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ABSTRACT

This guide describes the outdoor education practicum required of student teachers at Northern Illinois University (NIU). This 5-day residential experience is held at the Lorado Taft Field Campus (branch of NIU), established in 1951 to train teachers in outdoor education. Course objectives include: (1) to help student teachers gain knowledge about planning and conducting residential outdoor education programs; (2) to increase student teachers' understanding of children and their needs by participating in a residential outdoor education experience; (3) to team teach with peers; and (4) to evaluate the experience. Grading is done by Taft faculty on a pass/fail basis. A student who participates in the planning, demonstrates interest and enthusiasm, works competently with children, and carries a fair share of the work can expect to pass. General information for university students at Taft is provided, including rules and guidelines pertaining to meals, visitors, and smoking. A "teaching team" approach is used in which two or three student teachers are assigned to a group of 10 students and supervision is provided by the Taft faculty and classroom teachers. The document includes a list of equipment and clothing needed, dining hall guidelines, acceptable table manners, guidelines for supervising children in dormitories, and emergency procedures. A section of the guide addresses developing lesson plans with examples. It also includes sample teaching ideas for outdoor education, a list of instructional resources and field equipment available at the Taft campus, maps of the Lorado Taft Field Campus, and charts and graphics. (LP)

Laboratory Experience in Outdoor Education

Senior Student Teaching Experience

Lorado Taft Field Campus
Northern Illinois University
Oregon, Illinois 61061

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Introduction
A Meeting Place for the Disciplines

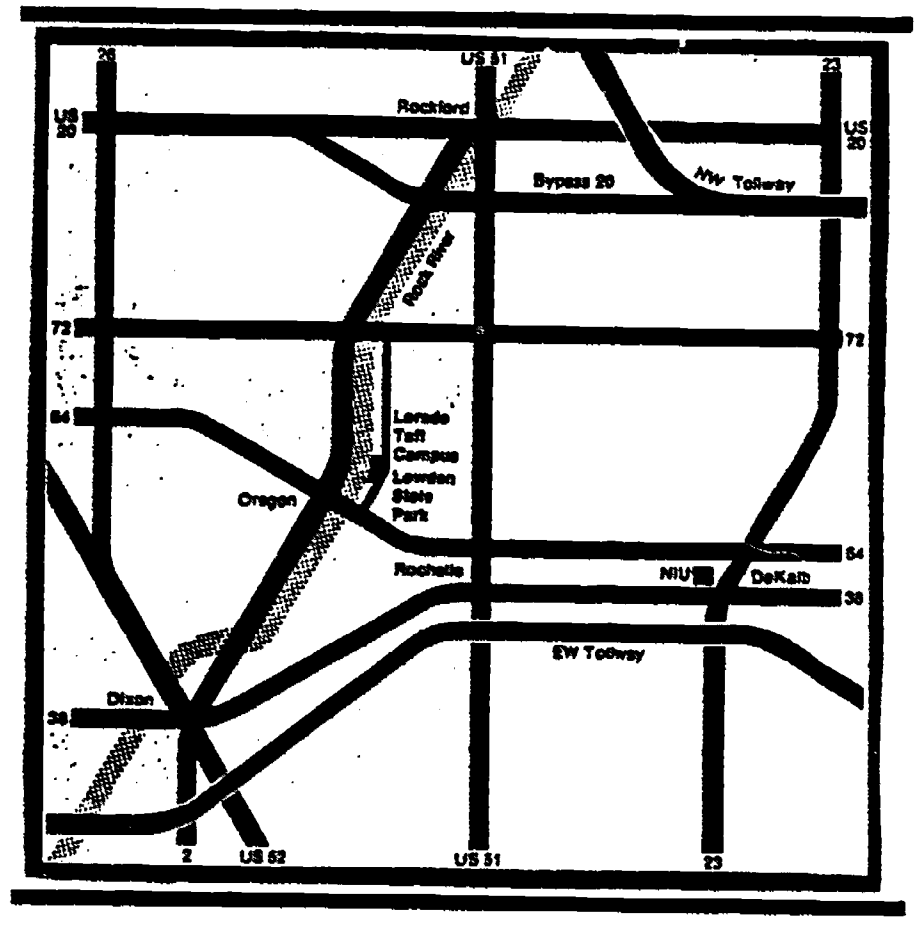
The Lorado Taft Field Campus was established in 1951 as a branch campus of NIU (then Northern Illinois State Teacher's College) as a center for training teachers to extend the instructional process to out-of-classroom learning environments. During the intervening years the Taft Campus has become an internationally recognized center for outdoor teacher education, with undergraduate and graduate programs.

What is Outdoor Education?

Outdoor education is the use of the outdoors to promote the total education of children through enriched experiences that cannot be provided in the classroom. One of the significant forms of outdoor education is the resident program where teachers and pupils live and learn together in an outdoor education center.

What Are the Values of Outdoor Education?

Children are active, curious, adventurous, and enthusiastic learners in the outdoors. For the first time many activities make sense to children when they are able to participate in them through first hand or direct experience. Science and conservation, for example, have greater significance when they become observed realities rather than words or pictures in a book. Whether the outdoor exper-ience is used for teaching science, conservation, social studies, language arts or arithmetic, it is a valuable part of the school's instructional program.

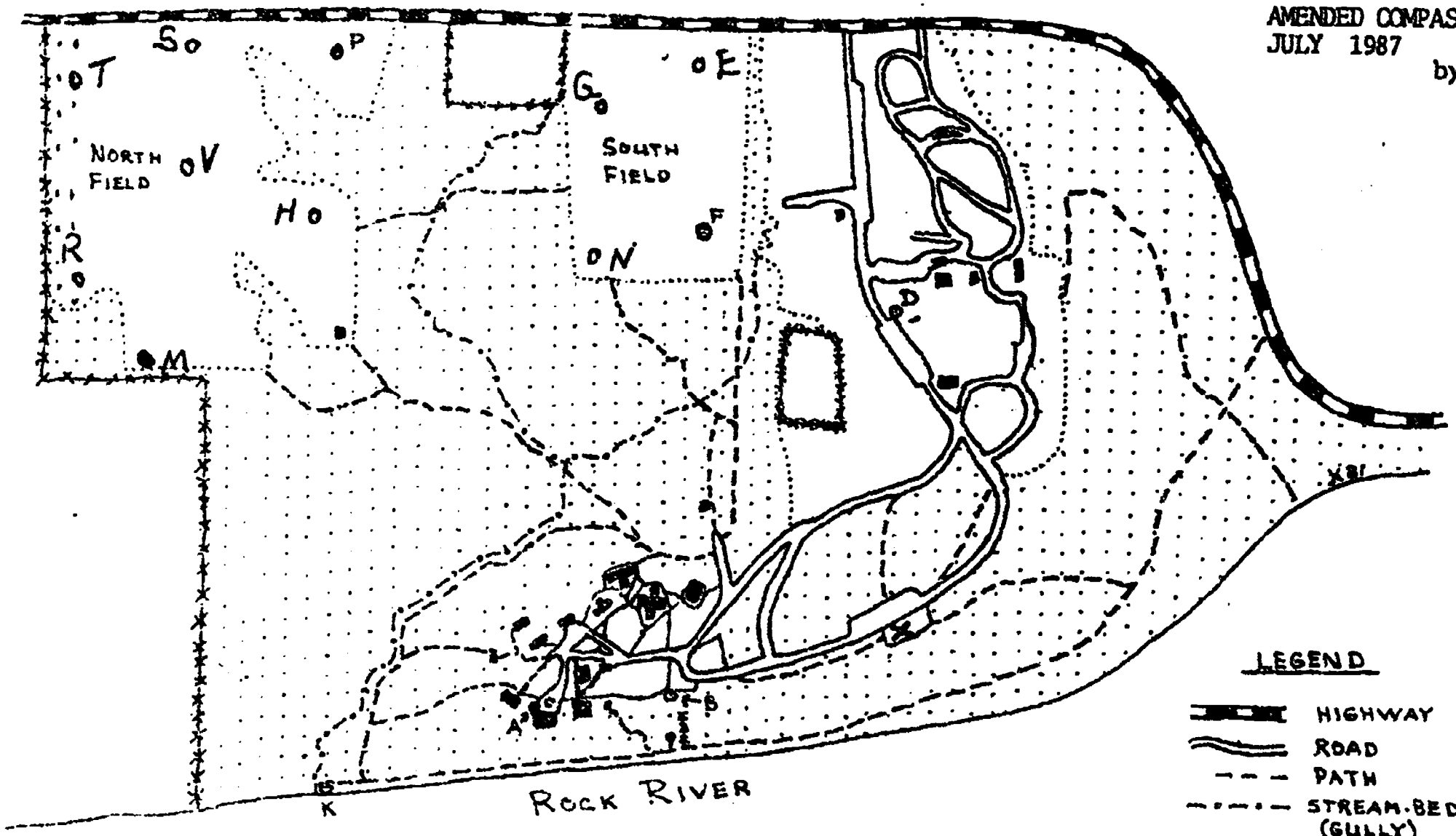


Where is Lorado Taft Field Campus?

The Lorado Taft Campus is located four miles north of Oregon, IL adjacent to Lowden State Park. It may be reached from the east and the west by Illinois Highway 64 and from the north and south by Illinois Highway 2. The campus consists of 140

LORADO TAFT FIELD CAMPUS
LOWDEN STATE PARK

AMENDED COMPASS CHECKPOINTS
JULY 1987
by M.Swan



LEGEND

- HIGHWAY
- ROAD
- PATH
- STREAM-BED (GULLY)
- FOREST
- OPEN AREA
- FENCE
- BUILDING
- MONUMENT
- SPRING

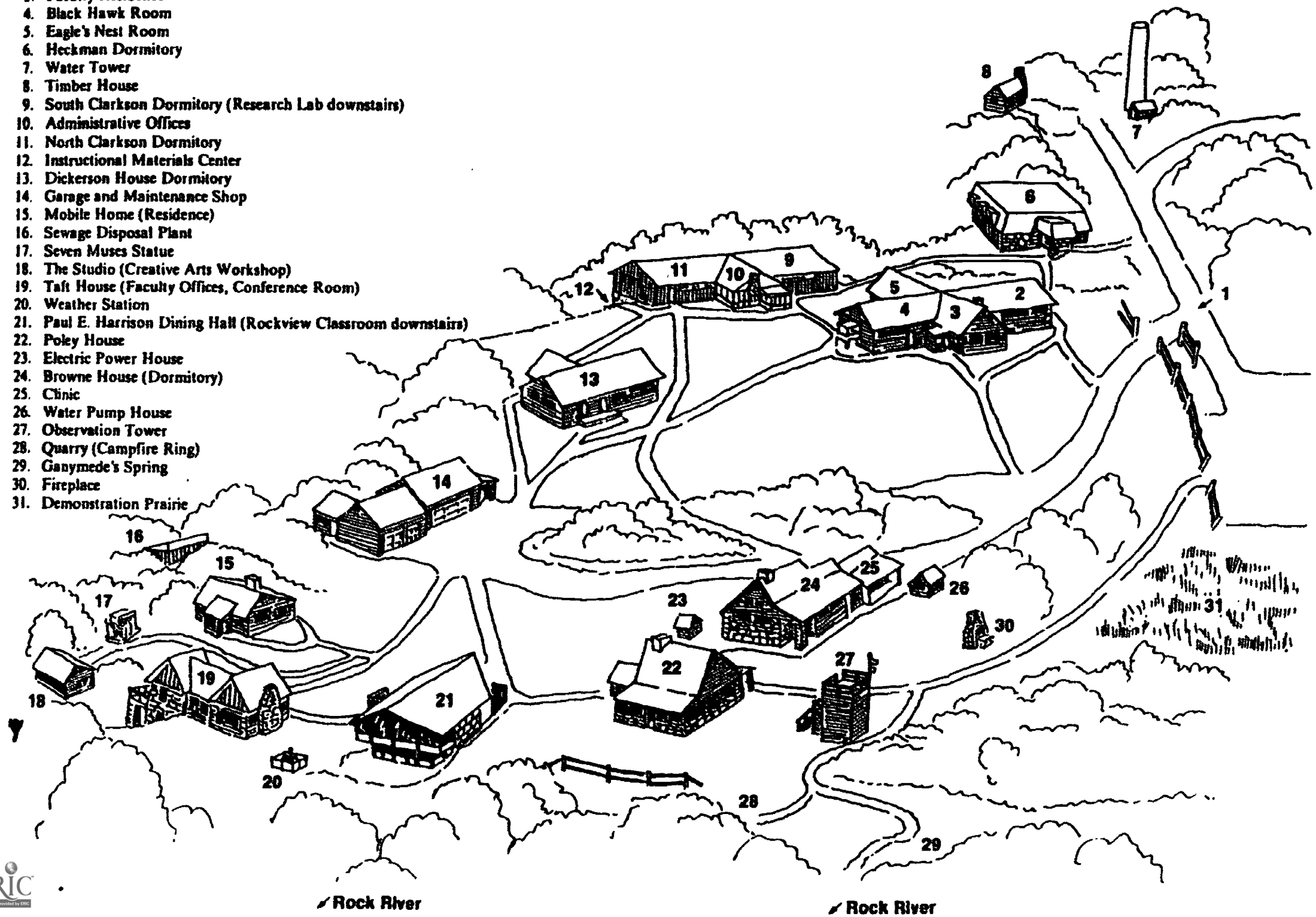
Note: Orienteering Markers indicated by letter. ie. "A", "B" etc.

SCALE
1: 6825
1cm: 68.5 meters

Lorado Taft Field Campus

Northern Illinois University

1. Entrance to Lorado Taft Field Campus
2. Grover House Dormitory
3. Faculty Residence
4. Black Hawk Room
5. Eagle's Nest Room
6. Heckman Dormitory
7. Water Tower
8. Timber House
9. South Clarkson Dormitory (Research Lab downstairs)
10. Administrative Offices
11. North Clarkson Dormitory
12. Instructional Materials Center
13. Dickerson House Dormitory
14. Garage and Maintenance Shop
15. Mobile Home (Residence)
16. Sewage Disposal Plant
17. Seven Muses Statue
18. The Studio (Creative Arts Workshop)
19. Taft House (Faculty Offices, Conference Room)
20. Weather Station
21. Paul E. Harrison Dining Hall (Rockview Classroom downstairs)
22. Poley House
23. Electric Power House
24. Browne House (Dormitory)
25. Clinic
26. Water Pump House
27. Observation Tower
28. Quarry (Campfire Ring)
29. Ganymede's Spring
30. Fireplace
31. Demonstration Prairie



wooded acres high on a bluff overlooking the Rock River. It is an ideal site for school classes to study in the natural environment as well as for conferences, workshops, and short-term meetings. Many groups have found that its isolation contributes to the effectiveness of their meetings.

CIOE 483 - Outdoor Education Laboratory Experience

The Senior Laboratory Experience in Outdoor Education provides another clinical experience closely tied to your student teaching semester. The opportunity to live with a group of children and teach them at a resident outdoor education center will complement your regular student teaching assignment. In the total-living situation (24 hours a day) of the Taft Campus, you will be responsible for planning a curriculum, teaching, and supervising a group of youngsters during their three-day stay at Taft.

The usual plan is as follows:

1. A member of the Outdoor Teacher Education faculty will meet with you in your student teaching center to lay the foundation and initiate the planning.

2. You will organize yourselves into teaching teams of from two to four "Taft Teachers," each team to work with a group of students (from 10 to 15 depending upon total enrollment) from the time they arrive on Wednesday until they leave on Friday.

3. You will have Monday and Tuesday or Thursday and Friday at Taft just prior to the children's arrival to finalize your lesson plans, and work out your teaching assignments. A Taft coordinator, and two graduate teaching assistants will be working with you as resource specialists. Your student teaching supervisor may also be at Taft for part of the time, and available for consultation.

The outdoor teacher education practicum is an ideal complement to student teaching since it enables you to function as a mini-faculty, within the teaching team structure, to design many of your own lessons and develop your own instructional programs. This includes working out daily schedules, teaching assignments, supervising students in their dorms and during meal times, and planning evening activities.

A day at the outdoor school is not a typical 8:00 to 3:00 school day. The days will be long and the involvement intense. When the laboratory experience is completed, however, you may feel as others have, that this was one of the most worthwhile professional experiences of your undergraduate career.

Course Objectives

The student will:

1. Gain understanding about planning and conducting resident outdoor education programs.
2. Increase understanding of children and their needs by participating in a resident outdoor education experience.
3. Team teach with peers.
4. Evaluate the experience.

Subject Matter Content

1. Approaches used to organize and conduct resident outdoor education experiences.
2. Teaching resources and materials appropriate for resident outdoor education experiences.
3. Elements of the natural sciences and mathematics as well as the creative arts and history appropriate for the elementary levels.
4. Group building processes such as challenges and initiative tasks.
5. Lesson planning for outdoor settings.
6. Instructional strategies and use of outdoor learning aids.

Illustrative Course Activities

1. Organize and plan the resident experience and develop lesson plans using outdoor resources.
2. Teach in the outdoors.
3. Lead groups in singing, campfire and dance activities.
4. Supervise dormitories during rest periods and throughout the night.
5. Participate in evaluation activities.

Minimal Student Requirements

1. Be in residence at the Lorado Taft Field Campus for a period of five days.
2. Function as a team member in planning and conducting the resident outdoor education experience for the assigned group of children.
3. Develop lesson plans as assigned and implement those plans.
4. Participate in evaluation discussions.
5. Submit a final report on the experience as specified by the course instructor.

Grading

Grading is done by Taft faculty and is on the basis of Pass/Fail. A student who participates in the planning, demonstrates interest and enthusiasm, works competently with the children, and carries his/her share of the work load can expect to pass.

General Information for University Students at Taft

1. Address: Lorado Taft Field Campus
   P. O. Box 299
   Oregon, IL 61061

2. Telephone: (815) 732-2111 or (815) 753-0205/0206

3. Fees: Varies according to length of stay at Taft

4. Meals: Are normally served at 8:00 a.m., noon, and 5:30 p.m. Table setters report to dining hall 30 minutes before mealtime. The famous Taft Campus home style meals are the kind that need to be served on time. Your promptness at meal-time will be appreciated, especially by the cooks.

   In every group-living situation certain general policies are necessary for the welfare, safety, and comfort of the total group. We ask your cooperation in carrying out these policies.

5. Leaving the campus: The senior outdoor teacher education practicum at the Lorado Taft Field Campus provides the prospective teacher an opportunity to live and work with children in a resident situation. One rather unique feature of the practicum, and an ingredient highly essential to the success of the program is the total-living involvement of university students with pupils. Because of the full-time involvement of university students with pupils, students are expected to remain at the Field Campus for the duration of the practicum, Monday through Friday. A student may be excused only with the express permission of his/her professor, or in case of emergency. The same policy applies to the junior professional laboratory experience as well, since we are striving for total group participation for the duration of the experience.

6. Visitors: You should only receive visitors by permission from your professor only.

7. Return to DeKalb: Students ordinarily do not return to DeKalb during the week. In the event that it is absolutely necessary that you return, arrangements should be made with your seminar professor and coordinator.

8. Smoking: Because smoking is offensive to some, please refrain from smoking in the dorm rooms, dining hall, library, and classrooms. On the trail, special care should be taken in disposing of cigarettes. When teaching or supervising elementary school pupils smoking in their presence is discouraged.

9. Alcohol: State law prohibits alcoholic beverages in University buildings or on state property.

10. Dormitories: Lights should be turned off and it should be quiet for those wishing to sleep. Those who return to the dormitories after 11:00 should be considerate of others.

11. Classrooms, Library, Poley, Taft, Craftshop, Dining Hall:
These buildings will be open for use until 11:00 p.m. at which time you are expected to return to your dormitories. Before leaving these buildings, table and chairs should be in order, books, games, and tools returned to shelves, lights turned out and doors locked.

12. Illness-Accident: Any illness or accident, day or night, should be reported to the block professor and Taft coordinator. A registered nurse is on duty in the clinic during the days when children are in residence. Children and teachers may report to her for treatment.

Taft Teacher and the Teaching Team Teacher

Because of the teacher-pupil ratio, each of you (in the role of a Taft Teacher) will not be able to work with the entire elementary class. Consequently, a "Teaching Team" organization has been used. For example, a class of 30 may be divided into three groups of ten pupils each, with an assigned teaching team of two and three Taft teachers working with a given group during the stay at Taft.

The classroom teacher will direct the formation of pupil groups. Each group may choose to be identified by a name; e.g. Beavers, Spacemen, Pioneers, Blackhawks, Beatles, etc.

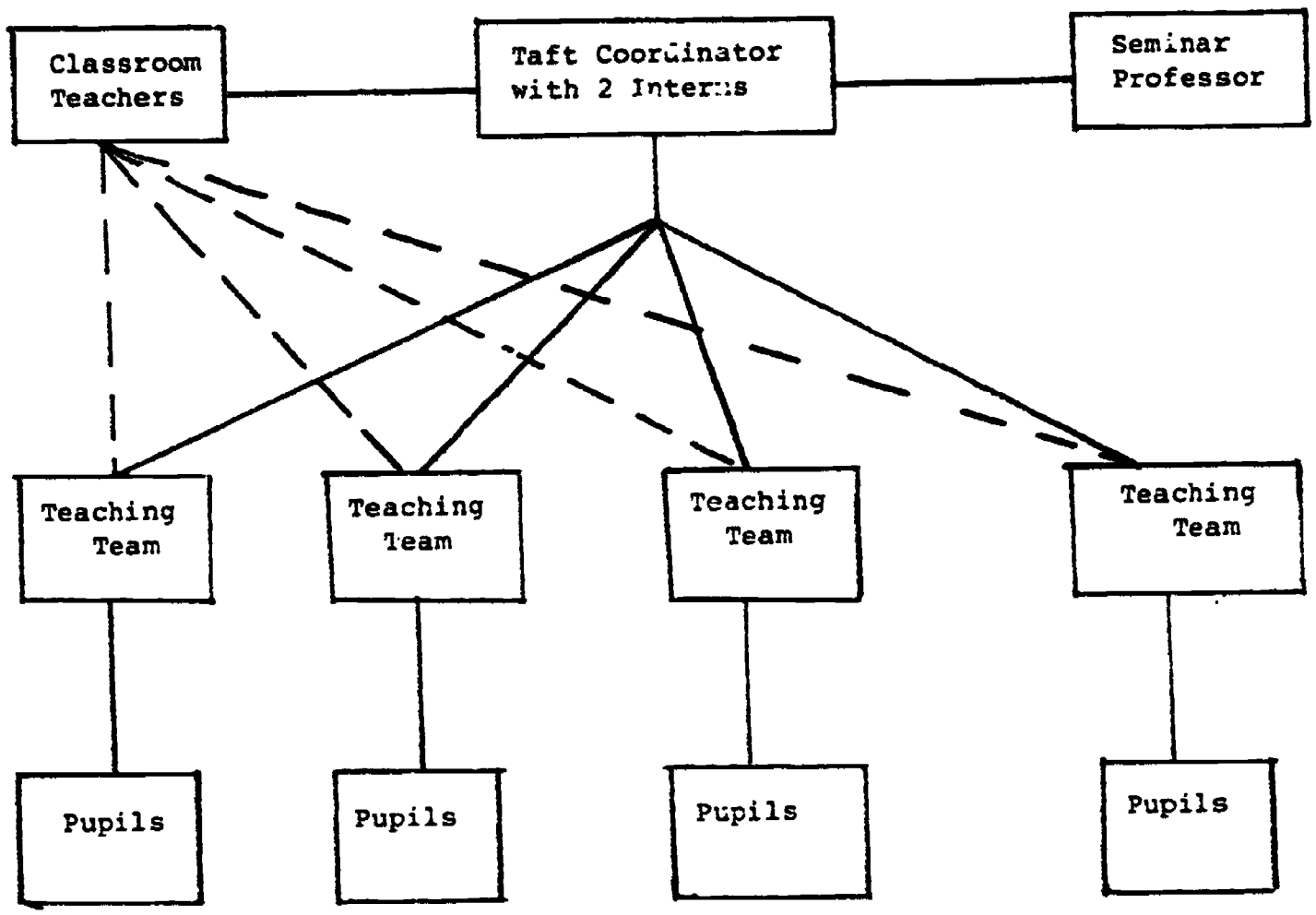
The composition of the children's groups and the teaching teams normally remains constant during the Taft experience. Each group has a designated indoor meeting place as a home center and shares in equipment, supplies, library items, and space in other buildings according to scheduled needs.

As a member of a teaching team, you will be confronted with problems of organization and instruction similar to those faced by a school faculty.

You and your team will want to schedule times for preparation, observation, and teaching. You will want to locate and become familiar with whatever resources you need to prepare lesson plans and use in teaching. The Taft staff members will be your prime resource people as well as the classroom teachers and the pupils.

Organizational Model

Clinical Experiences in Resident Outdoor Education



Equipment and Clothing Suggestions

Clothing

There should be a daily change of:

long pants
shirt or blouse
underwear
socks (4 or 5 pairs in winter)

1 pair of all purpose shoes
1 pair of waterproof shoes or boots
1 rain jacket or poncho (a heavy duty plastic garbage sack with an opening for head and arms works fine!)
1 winter jacket (as weather indicates)
1 hat (waterproof if not attached to rain gear)
2 pairs of gloves or mittens
1 set of sleepwear
Optional: T-shirts, flannel shirts, sweater, tennis shoes (in warm weather)

Personal Items

sleeping bag or bed roll (2 sheets, 2 blankets, 1 pillowcase)
toothpaste & toothbrush
soap in a soapbox
deodorant
towel & washcloth
comb and brush
notebook
pen or pencil
handkerchief or Kleenex (necessary in cold weather)
bandanna

Useful Items

camera/film (with name on it)
mosquito repellent (in season)
alarm clock

Please leave at home

Gum & candy toys radio TV other things of
pets soda pop knives this nature

Baggage

suitcases, duffle bags, back packs, large garbage bag

Dining Hall Guidelines

1. Eight individuals at each table is a comfortable number. Please try to have the same number of individuals at each table, as this will make it easier for the kitchen staff in portioning the food.

2. There should be an adult at every table.

*3. One person, called the hopper, is to set the table, serve the food and return utensils and food to the kitchen, and wipe the table after the dessert dishes are removed. The hopper is to be the only one up from the table. The hopper takes direction from the adult at the table.

*4. The coordinator, an intern or a senior in charge of hoppers will be outside the dishwashing window to assist children who are returning used dishes. Please try to establish a single line, one-way traffic route to avoid accidents.

*5. The hopper should return all serving dishes, condiments, etc. first to the large serving windows and then the used dishes to the dishwashing window. The table is cleared of everything except beverage and cups or glasses before dessert.

6. The first meal which is served family style will be a time to go over dining hall procedure with everyone. At this time, the person in charge of hoppers will go over important guidelines once everyone is seated at their tables. The group will have a better understanding of the procedure if they are explained in the dining hall.

7. The person in charge of hoppers meets with them 30 minutes prior to the meal to set tables and review dining hall guidelines.

*8. The hopper is to carry no more than two glasses or cups per trip, no more than four plates, and one serving platter at a time.

*9. All children will be encouraged to try a portion of all foods. An exception to this is food allergies noted by the nurse. Good manners and eating behaviors are to be encouraged. Conversation should be limited to the table.

*10. The adult will supervise the portioning of food and will pour the beverage. The food quantity on the serving platters should be sufficient to serve everyone the first time around. No one will begin eating until all are served and the hopper is seated.

*11. There are seconds available on most foods. When seconds are requested, the adult will direct the hopper to get the exact number required.

*12. Sanitation, safety, and careful handling of china, glasses, and silverware should be stressed. Special attention should be given to keeping hands off the parts which touch food or mouth, as well as to keeping clothing from touching china or glasses.

13. No smoking in the dining hall.

*Important guidelines to be reviewed with the children before the first family style meal.

Table Manners

The dining hall is a place where good manners may be practiced and learned. Teachers have the privilege and the obligation of developing acceptable dining behavior. Acceptable behavior obviously rules out running, shoving and rowdiness in the dining area. It is not so easy, however, to distinguish between acceptable and unacceptable in the rules of etiquette. Perhaps the following approach would be helpful.

Common Courtesies

1. Begin eating only when everyone has been served.
2. Chew with mouth closed.
3. Talk in quiet conversational tones.
4. Use the password, "Please."

Etiquette Courtesies

1. Keep elbows off the table.
2. Napkins belong in lap.
3. Sit up to the table.
4. Use knife, fork, and spoon in recommended manner.

Some of the following approaches might be tried.

1. Hosts select one manner for emphasis during a specific period in the dining hall.
2. Display a chart of manners in a prominent place in the dining hall.
3. Confer with classroom teacher in preparation of pupils for using acceptable table manners at Taft.

Remember that teachers may be attempting to impose behavior conflicting with pupil's values. Children's eating habits have been established over a period of years, and family and cultural values are involved. A balance of example, patience, firmness, and perseverance is the key to desired change.

Dormitory Supervision

Putting Pupils to Bed

A good night's sleep is essential to a healthy and happy stay at Taft Campus. If pupils recognize the importance of rest and respect the right of each person to get his rest, the task of putting them to bed is easier.

1. Usually one-half hour is sufficient time for getting pupils ready for bed. This should start no earlier than 8:00, and pupils should be in bed by no later than 9:30 p.m.

   a. Showers should be taken every night.
   b. Slippers or shoes are to be worn in the dormitory and especially to and from showers.
   c. Clothes should not be worn or taken into the shower area.
   d. Towels are to be hung on hooks while taking showers.
   e. No horseplay is allowed in dormitories.
   f. Check the dormitory temperature.
   g. Locate any bedwetter's bunks and send them to the bathroom before the dormitory supervisor goes to bed for the night.
   h. All other pupils should be sent to the bathroom before lights out.

2. A light should be left on in the bathroom so pupils who need to use the bathroom during the night can find their way. Pupils using the bathroom during the night should do so quietly.

3. Usually a story is read or told after lights are out. (15-30 Min.)

4. At least one teacher must remain in the dormitory at all times after pupils are in bed. The teacher should remain in the room with them until they are asleep so as to prevent unnecessary disturbances. (If a pupil persists in being noisy, it may be necessary to ask him to take his blankets and go into another room in the building and sit by himself until he is ready to return to his bed for sleep).

5. Pupils should remain in bed and quiet until the teacher in charge gives permission to get up at or about 7:00 a.m.

6. Table setters are to remain in the dormitory until 7:30 a.m. at which time they report to the dining room accompanied by a teacher.

7. Beds should be aired during breakfast, and are to be made after breakfast.

Emergency Procedures

FIRE

In the event of fire the prime consideration is the safety of pupils and students.

1. Forest and grounds - if a fire occurs on the grounds or woods, move students from the path of the fire and to the upper campus by a safe route. Report the fire to the nearest Taft faculty or staff member. The fire department number is 732-2161.

2. Buildings -
   a. See that all occupants leave the building. Children are to go to the dining hall or Eagle's Nest classroom (whichever is farthest from the fire) for a count. They should be accompanied by their teachers and other faculty working with their group.

   b. Turn on an alarm switch - they are inside each door of the dining hall, the Clarksons, and Heckman dorms.

   c. Notify the switchboard operator in the business office to call the fire department. If you need to dial yourself, be sure to dial 9 first, then all seven digits.

      Note: If the person finding the fire is alone, the above should be done in sequence. If more are present, one person should inspect the buildings for occupants, another go with the children, and a third turn in the alarm to the switchboard operator. Some buildings such as Heckman, the Clarksons and Grover have several apartments and rooms that must be checked.

   d. The Resident security staff member or designated security staff person (in the absence of the Director) will direct fire fighting and salvage. They will call the Oregon Fire Department and exercise judgement to insure the safety of persons and to reduce damage. The Taft Campus Director should be called, extension 112 (office) on campus, or at home.

   e. If the Taft ROE Coordinator for the group is present, she/he will take charge of the pupils and teachers. Otherwise the classroom teachers/university instructors will take charge of pupils and students. Students and staff will stay at Eagle's Nest or dining hall until given further instructions by the person in charge.

TORNADO OR SEVERE STORM

If a tornado or severe storm approaches, your action could be very important. During tornado or storm seasons, persons responsible for groups should be alert for "warnings" and alert others of any situation.

A tornado or severe storm situation is indicated by:
   a. A funnel shaped cloud extending from the base of a thundercloud.
   b. Black clouds, frequently with rain or hail, and often between 3 and 7 p.m.
   c. Usually moving from southwest to northeast.

d. An official warning that one has been sighted and Taft is in its path
e. Sirens - the area network of sirens is used to alert people to tornado/nuclear warnings. In an alert they sound for an extended period of time. (Test blasts are sounded at 10:00 a.m. the first Tuesday of each month)

Radio warnings: Tornado Watch - conditions right for a tornado
Tornado Alert - a tornado has been sighted

NOTE: THERE IS A WEATHER RADIO IN THE BUSINESS OFFICE. USE IT! IF YOU SIGHT A TORNADO, CALL THE SHERIFF'S OFFICE - 732-2136.

In case of an alert (warning) you should:
...if inside - move away from glass areas and into an area totally underground...library, away from window
...furnace room of library
...basement and stairwells beneath dining hall kitchen
...storage basement of Taft House
...Heckman basement
Turn off appliances
Keep calm and follow instructions
Turn on a transistor radio for news

...If outside - seek shelter in a low place and lie down, away from trees if possible.
...if no depression can be found, get under a large shrub and hang on to the main stem tightly.
...better yet, get into an underground building.

FOR MEDICAL ASSISTANCE (Tornado)
a. Dr. Mesrobian, 732-3151
Give name, location, and type of injury.
b. Call the ambulance service, 732-2161.
c. Direct first aid personnel to the injured.
d. Keep calm and follow instructions.
e. Report to the Taft Campus Director and/or Security personnel.

When possible, Taft personnel, teachers and pupils should be alerted by means of the dinner bell. The signal will be three short series punctuated by a pause and then repeated.

Upon the all clear go to assigned classrooms and conduct a careful check to learn if anyone is missing.

ACCIDENT AND ILLNESS (Evenings)

Two Faculty Assistants (Mike Ellis and Terry Brown) take turns with security duty, they play key roles in handling emergencies, especially at night. One of them is here when the faculty or intern

coordinator is not likely to be present. The one to contact in emergency situations is posted at the Business Office door and/or Clinic Door.

The security person whose name is posted will be available on the Taft Campus at all times when groups are in residence. In case of an emergency,first attempt to contact that person. If not available contact the maintenance security person on duty and/or the Graduate Teaching Assistant in Residence who perform back-up security on Taft Campus.

These procedures apply in the case of emergencies involving illness and/or accident:

The emergency should be reported to the Taft Coordinator and/or security person on duty. She/he will then act as coordinators or communicators in carrying out emergency procedures.

a. If a college student becomes ill this should be reported to the University instructor, if present, the assigned Taft staff member. For illness, NIU students should use the University Health Services.

b. If a school pupil becomes ill at night, that should be reported to the classroom teacher, and the security person on duty.

c. If a pupil or college student is injured in the field and cannot be moved, send one or two members of the group (an adult, or a child accompanied by another child, don't send a child back alone) to report the emergency to the nurse or business office. They will then involve personnel as needed. Instruct the messenger to inform the secretaries in the business office and they will locate the Coordinator. After hours go to the residence of the security person assigned that day.

The Coordinator or security person should notify these people of the situation:

a. Director
b. Nurse
c. Classroom Teacher
d. Other staff as required

They will be consulted and involved in handling certain aspects of the emergency.

Detailed accident or illness reports must be completed. The forms are available in the nurse's office and the main office outer file. (blue sheets)

EMERGENCY AFTER HOURS - Contact your security personnel for procedure.

Developing Lesson Plans

A variety of lesson plan formats exist. Three examples have been included to guide the development of your lesson plans while you are at Taft. Please check with your CIOE 483 instructor to determine if a specific lesson plan format should be followed.

Lesson Design #1

Write an Instructional Objective: The learners will_____

_____

_____

ANTICIPATORY SET

OBJECTIVE AND PURPOSE

INPUT

MODELING/EXAMPLES

CHECK FOR UNDERSTANDING (frequently throughout the lesson)

GUIDED PRACTICE (meaning, model, and monitor)

INDEPENDENT PRACTICE

CLOSURE (optional)

Developed by Madeline Hunter & Doug Russell

Lesson Design #1: Explanation

Lesson Objective - Before a lesson can be designed, an objective must be written. In teacher talk the lesson objective will state what the student will be able to do at the end of the lesson. What the student can do at the end of the lesson is something that s/he could not do at the beginning of the lesson.

Seven Steps to Lesson Design

1. Anticipatory Set - An activity to focus students' attention, provide a brief practice and/or develop a readiness for instruction that will follow. It should relate to some previous learning. If successful, the anticipatory set should help the student get mentally or physically ready for the lesson.

2. Objective - Teacher clearly informs the student what to expect and what to be able to accomplish by the end of the instruction. The objective should be specific in content and focus on observable behavior. The objective should let the student know what is going to happen in his/her own language (restating the lesson objective in his/her own words).

3. Input - What information must the student have in the lesson so that s/he may reach the objective. The teacher needs to determine how the student is going to get this information or what the means of instruction will be. It is important that the teacher determine what new information is needed by the learner.

4. Modeling - When the student sees an example(s) of an acceptable finished product or of what the new learning looks like. The teacher needs to focus on the essentials and label the critical elements.

5. Check for Understanding - When the teacher checks for student's possession of essential information and the skills necessary to achieve the instructional objective. This can be done by the teacher observing the student performing the new skill. Look for bits and pieces and small segments of the whole.

6. Guided Practice - The student's first attempts with new learning are guided so they are accurate and successful. Teacher must closely monitor what the student is doing to see that the instruction has "taken." Mistakes need to be corrected when seen by the teacher.

7. Independent Practice - When the student can perform the skill or process without major errors, then s/he is ready to develop fluency by practicing without the availability of the teacher. The teacher does not need to monitor the practice as the student is doing it, but should check the finished product. (Homework, assignments, etc.)

Note: The teacher does not have to use all seven steps for every lesson. The steps do not have to be in order.

Lesson Design #2

1. Objective(s)

   This is the place you state what you want children to learn to experience. It is primarily for the instructor. The more precise teachers are in stating objective, the better they will be able to plan and execute a successful lesson.

2. Introduction

   The introduction includes the following three areas:

   a. relating the lesson to the students' past experiences.
   b. using motivating techniques to gain the attention and interest of students.
   c. informing students about the purpose of the lesson.

3. Development

   This is the "heart" of the lesson. Each step in the sequence is enumerated. (The more experienced the teacher, the less detail is given). The questions, examples, materials, and activities which are used to help students attain the objectives are stated.)

4. Summary and Evaluation

   a. The summary ties the loose ends together and makes sure that the learning is complete.
   b. The progress and interest of the children may be noted and standards of work evaluated.
   c. Next steps and assignments may be defined.

5. Preliminary Preparations

   This involves any special arrangements that are necessary for the execution of the lesson plan, such as: arrangement of furniture, special equipment, films, movie projector, materials (paper, pencil, crayons, paste, film strips, books from the learning center, etc.)

Lesson Design #3

Concept, Skill, or Value to be Learned

Air Temperatures vary in different places above and under snow. (concept)

Activities

Indoor Introduction and Preparation

Discuss snow drifts and temperatures. Pose hypotheses about temperatures above and below the snow.

Give Directions - find a deep drift, and take temperatures in it, on top, halfway down, and bottom. Take air temperature.
Divide into small group (of four).
Distribute thermometers, (one per group).
Explain use and care: length of time to register; how to read.

Outdoor Learning

Groups disperse to find drifts. Take and record temperatures. Instructor circulates.
Checking drifts, techniques, and asking questions.
Discuss temperature differences found and reasons why.

Resources Needed

Indoors - Chalk and chalkboard, if wrap up is done indoors.
Outdoors - Thermometers (one for every four students)
Clipboards, papers, and pencils (one each per group)

Procedure

Get thermometers from IMC, check for accuracy: bring to classroom.
Discuss with students the characteristics of snow (cold, insulator, etc.)
Hypothesize how temperatures may differ under the snow.
Give directions: find a drift; take temperature readings.
Break into four groups.
Distribute thermometers. Explain how to read, and how long to wait until reading. Be sure students understand.
Go outdoors. Students find drifts and begin work.
Circulate. Ask questions. Be sure work is adequate.
Bring group together to discuss findings and reasons.

Evaluative Plan

Students have taken and recorded temperatures. They should be able to explain why temperatures vary as they do, and relate this knowledge to their own lives (home insulation, layered clothes, etc.)

Bibliography

Phillips, R.D., and C. A. Watson. Winter Investigations. Winnipeg: Envio Concerns, 1977.

Sample Teaching Ideas

The following pages provide examples of the types of activities that you can teach in the outdoors. A number of these activities were drawn from Tips and Tricks in Outdoor Education edited by Malcolm Swan which is available for purchase in the Lorado Taft Office. In addition, you will find literally hundreds of lesson ideas and resources in the Taft Library.

Using A Clue Chart for Bird Identification

The clue chart is very useful in recording information about a bird seen at the feeder or in the wild. Record information about the bird in the appropriate space of the clue chart. The information may be in the form of words, sketches, or whatever is most meaningful in describing the bird and its behavior.

	Size	Shade	Shape	Surround-ings	Sweep	Song
1.						
2.						
3.						

Bird Characteristics

Size: Is the bird larger than a sparrow (15 cm/6 in.)? A robin (25 cm/10 in.)? A crow (50 cm/20 in.)?

Shade: Areas of the body where colors are located (variations in color at the throat, belly, wings, tail, and markings of feathers).

Shape: Body - plump, sleek, thin, short and stubby, streamlined.
Bill - thick, thin, long, short.
Tail - rounded, wedged, squared, notched.
Wing - rounded, pointed, ragged.
Leg - long, short

Surround-ings: Where was the bird located (tree top, vertical position on tree trunk, wooded area, meadow, telephone wire, fence post, prairie, along a country road, swimming or floating on water, other)?

Sweep: What were the flight characteristics (jerky, darting, swooping, irregular)?

Song: Are there phonetic sounds (raspy, chip-chip, peter-peter, trill)?

A Fact List for a Stump

Before it decomposes, a stump can offer clues about its past. Every year a tree adds a growth ring to the wood. When the tree is cut down, the rings are seen as concentric circles on the stump. Rings vary in size depending on many environmental factors, including weather, injuries, competition, etc. Studying a stump can be an interesting way to combine history and biology.

1. Approximately how long ago was the tree felled?_____
   In what year was that?_____

2. Why was it cut down?_____

3. Which way did it fall?_____

4. How old was the tree when it fell?_____

5. Was the tree's growth the same each year?_____

6. If not, in which years did the tree make good growth?_____

   _____In which years did it make poor growth?

   _____

7. Are there signs of injury to the tree when alive?_____

   If so, what are they?_____

   When did the injuries occur?_____

8. Locate important years on the stump by counting back years of growth in

   the rings._____

9. Find and list signs of decay._____

   _____

10. Take a rubbing of the stump to take back with you.

11. Find out about the weather and the history or those years when unusual events seemed to happen to the tree (a forest fire, logging, unusual amounts of rainfall, etc.).

A Fact Sheet for the Study of a Micro-Habitat

Often schoolyards seem like sterile places for ecological studies. The study of a micro-habitat is an ideal activity for a schoolyard; it requires little space and encourages students to carefully examine both the commonplace and the familiar. Have students work in pairs or teams. Throw a Frisbee or Hula Hoop in a random direction in the area to determine the location and size of the micro-habitat to be studied. The location is determined by where the tossed article lands. The size is determined by the circumference of the area covered by the Frisbee or Hula Hoop. Have the students examine it carefully and compare their findings with those of the other students studying different micro-habitats.

1. What is the dominant plant?_____

   About how many of these plants are there?_____

   What percentage of the area do they cover?_____

2. List all other plants in the plot. _____

   How many are there? _____

   What percentage of the area do they cover?_____

3. What animals are present? _____

   How many of each?_____

4. Examine the soil and describe it. _____

   What indications of human interference can you find? _____

   _____

5. Name the plot. _____

6. How will this area look in a year? _____

   In five years? _____

7. What can you do to improve or preserve the area? Discuss this in class.

How Big is an Acre?

We read that a state or county has a given number of people per square mile, or per square acre, but we often have trouble visualizing this unless we have actually seen a well-defined square mile or acre.

Procedure

1. Ask the students if they think they can mark the boundaries of an acre of land. You may have them to this in the park area.

2. After the students discuss what they think the size of an acre is, ask if anyone knows what the actual length and width of an acre is if it is square. (Note: An acre has 43,560 square feet and if square, each side is just over 208 feet.)

3. Using a tape measure, or pacing, have the students mark off one acre. (One student can stand at each corner, or some other simple marking system can be used.) Now determine what the measurement is in meters.

4. Mark off acres that have other shapes.

Discussion

1. Do the students think an acre is a big or a little piece of land?

2. Is an acre more or less land than they first thought?

3. If an acre of land costs 2,000 dollars, how much would it cost to purchase Taft Campus? (140 acres)

   Estimate the size of the field that was used....

   how much would it cost?

Animal Habitat Study

Objectives: To be able to identify animal habitats
To recognize 5 necessities of life
To use observation skills in investigating an area

Activity:

1. Ask students to define a habitat: surroundings, environment, more than just a home, since it must provide all the things necessary for survival.

2. What are five things that are necessary to sustain life?
(food, shelter, water, air, space to move around)

3. Give some examples of animals and where they get the necessities of life...such as the deer, squirrel, or rabbit.

4. What are some signs of animals? (tracks, holes, nests, broken twigs, food scraps, skin, fur, feathers, shells, droppings, paths, seeing the animal, hearing the animal, smelling)

5. Investigate in groups of 4 or 5 . . . one person record the "signs" for the group. . . different groups can investigate different areas.

6. Assemble the groups and make a chart for everyone to see. List the areas investigated at the top and put the animals or signs found under the area where it was found.

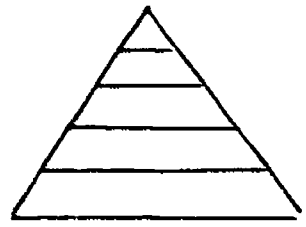
Discussion:

1. What did you find the most ?
How many were big? Small?

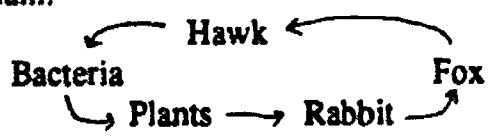
2. Idea: Food Chain
Were the animals plant eaters or animal eaters? (herbivores/carnivores)
Which were omnivores? (eat both plants and animals)

3. Discuss and draw a food pyramid:

man
big meat eaters (hawk, fox)
plant eaters (snake, bird)
plants (worms, deer)
soil, water, sun



4. Discuss and draw a food chain:



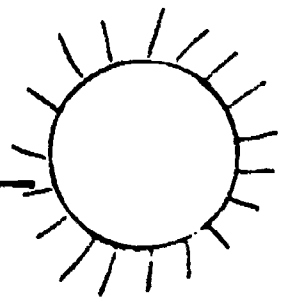
5. Where did you find the most signs: (field, woods, edge of woods, shelter)

6. Discuss Web of Life: How do the animals depend on the plants? How do the animals affect the area, the plants in the area? Do animals change the habitat? How?

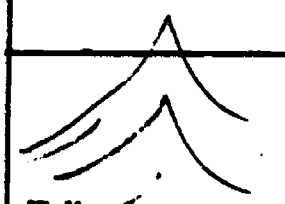
Terminology:

Herbivore, carnivore, omnivore, food chain, food web, habitat

Animals and Animal Signs in the Forest



Sky

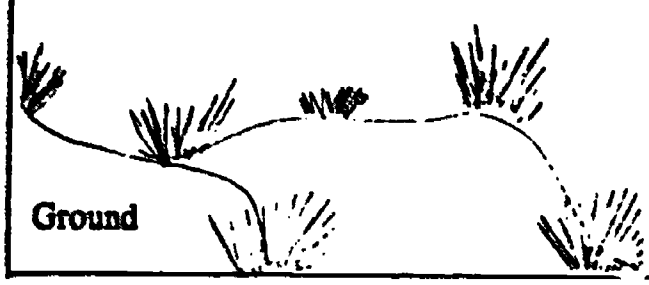


Taller
Tree Tops

Lower Trees

Bushes

Knee High



Ground

Awareness of the Environment

Discovering the environment can be an exciting venture. Individuals do not become aware of objects found in their immediate environment merely because they have sense organs. Many persons look but do not see. They become aware of the environment to the degree they are afforded opportunities for careful observation.

The following activities may help to "sharpen the children's senses:"

1. Discover objects relating the texture which can be described as slick, hard, rough, soft, slimy, velvety, coarse, knobbed, ribbed, furry, hairy, waxy, etc.

2. Discover objects relating to shape which can be described as small, large, oval, round, oblong, lobed, ridged, smooth-edged, rough-edged, triangular, pointed, curved, billowy, horizontal, expansion, contraction, etc.

3. Discover objects relating to density which can be described as spongy, solid, thick, lumpy, hollow, compact, porous, non-porous, etc.

4. Discover objects relating to temperature which can be described as hot, cold, damp, clammy, moist, dry, wet, cool, lukewarm, etc.

5. Discover objects relating to size which can be described as narrow, large, small, tall, short, think, heavy, bulky, miniature, etc.

6. Look for evidence of life "above and around water" including insects, turtles, algae and other plants, worms, frogs, etc.

7. Observe the differences in the "bark of trees." Some may be shaggy, some will look like potato chips, some will look like the shapes and colors found on the backs of certain snakes, some will have warty-like projections, some will have deep ridges, etc.

8. Look for "domestic" and "wild flowers." Examine them carefully for the number, color, size and shape of the petals.

9. Lay out a "square foot of ground" using a piece of string. Categorize the various forms of plant and animal like found in the square foot. Also classify according to "kind" the other types of organic materials found in this square foot.

Tree Study

Objectives: To closely examine a natural object and to describe its characteristics.
To exercise imagination, creativity, and reasoning in dealing with a familiar object.
To better understand and appreciate trees.
To study the tree as a representative of the plant kingdom and to understand its relationship to other plants and animals.

Activities:

1. Begin with a general question about trees. What is a tree? Ask students to write a definition. Distinguish between deciduous trees and evergreen trees.

2. Have students list the characteristics of trees.

3. Make a list of the "uses" (natural and man-made) for trees.

Discuss the above questions emphasizing that trees have many interesting characteristics and that they are useful in the natural environment and they are useful for man.

4. Have each student "adopt a tree." Give each an activity sheet with specific questions about "their tree." Explain how there is a lot to learn by observing a tree. Discuss the findings.

5. How do trees fit into the Oxygen-Carbon Dioxide cycle? Discuss their importance.

6. What is meant by conservation? How does it apply to trees?
   Concepts: erosion
   selective cutting

7. When is a tree not a tree? (stump, seedling, seed, fallen limb, decayed log) How do each of the above items "fit" into the balance of nature?

"Adopt A Tree"

1. Select a tree in the area to study in depth.
2. My name for my tree is _____.
3. My tree is (shorter, taller) than I. If taller, it is _____ times taller.
4. My tree is _____ centimeters around.
5. My tree is (alive, dead). How do you know?_____.
6. My tree smells like _____.
7. My tree's bark is _____.
8. List some things for which your tree can be used._____
   _____.
9. What colors do you see in your tree?_____.
10. Listen to hear if your tree is making any sounds. Describe.
11. Write a poem about your tree.
12. Do you see any animal homes in your tree? Describe_____.
    _____.
13. What makes your tree different from others?_____.
14. Why did you pick this tree for your own?_____.
15. On the other side of the paper make a descriptive drawing of your tree. Be sure to include specific characteristics that are unique to your tree such as a broken limb, unusual growth patterns, etc. as well as the common features.
16. Describe the leaves on the tree. Draw the shape of a leaf.
17. Why are the leaves green?_____.
18. What things are needed for the tree to make food?_____.
19. What would happen if the trees on earth were all destroyed?_____
    _____.
20. What things about a tree do you need to know in order to tell what kind it is?_____
    _____.

Instructional Resources for Resident Programs
Lorado Taft Campus Library

The following items are available for use by schools and teachers in residence at Taft Campus. Only items used frequently are listed. If you need something but it isn't on the list, ask the library staff. Sign out field equipment and AV on "blue clipboard."

Field Equipment

Biltmore Sticks
Binoculars
Boots, short and long
Buckets
Clipboards/Plywood writing boards with rubber bands
Compasses
Compass, large teaching
Fishing poles (bamboo)
Flashlights
Goggles
Insect nets
Hand lenses 8X
Life preservers
Magnifying lenses
Mallets, hammers
Measuring string
Meter/Yard sticks & tape
Micro boxes
OBIS Food Chain Game
Orienteering markers
PH papers
Psychrometers, student sling
Rulers
Saws - large bow saw
small bow saw
Seine nets, nylon
Shovel, short handled
Soil auger
Soil samplers
Stakes
Stop watches
Tape, measuring, 50'
Telescope
Thermometers: assorted such as metal pocket, glass, wood encased, plastic planting
Tree corer
Tree scale/log scale sticks
Trowels
Twine
Woodburners

Kits (self-contained study units for approximately 10-15 people)

Winter/snow
Water
Geology
Weather

A-V Supplies (see librarian for check-out)

Cassette recorder
Dissolve unit
Ditto machine
Dry press
Extension cords
Microphones
Programmer
Projector - 16 mm
slide
slide w/zoom lens
filmstrip
filmloop
Record players
Synchronizer
Thermofax
Visual-Maker (35 mm slide maker)

Software

Field I.D. Guides
16 mm films
OBIS Supplies
Office supplies
Phonograph records
Slide-sound shows
Taft trail guides - to be returned (for larger quantities and/or to use as workbooks, purchase through Taft office)

For your convenience phonographs and movie projectors are kept in some classrooms but occasionally must be shared with a nearby classroom. These items are not signed out from the IMC.
Lockers outside the IMC house pioneer tools, insect nets, wood tools, sports equipment, etc. Your master keys give you direct access.

Seasonally, you will find snow shoes or water study equipment there. Also, camping equipment is available.