't accomplish with a print study guide. To prepare for the ornithology pullout test last year, I pared the number of birds down significantly. With more than 470 species occurring in the state, there are simply too many for students to know before the test. Decide what the most likely species are for the upcoming test and find copyright free images as well as bird songs and calls you can load to a CD. It may be possible to download to iPad's Sibley's *ebirds of North America* for $20 or less and there are down loads for iPods that may be offered at a reasonable cost. Still too much time and money? Consider having students look up each species on your study list at Cornell's Ornithology Lab's All About Birds website. They will find information about each species along with calls and songs, photographs and in some cases short video clips.

There is a host of other websites that are also useful. I must mention that the Great Plains Nature Center has many images useful for studying for the ECO-Meet events and it is the host site for ECO-Meet information. The areas to be tested in the table tests are listed for several years in advance so that teachers and students have time to prepare for upcoming tests.

The last ECO-Meet activity is the scavenger hunt and this is a favorite with many students. Preparation can consist of bringing in samples of leaves, and other plant materials from the local area to be used in practice sessions. Emphasize those characteristics that help identify a particular plant. Some of these are obvious such as the arrow-shaped leaf of the aquatic plant known as arrow-head. Others, such as the fine hair-like structures found when you pull a leaf of rough-leaved dog-wood apart ,are more difficult to see but provide valuable tools for plant identification.

By far the best way to practice for the scavenger hunt is to do a nature walk. I have a friend with several hundred acres that encompasses some great riparian areas, some ponds for aquatic vegetation, tallgrass prairie and even some old-growth timber. He not only lets my students and I to walk on his property, he goes along and helps us identify plants as he knows virtually all the plants on his property and the key characteristics to identifying them.My guess would be there is probably someone in your area who has the property and expertise to help you and your students prepare for the scavenger hunt as well.

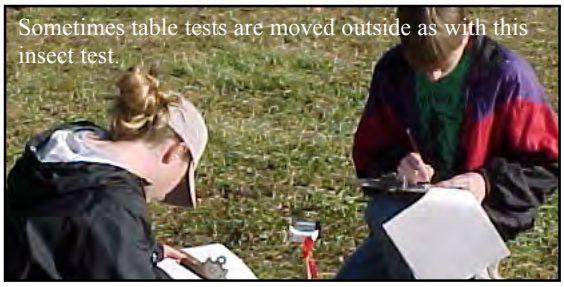
At the ECO-Meets there are only winners in the sense that students gain a greater understanding and appreciation of nature and the complex interactions that make up our environment. They will be the stewards of our natural resources for years to come. Our preparation of them now helps determine how effective their stewardship will be.

# How To Prepare for Table Tests

## by Jim Mason, Great Plains Nature Center

The topics for the two table tests for ECO-Meet are rotated each year in an attempt to expose the participants to all that Kansas has to offer in flora, fauna and habitats. The Habitat Test rotates through Shortgrass Prairie, Tallgrass Prairie, Woodlands and Wetlands/Aquatic. The Focus Test drills in on one group of animals each year. In 2012 that group is Passerine birds. In past years it has been mammals, invertebrates or reptiles & amphibians. Thus, students who participate in ECO-Meet over 3-4 years will have an opportunity to learn about a wide variety of our native biota.

Limiting the scope of the tests each year also makes it easier for a student or coach to prepare for each year's competition by reducing the amount of material that needs to be studied. The ECO-Meet Committee provides study lists of species that are tailored to fit each year's topics, and those lists are posted in pdf format on the Kansas ECO-Meet website. Students and their coaches can download the lists in advance of each year's competition to prepare for it. The Habitat Test for 2012-2013 focuses on the Shortgrass Prairie, so the mammal, reptile, amphibian and fish lists have been filtered to include only those species found in the western half of Kansas.



Sometimes table tests are moved outside as with this insect test.

Because it is so big, the list of insects is divided into four roughly equal parts on a four year rotation, but not necessarily tailored to that year's Habitat Test. Other animal groups remain constant from year to year: Miscellaneous invertebrates, Threatened & Endangered Species, Woody Plants and Grasses & Forbs.

In addition to the study lists, other background materials are also provided on theECO-Meet website as well as links to relevant online resources. So, by logging onto the ECO-Meet website it is possible to obtain comprehensive study materials for each year's tests.

**www.kansasecomeet.org**

# Scavenger Hunt Tips and Tricks

## by Chuck Otte, Geary Co. Extension Agent

Always popular at ECO-Meets, the Scavenger Hunt can be a source of frustration for some teams. Presented with a list of 25 to 40 items representing forbs, grasses, woody plants, animals or miscellaneous and only 30 minutes to identify and collect these items, a team can easily be overwhelmed. But a little advanced planning and studying can quickly get you over the hump and on your way to successful collecting.

On the ECO-Meet website there are lists of species that you should be at least somewhat familiar with. Learn the difference between a forb, a grass, and a woody plant. Learn some basic concepts such as cool and warm season plants, simple leaves versus compound leaves, palmate versus pinnate, as well as different plant parts and different forms of plants (leaves, stems, rosettes, etc.) The list of plants is far too large to expect one to learn all the first year, but focus first on the most common species in your area or where your regional ECO-Meet will be held. If time allows, each team member can specialize in learning one of the four groups.

If it is your first year, don´t think that it is impossible to learn. Just take one plant at a time and keep building on it. Some people find learning how to identify plants easier than others. Everyone learns in different ways so figure out what works for you. **Remember, field guides can be used in the scavenger hunt, but that means you need to learn your field guide and how to use it.** Trying to look up every item on the list in the field guide can slow you down. Remember that many of the field guides may show you a flower in bloom or a tree in the middle of summer. Learn how to identify the plant in the fall after the flowers have become seed heads or the tree leaves have all fallen.

Once you have the list at the ECO-Meet, take a minute or two to strategize. See what´s on the list that you know, you might know or you have no clue about. Get the easier items first. Don´t waste time trying to figure out something you don´t know and miss collecting something you do know. Collect the known items first and then take the time to figure out what a pawpaw or persimmon looks like!

Some teams split up into groups, some teams stay together and some teams have all four members going in different directions. Spend some time practicing with your team so everyone can learn how each other works. First impressions are often correct decisions. Don´t spend a lot of time second guessing yourself or your teammates.


Some teams will use resealable plastic bags and permanent markers to keep their items identified and separated. This can be very helpful as a big bluestem seed head on the plant can be very easy to identify, but pulling it out of a collection bag by itself can suddenly turn daunting. Just make sure that whatever you use for a collecting bag will hold all your specimens and not leave a trail behind you as you dash back at the last minute.

Take a few minutes to get organized once collecting is done. Determine who your captain will be. The captain has the final word on any specimen that is in dispute or uncertainty about what specimen to turn in. Once you give the judge the item, you don´t get it back, right or wrong. Since some items may be able to be used for multiple responses, make sure you don´t hand in an upcoming answer too early, especially on a wild guess!

The scavenger hunt can be a lot of fun. Take some time to learn plants, get yourself and your team organized and turn your 30 minutes into a deliberate collection time, not a wild goose chase!

# How to Keep Your Team Active Year Around

The practice and hard work that goes into your ECO-Meet team does not have to be a fleeting memory of the fall. There are many other competitions and activities that take place throughout the year that can be used as opportunities for your ECO-Meet team.

ECO-Meet occurs in the fall by design. It focuses on the basic concepts and identification of the native flora and fauna of Kansas--sort of the ground floor of understanding the habitats and ecosystems of the state-- and it occurs soon after the school year starts.

Most of the testing focuses on identifying this or that or interpreting what teeth, claws, talons, etc tell you about the animal and where you might find it. Building on this knowledge and expanding it to include what makes good wildlife habitat or what are the best practices for water and soil conservation will equip your ECO-Meet team to go on and compete in the 4-H Wildlife Habitat Evaluation Contest or the Canon Envirothon to name a few.

The Wildlife Habitat Evaluation (WHEP) is a


4-H and FFA youth natural resource program dedicated to teaching wildlife and fisheries habitat management to junior and senior level (ages 8-19) youth in the United States. It provides participants an opportunity to test their wildlife knowledge in a friendly competition, as each state supporting WHEP conducts an annual contest where teams of 3-4 similarly aged individuals gather.The winning senior (14-19 years of age) WHEP team from each state earns the right to attend the annual National WHEP Contest. More information can be obtained by visiting kansas4-h.org or www.whep.org.

Since the state competition for WHEP occurs in January, it can be the first competition following ECO-Meet that your team enters. Winning at this event will allow your team to travel to a national competition, typically held the last full week of July, in a different state each year.

Following WHEP is the Envirothon competition typically held in April or early May at several regionals across the state. Envirothon is corporately sponsored by Canon and is advertised as North America's largest high school environmental education competition. Participants are tested on aquatic ecology, forestry, soils and land use, wildlife, and a special topic which changes each year. The Kansas Association of Conservation Districts (KACD) is the major sponsor of the Envirothon competition in Kansas. More information can be obtained at www.kacd-net.org/kansasenvirothon or at www.envirothon.org.

There are other competitions as well that could benefit from the studying done for ECO-Meet in the fall. FFA has a program of range judging that takes place in late April. More information about this can be found at www.rangejudging.com.

Scholar's Bowl is also a competition that often has environmental topics or native flora and fauna questions. Sanctioned as a KSHSAA activity, scholar's bowl (or quizbowl) is a competition with questions on all topics of human knowledge. Regionals occur in late January and the state competition in February.

And, finally, there is the Science Olympiad program. Events cover biology, physics, chemistry, earth science, engineering and inquiry. There is more info at webs.wichita.edu/scienceolympiad

Even if your ECO-Meet team doesn't participate in any additional competitions, studying for next year's ECO-Meet can take place year-around. Suggest students participate in wildflower walks, monthly bird walks, field trips to natural areas such as Konza Prairie or Tallgrass Prairie National Preserve, or take part in citizen science groups that monitor things such as stream quality or butterfly migration. Ultimately, our goal is to create a citizenry that understands the natural world and will become better stewards of our planet.



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The purpose of On TRACKS is to disseminate information and educational resources pertaining to the natural, historic, and cultural resources of the prairie, emphasizing Kansas ecology. Information is presented from the perspective of current scientific theory.


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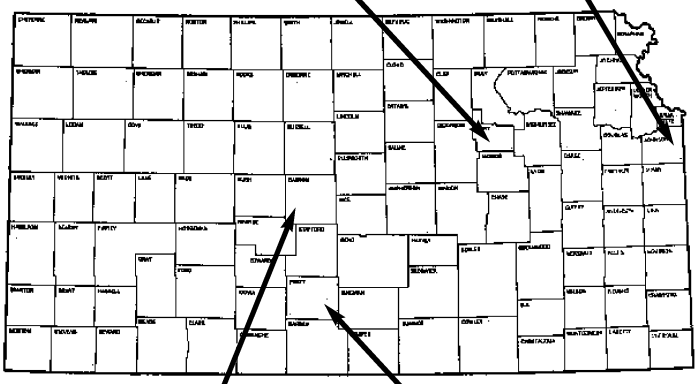


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