

NACD/DEUTZ-ALLIS CONSERVATION EDUCATION
AWARDS PROGRAM

D.S.C.

FEB - 2 1986

(PLEASE TYPE) Entry Form Conservation Teacher-of-the-Year

Name of Teacher Audrey I. Charter

School Guthrie Center Community Elementary School

School Address North 4th City Guthrie Center

State Iowa Zip Code 50115

Department _____ Grade Level(s) 5 & 6 County Guthrie

Are you a voting board member of a conservation district? (yes) _____ (no) X

Do you teach subjects other than environmental or conservation education? Yes

List: Reading, Health, and Science

May NACD use all or part of your program in its educational and informational activities. (yes) X (no) _____

Home Address R. 2 Box 216 City Adair

State Iowa Zip Code 50002

Telephone Numbers - Home: (515) 747-3997 School: (515) 747-2720

Teacher Signature Audrey Charter

NOMINATING CONSERVATION DISTRICT

District's Name GUTHRIE COUNTY SOIL CONSERVATION Chairman's Name DENNIS H. HOOVER
DISTRICT

District's Street Address RR # 2 BOX 10

City GUTHRIE CENTER, State IOWA Zip Code 50115

District's Telephone Number (515) 747-3812

Is the above teacher a voting member of the conservation district board? NO

District Chairman's Signature Dennis H. Hoover

Date Signed February 6, 1986

PLEASE USE THIS PAGE AS THE COVER SHEET FOR YOUR ENTRY MATERIALS

A. "Everything is connected to everything else". Environmental education instruction should allow the student to interact with the natural and social environment. Using our six acre outdoor classroom allows the students the natural environment. The social aspects can best be studied in the environment by students making and implementing environmental decisions. The students were involved in formulating the goals to develop the outdoor classroom. The outdoor classroom project was to provide a program whereby each kindergarten and sixth grade student of the Guthrie Center Elementary School is involved in the management and preservation of an environmental area. In setting up the criteria for the environmental outdoor classroom serious consideration was given to conservation. In the clearing of the necessary area for the arboretum special care was taken to avoid soil erosion by not reducing the ground cover, care was taken to not disturb natural habitats, brushpiles were constructed providing new habitats, grapevines were taken only from the cleared area, bird-houses were constructed and placed in the area to provide more habitats and to encourage new wildlife. When the prairie was developed once again conservation was considered. Trails were constructed to provide access to the area but not to destroy, in steep areas steps were placed to prevent erosion. The trails were covered with a deep cover of wood chips to prevent erosion, to provide the concept of the building of soil, and to allow year round use for all aspects of environmental education. With all my fifth and sixth grade science students conservation and environmental education is considered in the outdoor classroom.

B. The project was to provide a program whereby each kindergarten and sixth grade student of the Guthrie Center Elementary Community School was involved in the management and preservation of an environmental area consisting of 6.1 acres. Originally an apple orchard this area has gone through the steps of succession for the last twenty years. The students were involved in formulating the following goals:

1. Establishing a nature trail through the area.
2. Making booklets identifying the prairie plants and wildflowers, birds, animals, and trees in the area. These were completed with illustrations, brief explanations, and attractive covers. As new species are invited to the area these are added to the booklets.
3. A large sign was designed, painted, and placed designating the area as an environmental classroom.
4. A small animal trapping project was done to determine species and population in the area. Bar graphs were made compiling the results. Deer mice, shrew, and chipmunks were caught. The traps made of coffee cans and mouse traps were constructed by the students.
5. Birdhouses were planned, constructed, and placed in the area.
6. A scale map was made of the area using metric measure. The trail, new plantings, and other points of interest are marked on the map.
7. Small signs of cedar wood were routed designating points of special interest; i.e. poison ivy, hackberry, pink trillium. Larger signs of oak slabs were routed designating the wildflower garden, nature trail, and arboretum.
8. Two wetlands were planned and constructed. The dams have been seeded with prairie grasses.
9. Since this originally was an apple orchard the trees were planted in rows. Two rows of trees and the shrubs of twenty years of succession were cleared by the students. The wood was sawed (much of it with hand saws) and sold by the cord for \$40.00 per cord. Approximately ten cords of wood were cut. In clearing this area many wild grapevines were found. These were used to make grapevine wreaths of three sizes. \$545 was raised from selling plain and decorated wreaths.
10. A lookout tower was designed and constructed by the students. The 8' X 8' platform is fifteen feet from the ground with a flight of stairs going up. The native rough-sawed oak wood was donated. The logs were sawed at the Slater Sawmill. The students were taken on a field trip to visit the actual sawing of some of the logs. The poles for the lookout tower were donated. Any additional needed labor was donated by parents or interested citizens.

11. Prairie and woodland wildflowers were planted in the area. The prairie wildflower garden was tilled; some seeds were planted and some plants were transplanted in and after they were started in the nursery. Many woodland wildflowers were dug by one student's father from his woodland area and transplanted in the area.
12. An arboretum of 48 trees were planted in the cleared area. These trees were donated.
13. A cable bridge is designed and will be placed across one small ravine above one wetland.
14. A sloping bank adjacent to the outdoor classroom will be tilled this spring, then planted to strips of native prairie grasses.
15. An Open House was held. The students wrote scripts to use as they gave guided tours through the area.

C. Many areas of study were incorporated in this project and will continue.
Examples:

Math: Definition of a cord of wood

Measuring logs to determine the amount of lumber

Measuring lumber to determine the cost

Determining the cost of sawing the wood

Sawing, measuring, and constructing the birdhouses

Metric map

Accurate records of income and expenditures (each student had their own record) including wreath and wood sales, cost of tower, cost of cable bridge, cost of birdhouses, etc.

Measuring cable, wood, etc. for constructing the cable bridge

Bar graphs in the trapping project

English: Writing scripts for tours

Writing letters, invitations, Thank You's

Writing speeches for the Open House

Speaking

Researching information for the animal, bird, wildflower, and tree booklets

Social Studies: WORKING TOGETHER - truly fantastic between kindergarten and sixth graders!!!!

Reading: Researching and reading reference materials

Science: Interaction of all natural communities

Plant, tree, wildflower, and animal identification

Conservation practices on trail construction

Planting and caring for trees and plants

Seed germination

Soils and soil preparation

Succession

Prairie development
Construction and development of wetlands
Geology, biology, zoology, and many, many more!

D. The greatest assistance came from our steering committee members:

Ted Hansen, principal
Lee Neal, Soil Conservation Commission
Marlene Lake, business person
Robert Rye, Conservation Education Director
George Hemmen, Conservation Warden
Dennis Hoover, School board member, SCS member, parent

Honored guests:

Iowa Governor Terry Branstad - Attended our Open House, cut the opening ribbon to our lookout tower and assisted in planting an Iowa oak tree

Ronald Ritter, representative from the EPA to present Presidential Awards to each of the students

The list is endless of the many kind acts from organizations, parents, and interested citizens of the community. A few examples are:

Soil Conservation Commission - donated the paint for the large sign
Lee Neal - helped plan and lay out the tree plantings
Priestley Lumber - Donated the plywood for the sign
Rosehill Nursery - Ed Clark donated trees for the arboretum
Iowa State Nursery - donation of shrubs and trees
Rural Electric Company - delivered eight truckloads of wood chips
Slater Construction - Sawed wood for the tower, provided a field trip, donated oak and cedar wood for signs, constructed the wetland
Boyd Shroyer - donated and delivered poles for the lookout tower
G. C. Fire Department - Filled the water barrel so we could care for new trees and shrubs
And Many More!!!!!!

So far the outdoor classroom has been self-supporting. Grapevine wreaths and cords of wood were sold to pay expenses for the lookout tower, wetland construction, and seeds. Trees and many plants have been donated. The majority of the wood for the lookout tower was donated. Bolts, nails, etc. were purchased.

By winning second place in the Iowa Community Betterment Youth Caterogy and an Iowa Arts Council Award another \$450 was used to construct the cable bridge and to purchase seed for the planting of prairie grasses on the slope adjacent to the outdoor classroom.

E. The outdoor classroom is open to any of the other students in the Guthrie Center School system. Since I also teach fifth grade science, my main objective with these students is to develop an appreciation for our environment and how and why we need to care for our surroundings. I think Sylvan Runkel's quote expresses my feelings also - "Getting people-getting children-acquainted with what's out here will make people concerned about what is happening here. If we get acquainted with natural communities, we feel at home. Anyplace we feel at home, we feel like protecting."

The kindergarten teacher and myself wrote and presented a skit on SOIL as an introduction to National Wildlife Week. This was to promote interest and concern about our soil. This was presented to K-6 grades in the Guthrie Center Elementary School.

I have been trying to include areas of study that can be correlated with the sixth grade Iowa History studies; i.e. the geology of Iowa, plants and how the early settlers used some of these as a source of food and for medicinal purposes, and how the environment provided their basic needs for survival.

Personal Organizations:

District Judicial Nominating Commission - appointed by Gov. Branstad
P. E. O
Iowa Porkettes
Member of and Organist at Bowman Chapel Church

Workshops Attended:

Project Learning Tree
Project Wild
Conservation Energy Activities
Outlook
Loess Hills Seminar - June 1984 and 1985
Regional Conservation Education Association Conference - LaCrosse, Wisc
ICEC Winter Solstice, Conservation Education Center, Guthrie Center, IA
Hospitality Committee for the 33rd National Conservation Education Association
Conference to be held in August at Conservation Education Center, Guthrie
Center, Iowa

Sylvan Runkel, naturalist and Iowa's geologist will be come to our
outdoor classroom this spring.

The outdoor classroom is on the program to be toured during the 33rd National
Conservation Education Association Conference in August.

GUTHRIE COUNTY
Soil Conservation District

Phone (515) 747-3812
Guthrie Center, Iowa 50115

February 10, 1986

To Whom It May Concern:

When it comes to conservation and an understanding of our environment, the sixth grade students at the Guthrie Center Elementary School have been exceptionally schooled in the above subjects. This exposure is due to the tireless efforts of Mrs. Paul (Audrey) Charter, their teacher.

Most of her teaching methods are a "hands-on" type. The students made trails out of woodchips; they planted trees; they set-out native flowering plants; they checked the pH of soils; they dug soil pits and examined the soil for worms and insects, etc.

Mrs. Charter worked relentlessly with her students in developing an old six acre apple orchard into an outdoor classroom. The apple orchard is owned by the school and is adjacent to the playground.

This outdoor classroom has woodchip trails, birdhouses, wild flowers, native grasses and signs of identifications posted throughout the trails.

In addition, she prevailed on the students' parents to clear out all of the apple trees, in an area 80 feet by 500 feet, to start an arboretum. This spring, forty-eight different varieties of trees were planted and these were all donated.

After the parents cut, trimmed and sawed the trunks into fireplace size pieces, the students piled the wood into cords. The cords were sold by the students. This past winter they sold over \$5,000 worth of fireplace wood, and wreaths made of grapevines.

The workbook, *Conserving Soil*, furnished by the S.C.D., is used as one of the teaching tools. She also calls on the Soil Conservation personnel, the wildlife biologist, the game conservation officers, and others to give presentations before her class.

The Charters, who are farmers, practice what they preach. Their farm, consisting of 542 acres, has several miles of terraces and all acres are No-Till, except for 40 acres of sod that was plowed.

Mrs. Charter has already received the big award of student gratification, but I feel she should also be considered for something extra. And that extra could be the Conservation Education Award, as an Outstanding Teacher of Conservation.

Sincerely,
Dennis H. Hoover
Dennis H. Hoover, Chairman
Guthrie Soil Conservation District
Guthrie Center, Iowa 50115



DENNIS GALLAGHER
Principal Senior High School

RICHARD FRIEDRICH
Principal Junior High School

TED HANSEN
Principal Elementary School

HARLEY MERRITT, JR.
Superintendent

Guthrie Center Community Schools

+ + +

GUTHRIE CENTER, IOWA

50115

February 6, 1986

To Whom It May Concern:

Mrs. Audrey Charter has been a sixth grade science teacher in the Guthrie Center Community School System for the past several years. Her dedication to teaching students has been outstanding. She has worked very hard to expose students to scientific concepts, especially as it pertains to our environment.

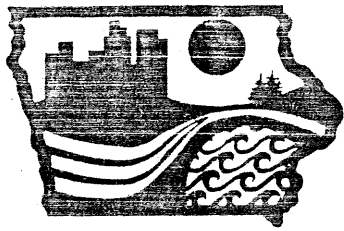
During the past several years, Mrs. Charter has taken classes, at her expense and time, to learn better ways of teaching students to respect and understand our environment. This knowledge was put to use by taking students on field trips. These trips were planned to help students understand the importance of conserving our environment. Her deep commitment to conservation will no doubt play a lasting and important part in their lives.

During the last year, Mrs. Charter asked to carry out a project that represents her desire to get students involved in conservation. Through determined efforts and dedication, she organized a committee designed a project to make our apple orchard into an environmental classroom, and with her students, she carried out the project. Building nature trails, identifying flora and fauna, cutting old trees which were sold as firewood to make money for the project, planting trees, building an observation tower, starting a tree nursery, starting a prairie area, and also has plans on the board for a rope bridge and a wetland area.

This spring, her efforts were rewarded by her students receiving the Presidents Environmental Youth Award. A representative flew out from the Kansas City Regional Office to present the awards. Governor Terry Branstad came out to dedicate the opening of the classroom and said, I quote, "This is the most impressive elementary program I've ever seen..".

I'm sure if you would ask her, she would say that it couldn't have been done without all the help she received. I can only add I'm sure it wouldn't have been done without her driving force.

Ted Hansen
Ted Hansen
Elem. Principal



Iowa Department of Soil Conservation

Wallace State Office Building / Des Moines, Iowa 50319

Telephone: (515) 281-5851

State Soil Conservation Committee

John Miller, Ch.
Cedar Falls

Elvie Dreeszen, V. Ch.
Cushing

Oliver Emerson
Waterville

Kenneth Kassel
Ayrshire

Jane LaGrange
Vinton

Thomas Scott
Iowa City

Clifford Stille
Macedonia

Virginia Striegel
What Cheer

Director

James B. Gulliford

October 29, 1985

Audrey Charter
Rt. 2, Box 216
Adair, Iowa 50002

Dear Audrey:

It is my pleasure to inform you that you have been selected as the state winner in the Division 1 (grades K-8) of the Iowa Soil Conservation Awards Program Teacher Section.

The award will be presented at the luncheon during the 39th Annual Conference for Soil Conservation District Commissioners. The luncheon will be held at the Stouffer Five Seasons in Cedar Rapids at 12:00 noon on December 3, 1985. We hope you can be present to accept the award. Complimentary tickets for you and your guest will be available at the conference registration desk.

If you have any questions, feel free to contact the Guthrie Soil Conservation District (Telephone: 515-747-3812) or me.

Sincerely,

Paul Sadler
Field Representative

PS:lh

cc: Don Muhm
Lynn Betts
✓Guthrie SCD



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
726 MINNESOTA AVENUE
KANSAS CITY, KANSAS 66101

May 9, 1985

Ms. Audrey Charter
Guthrie Center Elementary School
North Fourth Street
Guthrie Center, Iowa 50015

Dear Ms. Charter:

Thank you for the invitation to attend your open house. Ronald R. Ritter, Director, Congressional and Intergovernmental Liaison, will be pleased to accept your invitation to make the President's Youth Award presentations on the afternoon of May 21. We will be in contact you for specific details.

Your students, their parents, school faculty and community leaders are to be congratulated for their total involvement and a job well done. I'm sure those who use the trail will get as much enjoyment and satisfaction from it as you and your students did in constructing it.

You should all be proud of what you accomplished and it's with great pleasure that I have enclosed the President's Youth Awards certificates you requested. Also included are several extra ones in case you would like to award them to all those people who have helped in this worthwhile project.

Sincerely yours,

A handwritten signature in blue ink that reads "Rowena L. Michaels".

Rowena L. Michaels, Director
Office of Public Affairs

Enclosures

AUDREY CHARTER - SIXTH GRADE TEACHER
GUTHRIE CENTER ELEMENTARY SCHOOL

Education: B. A. from University of Northern Iowa
Major - Elementary Education
Emphasis in science

Workshops: Loess Hills Prairie Seminar - 1984 and 1985
Project Learning Tree
Spring Workshop - Decorah, Iowa
Solstices at Springbrook Education Center

Organizations; ICEC

"In all the richness of America's resources, our young people and our natural environment are priceless treasures. Both are irreplaceable, and the two are intertwined. Each must depend upon the other for nurture and good health. A true regard for the preservation of the environment, therefore, should be instilled in our young if the generations that follow are to enjoy the bounty of clean air and clean water." This is a quote from William D. Ruckelshaus, Administrator of the United States Environmental Protection Agency - but it states very clearly how I feel about environmental protection in any form.

In teaching fifth and sixth grade science, conservation teaching is applied whenever possible. Guthrie Center Elementary School has owned 6.1 acres of abandoned apple orchard for 25 years. This plot of land has gone through the steps of natural succession for this same period of time. I have used this area as an outdoor classroom for the past ten years but it was never developed until this past school year 1984-85. The kindergarten south and sixth grade classes took the initial steps in developing this area into an environmental outdoor classroom. Goals were established by the students and a steering committee. (Attached please find a copy of the established

goals and accomplishments.) The students applied for a President's Environmental Youth Award through the United States Environmental Protection Agency, Washington, D.C. and received this award.

(Enclosed please find pictures and articles concerning this project.) Channel 8TV also carried an Iowa News Special on this project. This project was the science program for the sixth grade class this past school year. A field trip was taken to the Slater sawmill to actually see the oak logs sawed into lumber. The amount of lumber from a log and the correct conservation harvesting lumber was discussed at this time.

The highlight of the project was our Open House, May 21, 1985. An award program was held at 12:30p.m. Each student received a certificate, signed by President Ronald Reagan, commending them for their outstanding achievements in environmental protection services. Mr. Ronald Ritter, director, Congressional and Intergovernmental Liaison from Kansas City was here to present the certificates to the students. At 2:15 our Iowa Governor Terry Branstad arrived for a guided tour through the outdoor classroom, official opening of the observation tower, and the planting of an Iowa oak tree assisted by Mr. Ritter. Guided tours by the students were given through the classroom from 3:00 to 7:00 p.m.

A field trip was also taken to Sheeder's Prairie, Guthrie Center for a native prairie study; including plant, animal, and bird observations. Conservation resource people also gave presentations.

The sixth grade class entered the Soil Conservation Essay Contest. The sixth grade language arts instructor initiated the assignment. I assisted with resource materials. First, second, third, and fourth places were earned by the students.

The theme for National Wildlife Week, March 1985, was "Soil". I spent three weeks on activities, projects, and research with the fifth and sixth grade students. Various types of soils were identified, the acidity of each, the permeability of each, plant growth in each, and the erosion factors of each were experimented with with hands-on activities. When I do hands-on activities each student does the activity, or in a group of two, no more than three. One activity was to measure one square meter of soil surface, then dig in this area to discover animal and plant life, soil types, etc. Findings were compared between prairie, schoolyard, and roadside habitats.

An excellent filmstrip from the National Wildlife Foundation was shown that emphasized land conservation practices. This filmstrip was purchaed so it can be used each year unless outdated.

National Wildlife Week was introduced to the entire elementary student body by a twelve minute skit given by Belva Peterson, kindergarten teacher and myself. Mrs. Peterson played the role of Terra Loam and myself the part of the Soil Witch. We each wrote our part explaining the development of soil, animals and their value in the soil, and conservation practices on saving the soil. The skit was given to each grade level and also a local P.E.O. group. (



Each year I do a unit on Water, especially emphasizing the water cycle and clean water. Hands-on activities, filmstrips, research, and the Hoffman Ecology Series are used to increase understanding of these concepts. Water from various sources are tested and looked at under the microscopes.

The fifth grade class attended the Guthrie County Conservation Field Day at Nation's Bridge, Panora, Iowa. Four excellent programs were given on conservation education.

I have written the units I use with my fifth and sixth grade science classes. Each year these are rewritten to hopefully fulfill the needs of the students I have that particular year. Reference materials, textbooks, films and filmstrips, and many hands-on activities are used. Many of my ideas have been from workshops, Project Learning Tree, Outlook, resource people, ECO, other teachers and educators, and then adapted to my classroom situation.

I have put together an Outdoor Booklet that I use for many of our outdoor activities. Parts of this booklet are enclosed.

On awards day a plaque was presented to Mr. Hanson, elementary principal, Belva Peterson, kindergarten south and sixth grade students, and myself for our development of the outdoor classroom.

Our project was to provide a program whereby each kindergarten and sixth grade student of the Guthrie Center Elementary Community School was involved in the management and preservation of an environmental area consisting of 6.1 acres. Originally an apple orchard, this area has gone through the steps of succession for the last twenty years.

The students were involved in formulating the following goals for the 1984-85 school year:

1. Establishing a nature trail through the area - clipping, pruning, and using wood chips as a trail floor. Eight truck loads of wood chips have been placed on the trails. Wheelbarrows, garden carts, and buckets were used to carry the chips.
2. Making booklets identifying the prairie plants and wildflowers, birds, animals, and trees in the area. These are completed with illustrations, brief explanations, and attractive covers.
3. A large sign was designed, painted, and placed designating the area as an environmental classroom.
4. A small animal trapping project was done to determine species and population in the area. Bar graphs were made compiling the results. Deer mice, shrew, and ground squirrels were caught. The traps made of coffee cans and mouse traps were constructed by the students.
5. Small signs of cedar wood were routed designating points of special interest; i.e. hackberry, poison ivy, pink trillium, etc. Larger signs of oak slabs were routed designating the wildflower garden, nature trail, and arboretum. The routing was done by one of the students and his family.
6. Birdhouses were planned, constructed, and placed in the area. Six Bluebird, three kestral, and a woodduck house were constructed.
7. A scale map was made of the area using metric measure. The trail, new plantings, and other points of interest are marked on the map.
8. Two wetland areas are planned and marked out. The actual construction of these will be completed this summer, 1985. Money earned by the students will be used to hire the bulldozer. The estimated cost will be \$400 to \$500.

9. Since this originally was an apple orchard, the trees were planted in rows. Two rows of trees and the shrubs of 20 years of succession were cleared by the students. The wood was sawed (much of it with band saws) and sold by the cord for \$40.00 per cord. Approximately 10 cords of wood were cut. In clearing this area, many wild grapevines were found. These were used to make grapevine wreaths of three sizes. \$545.00 was raised from selling plain and decorated wreaths. This was done before Christmas, so many of these were sold as Christmas gifts.

10. An observation tower was designed and constructed by the students with the help of our principal. The 8' x 8' platform is fifteen feet from the ground with a flight of stairs going up. The native rough-sawed oak wood was donated by one of the students family. The logs were sawed at the Slater Sawmill. The students were taken on a field trip to visit the actual sawing of some of the logs. The poles for the lookout tower were donated by one of the students families also. Any additional needed labor was donated by parents or interested citizens of the community.

11. Prairie and woodland wildflowers were planted in the area. The prairie wildflower garden was tilled by one of the students parents. The seeds were started by S & B Nursery and transplanted into the prairie garden; i.e. boneset, butterfly milkweed, cup plant, rattlesnake master, etc. Woodland wildflowers were dug by one student's father from his woodland area and transplanted in the area; i.e. pink and white trillium, yellow violet, bloodroot, snow trillium, Dutchman's breeches, etc. Prairie grasses were sown (big bluestem, buffalo grass, little blue-stem, etc.) Also actual swatches of native prairie were dug and planted in the area.

12. An arboretum of 48 trees were planted in the cleared area. These trees were donated by Rosehill Nursery, Panora, IA. A woodchip trail was made between the two rows of trees. Trees included amur maple, hackberry, pin oak, etc. Also trees from the Iowa State Nursery were donated. These included Red Pine, Scotch Pine, White Pine, etc.

13. An Open House is set for May 21, 1985, from 2-7 p.m. The students will guide tours through the area. They have written a script to use explaining the area.

14. A cable bridge is designed and planned to cross one small ravine. If time allows, this will be constructed before the May 21 open house.

PROGRAM

12:30 Introduction of the
Committee

Presentation of the
President's Environmental
Youth Awards by
Ronald R. Ritter, Director,
Congressional and Inter-
governmental Liaison

2:15 Honored guest, Governor
Terry Branstad arrives,
Governor's tour given by
John Flanery, Jerilee Hoover
and Eric Friedrich

Ribbon-cutting ceremony at
the lookout tower. The
Governor will be assisted
by John Schreck, Charles
Shroyer, and Becky King

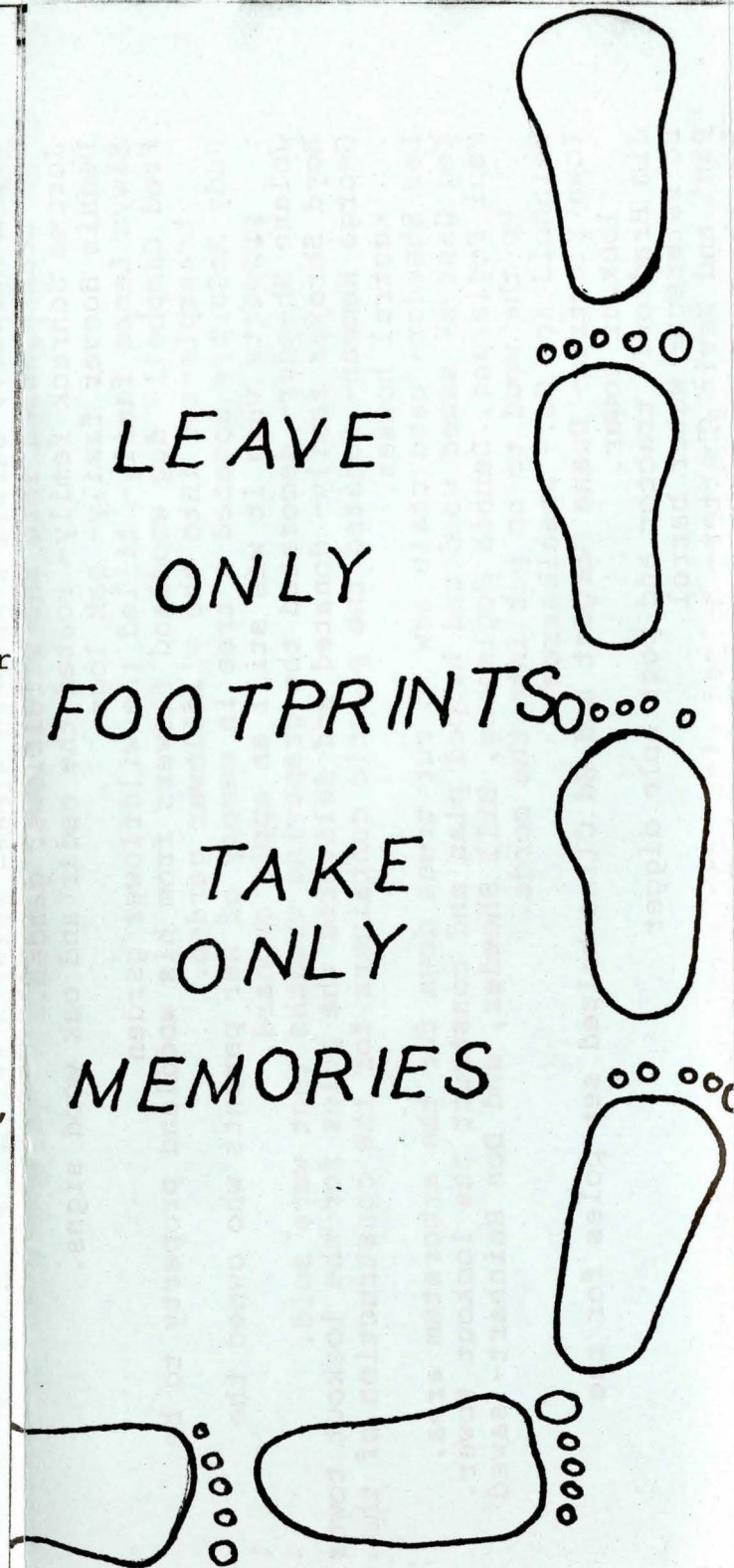
Guthrie Center School Band
will play 'This Land Is
Your Land'.

Planting of the Iowa Oak
Tree assisted by Lisa Lemke,
Kris Stringham, Julie
Vandevanter, Chris Schreck,
Jess McCarty

Presentation of the Grape-
vine Wreath to Governor
Branstad by Ronda Carper,
Maria Feilmeyer, and
Matt VanMeter

Completed Governor's tour
of the Classroom given by
Chad Redfern, Colleen
Bradford, and Jeff Schreck

LEAVE
ONLY
FOOTPRINTS
TAKE
ONLY
MEMORIES



ENVIRONMENTAL CLASSROOM OPEN HOUSE

MAY 21 1985



The students want to thank the many organizations, families, individuals, and businesses that helped to make our Environmental Classroom a reality. Without your help it could never have been done.

Soil Conservation Commission- donated the paint for the large sign, helped plan and lay out the tree planting, Lee Neal assisted.
Priestley Lumber- donated the plywood for the sign.
High School Art Class- designed and painted the sign, award calligraphy.
Rosehill Nursery, Ed Clark- donated trees for the arboretum.
Iowa State Nursery- donation of shrubs and trees
Rural Electric Company- ground brush for wood chips, put up the large sign.
Darold Slater Construction- sawed wood for the Lookout Tower, donated cedar wood and oak slabs for the signs, will construct the wetland area
City of Guthrie Center- donated use of payloader and truck to help with brush removal, Gary Walter and Tom Redfern assisted.
S & B Nursery, Darwin & Suzette Sloss- started the wildflower seeds to be transplanted into the wildflower garden.
Jerome Schreck family- routed the cedar and oak wood signs.
Dennis Hoover family- oak logs
Elwyn Lemke family- tilled the wildflower garden
Fred Campbell- dug woodland flowers from his woodland property to be transplanted into the wildflower garden.
Judy McCarty- donated a tree in memory of her parents who owned the property when it was still an apple orchard.
Jolene Sheeder- decorated the grapevine wreaths that were sold.
Boyd Shroyer family- donated and delivered the poles for the lookout tower.
George Hemmen- donated the plastic containers for the construction of the kestrel houses.
Lee Sheeder- used chain saw to cut trees down for the arboretum area.
Ted Hansen- sawed wood and helped plan and construct the lookout tower.
Paul Foglesong, Dennis Foglesong, Bill Sheeder, and Don Reinhart- sawed up the wood to be put into the cords.
Heinhold Hog Co.- wheelbarrow
Iowa Electric- Duane Norgart and Ed Cline helped set poles for the lookout tower.
Jim Bradford- tractor and post hole digger
Ed Peterson- water barrel
Paul and Kevin Charter- helped with construction of lookout tower
Strawberry Patch, Marlene Lake- donated ribbon for ceremony
G.C. Fire Dept.- hauled water for water barrel
Mike Wallace, Guthrie Co. Conserv. Board- donated trees
Mike Klein, Bay's Branch- donated trees
Committee members- Ted Hansen, Lee Neal, Marlene Lake, Robert Rye, George Hemmen, Dennis Hoover, Belva Peterson, and Audrey Charter
Student's Parents- donated the use of shovels, rakes, shears, band saws, pruners, and miscellaneous equipment.
Audrey Charter and Belva Peterson, our teachers- for having the faith in us to achieve our goal, their guidance and direction, and many hours of after school work they put into the classroom.

Also thanks to the many concerned individuals of the community that were always interested in our work in the classroom. If we missed anyone, it was not intentional.

Overgrown orchard now a science classroom

By LARRY STONE

Register Outdoor Writer

GUTHRIE CENTER, IA. — Planting wildflowers, cutting firewood, making grapevine wreaths and feeling handfuls of humus might not seem like your ordinary grade school science class projects. But Guthrie Center Elementary isn't your ordinary school.

Out behind the conventional-looking building and over the hill beyond the usual playground lies a unique, six-acre "classroom." That's where these lucky grade schoolers don't just study science — they live it.

"Twenty-five years ago it was an apple orchard," said fifth- and sixth-grade science teacher Audrey Charter. The land was unused when the school was built about 1960.

Those six acres were "left to go through natural succession — apples trees and all," Charter said.

When Charter started teaching here 14 years ago, she found to her delight an immense outdoor learning center where kids could do all sorts of "hands-on" projects.

Not a Textbook Teacher

"I'm not one who starts with a textbook and goes through it chapter by chapter," said Charter. "One of the things I do lots of is experiment and find out." She prepares many of her own teaching units.

Thus, the kids may study geography and math by making a scale map of the natural area, botany by identifying plants, zoology by watching birds or

IN THE OPEN

catching small mammals, and ecology by measuring pollutants in melted snow.

The potential activities in the outdoor classroom are endless, Charter said. "It's a very large part of my science program."

But the area took on a new dimension last year when the students learned they could earn a "President's Environmental Youth Award" for the site. Charter and kindergarten teacher Belva Peterson guided their students in planning formal development of the area for nature study.

The students built a trail system, spread wood chips on the paths, labeled trees and other plants, wrote bird and flower identification guides and planted trees and wildflowers.



Guthrie Center Elementary students check temperatures of snow and air under the supervision of award-winning science teacher Audrey Charter. Students are, from left, Sarah Sheeder, Jeanne Tallman and Kenny Kinkennon.

"It's just overwhelming what kids can do," Charter said. "It's tremendous."

Sold Firewood

With the help of parents and other volunteers, the students also cleared a number of old apple trees from the site of a planned arboretum, then cut up and sold the downed trees for firewood.

When they found a maze of wild grapevines in the cleared site, they began making and selling grapevine wreaths. They made more than \$900 from selling the wood and wreaths.

One student donated oak trees from the family's woodlot, and the children took a field trip to the Slater Sawmill to have the logs made into lumber.

With more volunteer help, they built a 15-foot-tall observation tower to provide a view of most of the outdoor classroom.

Students also built kestrel, bluebird and wood duck houses for the site and made interpretive signs. This fall, using money from wood and wreath sales, they hired a bulldozer to make two small wetland areas in ravines on the area.

Still in the planning stages are a

cable bridge across one ravine and a restored prairie area on an open hillside. Charter said the kids plan to prune some of the old apple trees to see if they can be coaxed into bearing fruit again. Each class hopes to plant at least one tree annually as a "class tree" memorial.

President's Award

Their efforts were rewarded last May when the school received the hoped-for president's award at an open house. The students also earned a Leadership Award from Gov. Terry Branstad, and they thanked the governor by leading him on a nature hike.

The outdoor classroom also won a \$250 prize from the Iowa Community Betterment Association and a \$200 award from the Iowa Arts Council.

Last week, capping "a year when dreams became realities," Charter was named Conservation Teacher of the Year for grades kindergarten through eighth. That award is sponsored by the Iowa Association of Soil Conservation District Commissioners, the State Soil Conservation Commission, the Iowa Farm Bureau Federation, the Iowa Conservation Education Council and The Des Moines Register.

Charter and her husband, Paul, also have done extensive conservation work on their 542-acre farm west of Guthrie Center.

Always a "Farm Girl"

"I've always been a farm girl," Charter said, and she has a lifelong commitment to conservation.

School Principal Ted Hansen said Charter's "dedication to teaching students has been outstanding," and he predicted that "her deep commitment to conservation will no doubt play a lasting and important part in [her students'] lives."

That would please Charter.

"Children this age have to learn to appreciate the environment and take care of the environment. Or — face it — we aren't going to have it," said Charter.

Can school-age children absorb that message by frolicking in the snow in an old apple orchard?

Sixth-grader Sara Hernandez thinks so. The best thing about the outdoor classroom is that "we learn to take care of nature," she said.

And that's important?

"To me it is!" the 12-year-old Sara declared.

Grim hostage drama ends with 2 dead

By WILLIAM RYBERG

Of The Register's Davenport Bureau

DAVENPORT, IA. — A tense hostage drama ended Saturday afternoon when police entered a Davenport home and found a nurse murdered and her assailant dying of a self-inflicted gunshot wound, authorities said.

A second nurse held hostage for about 11 hours apparently was not seriously injured.

Killed in the incident, authorities said, were:

- Sherida Phelps, 36, an emergency room nurse at Mercy Hospital here. Police said she had been stabbed in the chest and may have been shot.

- Gregory Shaw, 27, of Davenport, who died at the hospital of a gunshot wound to the head.

The second woman was identified as Phelps' roommate, Shawn Cahill, 26, also a nurse at Mercy.

Sgt. David Holden said Shaw and Cahill had dated, but Cahill wanted to break off the relationship. Shaw, who had been under psychiatric treatment, had been jailed at least once recently for harassing Cahill, Holden said. Shaw also knew Phelps.

Holden said Phelps was slain about 2 a.m. Saturday when she arrived home first after she and Cahill went out for a drink after getting off the 3-to-11 p.m. shift at the hospital.

She was stabbed with a folding hunting knife with a five-inch blade found in Shaw's pocket at the hospital, Holden said. Her body was found in the kitchen.

Shaw apparently entered the house by breaking out glass in a rear door. When Cahill arrived home, he handcuffed her and took her hostage, moving her from room to room during the night, Holden said.

Shaw's motives in the murder and the hostage-taking were unclear, Holden said.

Police became aware of the trouble about 7:30 a.m. when Cahill's mother arrived so they could drive to Chicago for a day of Christmas shopping. When her mother came to the door, Cahill told her get help.

Police and other officers surrounded the house, set up observation posts in a couple of neighboring homes, told area residents to stay inside and blocked off a two-block area to traffic.



WINNERS OF \$250 for second place in the Youth Awards category was an entry prepared by Guthrie Center elementary instructors, Belva Peterson and Audrey Charter, whose kindergarten and sixth grade classes helped make the outdoor classroom a reality. Above are some of the youngsters who made the trip to Ames for the picture-taking ceremony.



THE SAME ENTRY also received \$200 as one of the top eight entries competing for Iowa Arts Council Awards. Accepting the awards were Maria Feilmeyer, Nick VanMeter and Lisa Lemke. Governor Branstad awarded the plaque. Mrs. Charter said the cash prize money will be reinvested in the outdoor classroom project.

elementary project wins betterment prizes

An outdoor classroom project of the Guthrie Center elementary school which last spring received the Presidential Environmental Youth Award from the U.S. Environmental Protection Agency, Saturday reaped more honors at the 15th annual Iowa Community Betterment Recognition Day at Ames.

An entry prepared by elementary instructors Belva Peterson and Audrey Charter whose kindergarten and sixth grade classes helped make the outdoor classroom a reality, was judged second best in the Youth Awards category for population division 840-2,360 and won \$250. In addition, the project garnered \$200 as one of the top eight entries competing for Iowa Arts

Council awards. Both cash awards were accompanied by plaques.

A busload of 30 students and 10-12 adults attended the recognition day sponsored by the Iowa Development Commission and Gov. Terry Branstad.

Although no specific spending has been earmarked, Mrs. Charter said the cash prize money will be reinvested in the outdoor classroom project.

Besides the two awards won by the outdoor classroom project, the Guthrie Center volunteer fire department was the recipient of a plaque signifying the Governor's Leadership Award.

The award was based on the fund-raising efforts of the department for the renovation of the municipal swimming pool.



NATURE HIKE-Last May, Gov. Terry Branstad was featured speaker for dedication ceremonies for the outdoor classroom.



Entrance sign

Teacher
Audrey Charter



One of several subject signs

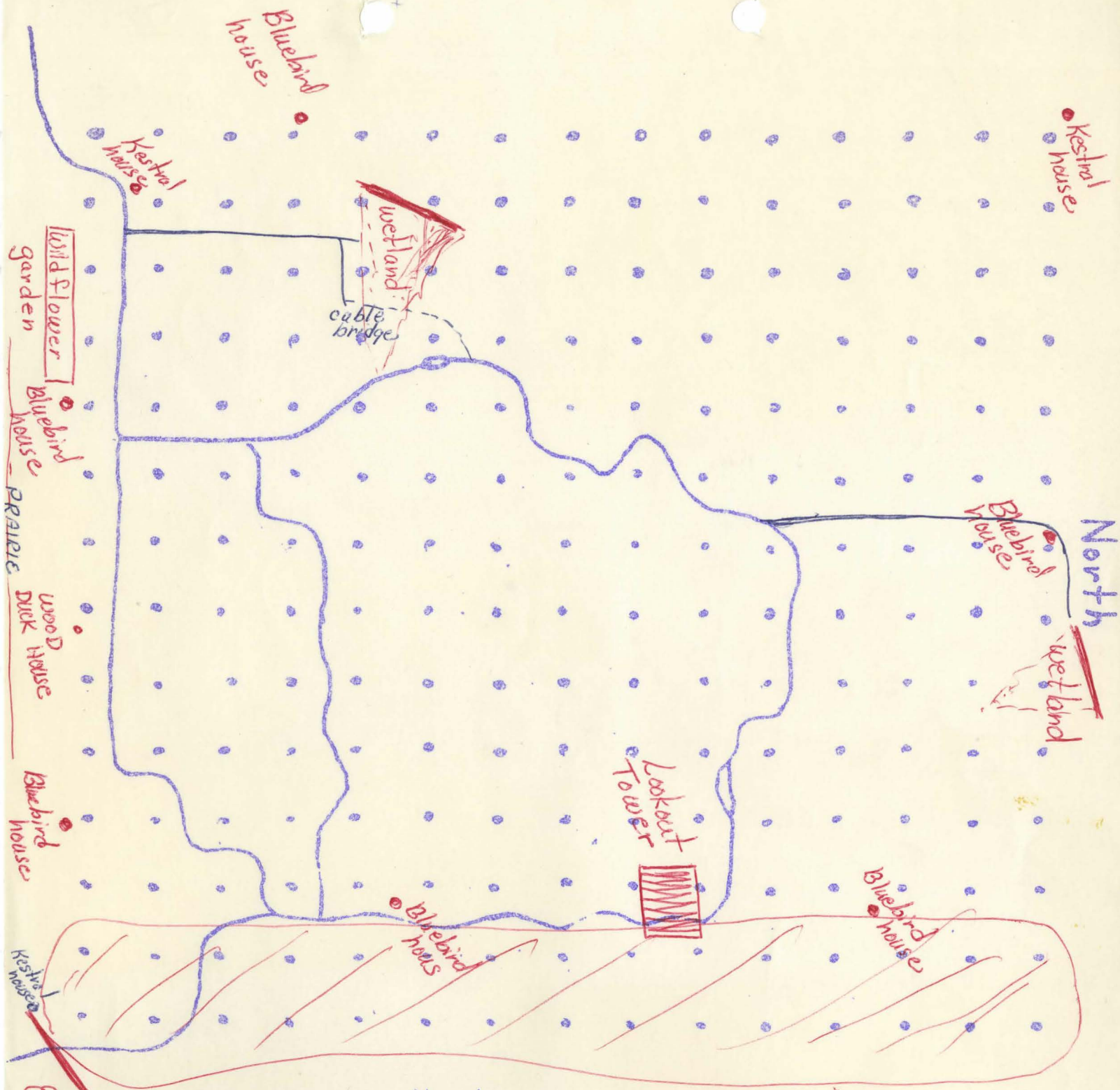


*Students on tour of
a sawmill*



*Students with grape vine
wreaths they made & sold*





Highway 25

This area was entirely cleared now this is our arboretum

large Environment sign Classroom



Planting trees for arboretum



Birdhouses
constructed





Examples of routed identification signs



Wetland Construction



Trip to the sawmill



Lookout Tower constructed



Constructing trails



Cutting wood



Cleared area for the arboretum



Iowa Gov.
Terry Branstad
at the
Open House



Receiving Presidential Awards
from
Ronald Ritter EPA



Guided tour

SECOND PLACE in YOUTH AWARDS



PRESENTED PLAQUE AND CASH AWARD
AT AMES



IOWA ARTS COUNCIL AWARD - RECEIVED
PLAQUE AND CASH AWARD



*Students on tour of
a sawmill*



*Students with grapevine
wreaths they made & sold*





WREATHED WITH SMILES-Sixth graders at the elementary school have sold over 45 Christmas grapevine wreaths which they constructed. Front row, l-r: Chris Schreck, Mike Steiner and Lisa Lemke. Back row: Aaron Schultz, Kory Schramm and Lori Benton.



Cords of apple wood the students stacked to sell



Giving their Attention to the Governor

Guthrie Center elementary students listen attentively as Governor Terry Branstad praises them for their work in an outdoor classroom at the school.

Gov. Branstad to tour environmental classroom

Governor Terry Branstad will be present Tuesday afternoon for open house ceremonies for the Guthrie Center elementary school orchard which has been transformed into an environmental classroom.

Also on the program will be Ronald Ritter, director, Congressional and Intergovernmental Liaison from Kansas City who will present the President's Youth Award at a 12:30 assembly in the elementary gym.

The environmental classroom was nominated and approved for the Presidential Environmental Youth Awards sponsored by the United States Environmental Protection Agency. The work for the project was conducted by Audrey Charter's 6th grade science class and by kindergarten classes of Belva Peterson.

Governor Branstad will arrive by

plane at the Guthrie Center airport at 2:15 and will be escorted to the environmental classroom and given a tour of the orchard by two 6th grade students. The tour will conclude with a ribbon cutting ceremony at the foot of the lookout tower. Afterwards, Governor Branstad and Ritter will assist in planting an Iowa oak tree. The governor is expected to depart about 3 p.m. Open house tours will be conducted until around 7 p.m.

Instructors said the project program includes involvement of all kindergarten and 6th grade students in the management and preservation of an environmental area consisting of 6.1 acres. Originally an apple orchard, the area has gone through the steps of succession for the past 20 years. Students were involved in formulating the following goals for the 1984-85 school year:

1. Establishing a nature trail through the area—clipping, pruning, and using wood chips as a trail floor. Eight loads of wood chips have been placed on the trails. Wheelbarrows, garden carts, and buckets were used to carry the chips.

2. Making booklets identifying the prairie plants and wildflowers, birds, animals, and trees in the area. These are completed with illustrations, brief explanations, and attractive covers.

3. A large sign was designed, painted, and placed designating the area as an environmental classroom.

4. A small animal trapping project was done to determine species and population in the area. Bar graphs were made compiling the results. Deer mice, shrew, and ground squirrels were caught. The traps made of coffee cans and mouse traps were constructed by the students.

5. Small signs of cedar wood were routed designating points of special interest; i.e. hackberry, poison ivy, pink trillium, etc. Larger signs of oak slabs were routed designating the wildflower garden, nature trail, and arboretum. The routing was done by one of the students and his family.

6. Birdhouses were planned, constructed, and placed in the area. Six bluebird, three kestral, and a woodduck house was constructed.

7. A scale map was made of the area using metric measure. The trail, new plantings, and other points of interest are marked on the map.

8. Two wetland areas are planned and marked out. The actual construction of these will be completed this summer, 1985. Money earned by the students will be used to hire the bulldozer. The estimated cost will be \$400 to \$500.

9. Since this originally was an apple orchard, the trees were planted in rows. Two rows of trees and the shrubs of 20 years of succession were cleared by the students. The wood was sawed (much of it with band saws) and sold by the cord for \$40.00 per cord. Approximately 10 cords of wood were cut. In clearing this area, many wild grapevines were found. These were used to make grapevine wreaths of three sizes: \$545.00 was raised from selling plain and decorated wreaths. This was done before Christmas, so many of these were sold as Christmas gifts.

10. A lookout tower was designed and constructed by the students with the help of our principal. The 8' x 8' platform is fifteen feet from the ground with a flight of stairs going up. The native rough-sawed oak wood was donated by one of the students family. The logs were sawed at the Slater Sawmill. The students were taken on a field trip to visit the actual sawing of some of the logs. The poles for the lookout tower were donated by one of the students families also. Any additional needed labor was donated by parents or in-

terested citizens of the community.

11. Prairie and woodland wildflowers were planted in the area. The prairie wildflower garden was tilled by one of the students parents. The seeds were started by S & B Nursery and transplanted into the prairie garden; i.e. boneset, butterfly milkweed, cup plant, rattlesnake master, etc. Woodland wildflowers were dug by one student's father from his woodland area and transplanted in the area; i.e. pink and white trillium, yellow violet, bloodroot, snow trillium, Dutchman's breeches, etc. Prairie grasses were sown (big bluestem, buffalo grass, little bluestem, etc.) Also actual swatches of native prairie were dug and planted in the area.

12. An arboretum of 35 trees was planted in the cleared area. These trees were donated by Rosehill Nursery, Panora, IA. A woodchip trail was made between the two rows of trees. Trees included amur maple, hackberry, pin oak, etc. Also trees from the Iowa State Nursery were donated. These included Red Pine, Scotch Pine, White Pine, etc.

13. An Open House is set for May 21, 1985, from 2-7 p.m. The students will guide tours through the area. They have written a script to use explaining the area.

14. A cable bridge is designed and planned to cross one small ravine. If time allows, this will be constructed before the May 21 open house.



AND PUT THOSE WOOD CHIPS THERE--
Belva Peterson's kindergarten class has been busy working in the orchard by the elementary school. The children gather wood chips while the sixth grade classes distribute them on the trail.

Guthrie Center

Spring, spring, wonderful spring! Too bad something as beautiful as a wet spring snowstorm leaves such a mess behind. We have enjoyed dry feed lots and excellent calving conditions, no one needing overshoes or snow boots to protect their feet, and best of all, the winter coats were about to be put in retirement for a few short months. What a difference a few hours make. We were fortunate strong winds did not accompany the heavy, wet snow or we could have been without electricity as well. I discovered it was a poor time to be without film in the camera because it certainly would have made a pretty picture.

It's interesting to offer a controversial comment and then sit back and watch for reactions. Though I can't see your reactions, I can only imagine a few first reactions when I admit I think *some* school teachers are grossly *underpaid*!

I came to this conclusion a few days ago when two school bus loads of grade school children from Guthrie Center came out to watch an Iowa sawmill in operation. Besides the two drivers, there were three or four teachers keeping all the inquisitive, active youngsters in their proper places.

We were very impressed with their behavior, a definite advantage when huge logs are being cut by a spinning blade. It indicated some rules were discussed prior to the trip.

Each student had brought a sack lunch and it was a beautiful sunny, warm day, so at noon, they took their lunches and had a picnic on the perimeter of our pond. When their lunch was over, they returned and were given a demonstration of lumber thickness planing. Several cedar boards were made smooth so they could enjoy the fragrance of the shavings.

Soon, the floor around the planer was covered with cedar shavings and when that procedure was finished, they were told to help themselves to the shavings to take home with them. They retrieved empty lunch sacks and filled them from the shavings pile. It didn't take long for the floor to be picked nearly clean.

There are always a few participants less interested in a field trip than others and I noticed a few little girls afraid their hair was getting dirty from sawdust, but on a whole, they really had a good time.

After an hour-and-a-half, I could almost predict the next question, "Where's the rest room?" We couldn't accommodate them so they decided a quick stop at a nearby campground was a good idea and we said goodbye.

I now view the teaching profession from a new angle and these teachers were definitely doing a commendable job. Their field trip will be remembered by many children for a long time.

Only one student had seen logs being sawed before, and that was in Oregon

Adel, Iowa
"Adel News"

**norma
slater**



when he was on vacation with his parents.

You probably all know someone who truly has a "green thumb." I know I do, and even the plants that are not supposed to bloom most surely come very close to blooming for her. My African violets had been such a disappointment for so long, I was about ready to throw them out, but every time I saw the gorgeous blooms and vigorous foliage on her plants, I was more determined to try a little harder to salvage mine.

Finally, I fixed a tray of gravel and stand on which to place the freshly re-potted violets, started monitoring the moisture around the plants and placed them in a better light. I will never know just what is working, but they are now all full of beautiful blooms and I am not taking credit for anything — it was just my turn to wear the green-thumbed glove.

Outdoor Classroom Spotlited in Guthrie

By Mary Post Bower

Pride and excitement glowed from the faces of kindergarten and sixth grade students at the Guthrie Center elementary building Tuesday afternoon as they showed the governor of their state what they've been working on for the past year.

The students gave Governor Terry Branstad and the public tours of their new Environmental Classroom, just north of the elementary school. In addition to having the walking tour, Branstad cut the ribbon on the students' lookout tower and helped plant an Iowa oak tree on the grounds.

"This is indeed the most impressive elementary school project I've ever seen," the governor told the students. "Preserving our natural resources is one of the most important challenges that face us today. We all need to work to meet the challenge of understanding our environment and how to preserve and protect it for future generations."

The governor arrived at the school about 2:15 and was escorted through the outdoor classroom by students John Flanery, Jerilee Hoover and Eric Friedrich. The school band played as he came into the lookout tower area, where he cut the ribbon and complimented them on the view from the top.

After Branstad and school personnel planted the oak tree, students gave public tours of the area until 7 p.m.

"This outdoor classroom will add much to the beauty of this area," Branstad concluded. "Some of your children and grandchildren may well get a chance to go through this classroom. Congratulations and keep up the good work."

Prior to Branstad's arrival, Audrey Charter's sixth graders and one section of Belva Peterson's kindergarteners received certificates for the President's Environmental Youth Awards

signed by President Reagan. These were presented to 64 students by Ronald R. Ritter of Kansas City, director, Congressional and Intergovernmental Liaison. Ritter also accompanied the governor on the walking tour and helped plant the oak tree.

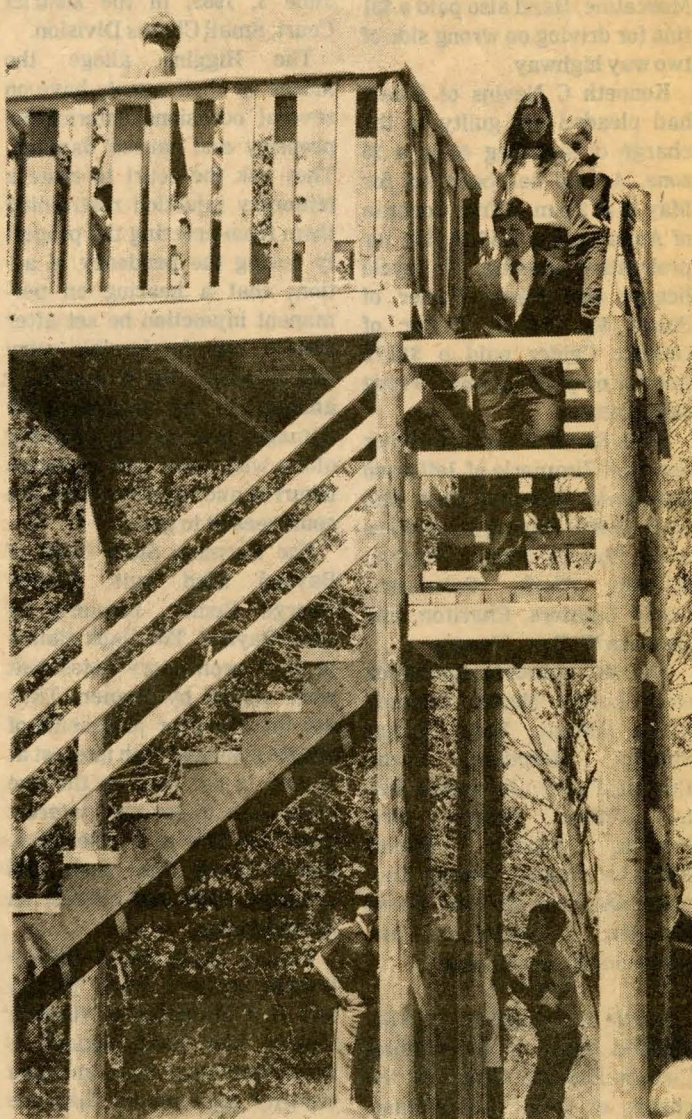
Although most of the improvements to the wildlife area were made this past school year, the 6.1 acres adjacent to the elementary school have been owned and maintained by the school for 20 years. Plans and goals for the former orchard were adopted by the school children last year, and most of the projects are already completed.

Included in the improvements were establishing a nature trail through the area and lining it with wood chips; making booklets identifying the plants and animals found in the area; placing signs and birdhouses throughout the area; marking out wetlands for construction this summer; clearing brush and unwanted trees; planting prairie and woodland flowers and trees, and constructing an oak lookout tower.

The students plan to continue improving their new classroom and specifically building a cable bridge to cross one small ravine.

The students were assisted in their endeavors by many school and community volunteers, who received their thanks during the open house. News media from the area and large TV and newspapers from Des Moines covered Tuesday's event, adding to the excitement for the students.

Although the anticipation and thrill of the open house are now past, the students have a permanent wildlife area in which to study and enjoy the plants and animals native to Guthrie County. And they have the satisfaction of knowing they are largely responsible for its improvement and preservation.



Governor Terry Branstad descends the stairs of the oak lookout tower constructed by students at their new outdoor classroom. Elementary students hosted an open house at the classroom Tuesday afternoon, with Branstad and Congressional Liaison Ronald Ritter as special guests.



Escorting Branstad along the nature trail before his speech were Jerilee Hoover, John Flanery and Eric Fredrick (not pictured). The students stopped along the trail to point out highlights of their classroom.



Ritter helped the governor and school personnel plant an oak tree at the site of the lookout tower during the open house activities Tuesday.

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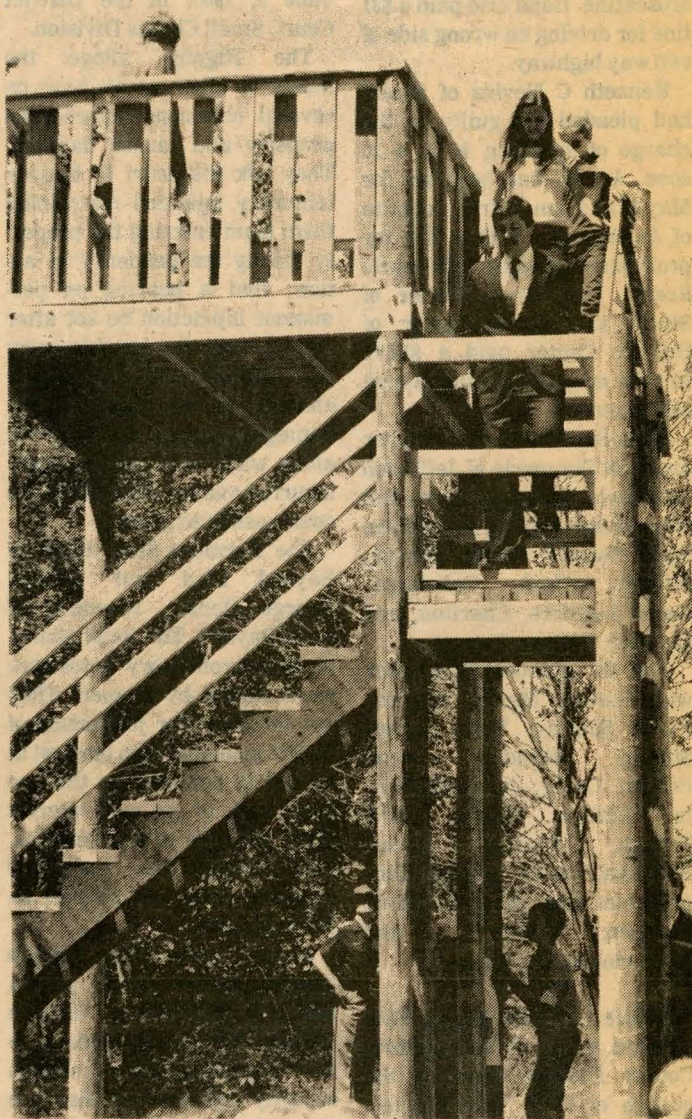
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Ritter helped the governor and school personnel plant an oak tree at the site of the lookout tower during the open house activities Tuesday.



TOP NOTCH-Iowa Governor Terry Branstad was honored guest Tuesday afternoon at open house and dedication ceremonies for the Guthrie Center elementary school's environmental classroom which received the Residential Environmental Youth Award from the U.S. Environmental Protection Agency. The

former school orchard was transformed into the environmental classroom. Instrumental in the project were sixth grade instructor Audrey Charter and her students and kindergarten instructor Belva Peterson and her students. At top left, Branstad is greeted by sixth graders John

Flanery and Jerilee Hoover who led the governor, top right, over a nature trail to the program site at the base of a lookout tower, right. Bottom right, the governor is shown helping plant a state tree, the Iowa Oak, and bottom left, the governor autographs a cap for an elementary student.

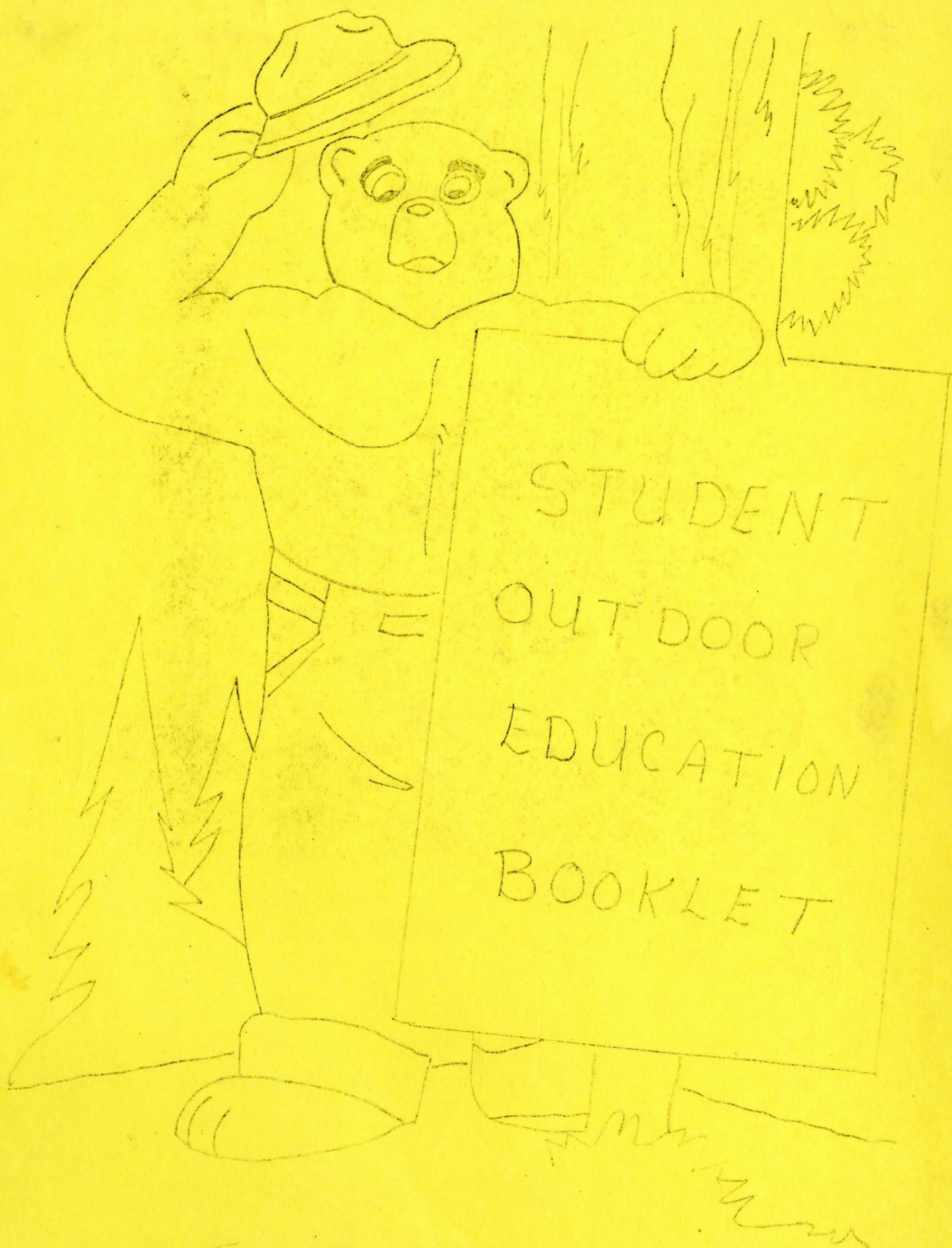


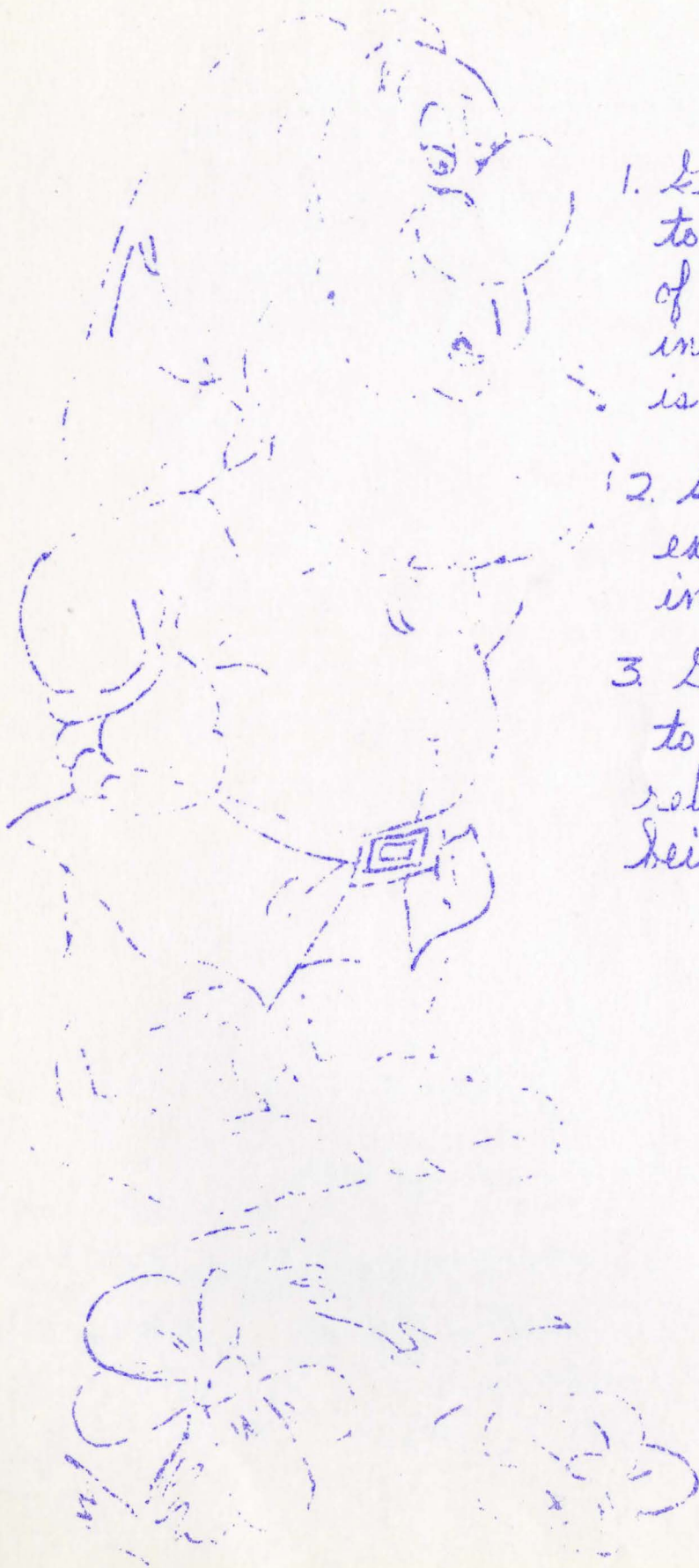
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OBJECTIVES

1. Give you an opportunity to recognize the possibilities of personal satisfaction from insight into the work that is found outdoors.
2. Give you an opportunity to experience first-hand working together.
3. Give you an opportunity to understand the inter-relationships between human beings and nature.



Rules

We listen

We walk

We observe

We do our
best.



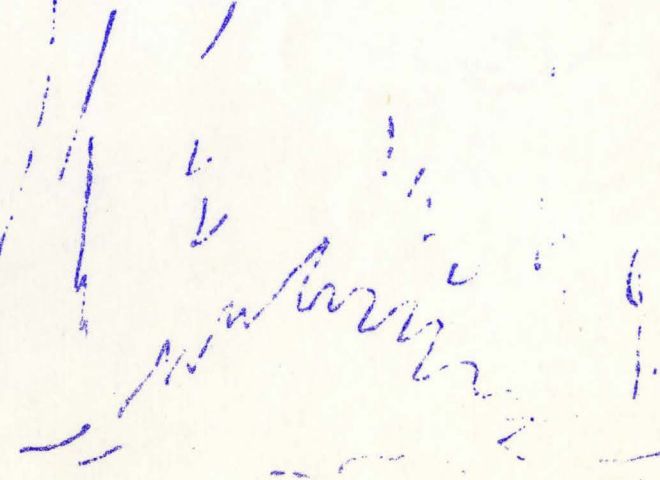
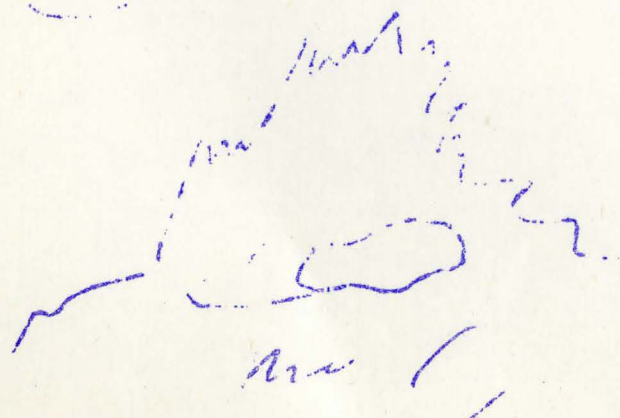


BEWARE

POISON IVY

POISON OAK

POISON SUMAC



Adopt - a - Tree

Visit 2

1. How is OUR tree the same?
2. How is OUR tree different?
3. What animals visit our tree?
4. What neighbors does our tree have?
5. Is anything damaging our tree?
6. Is OUR tree dormant or awake?

How can you tell?

7. LISTEN !! Does OUR tree make any sounds?

8. SMELL !! Does OUR tree have an odor?

9. Brainstorm 10 adjectives to describe OUR tree.



Spatter Prints

metal wire screen
toothbrush
straight pins
tempera paint
8½ x 11 paper

Leaf Prints

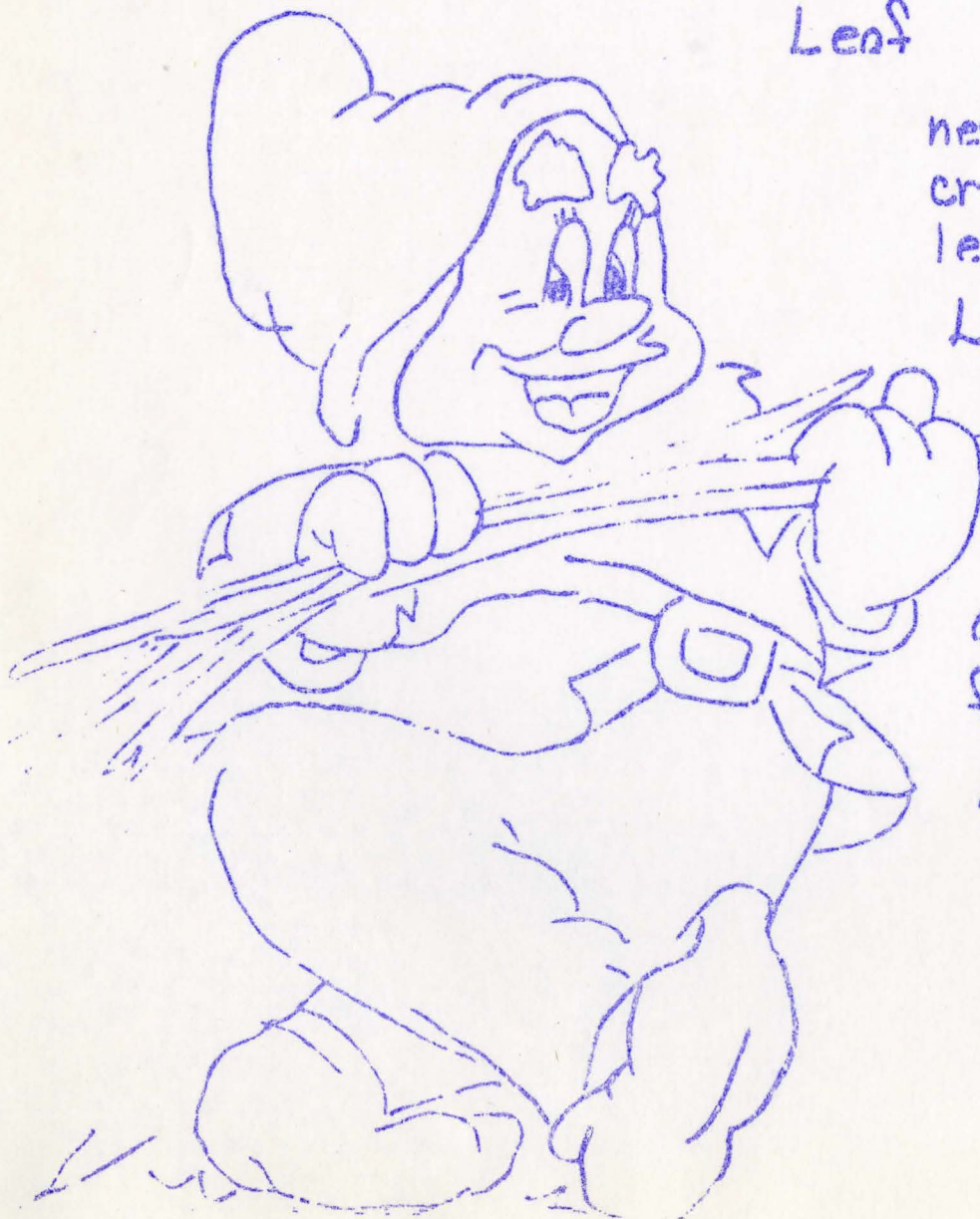
Place a leaf on a sheet of paper. Secure with pins. Place a screen over the leaf. Paint across the screen using the toothbrush.

Leaf Crayon Rub

newsprint paper
crayon
leaf

Lay a leaf down.

Put a sheet of newsprint on top of it. Use the side of a crayon to rub across the leaf. Rub firmly all over the leaf. A dark crayon is best.



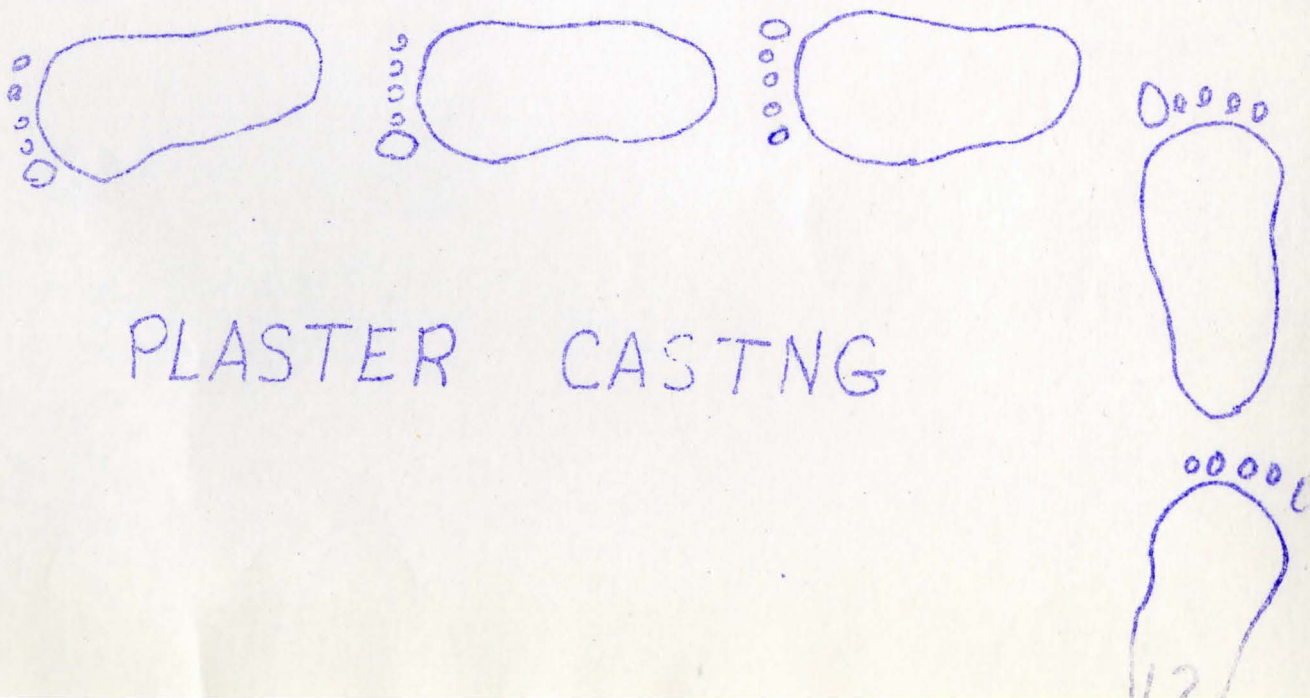
Materials: plaster paris (two parts)
water (one part)
plastic bag
water color (optional)



MIX: Place plaster paris and water in bag.
Mix by working bag with hands.

POUR: Remove corner of bag and pour
over mold.

RESULT: Negative casting



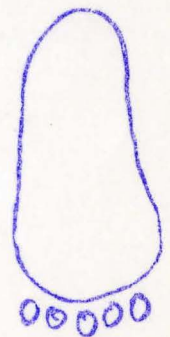
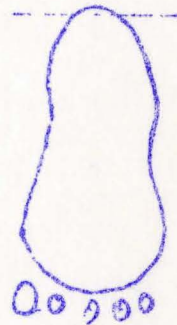
PLASTER CASTING

MY POLLUTION PROJECT

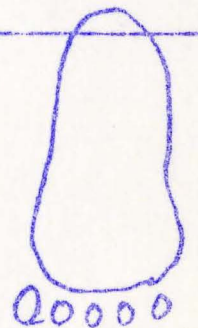
BEFORE:



AFTER:



DESCRIPTION:

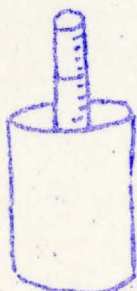


LET IT SNOW! LET IT SNOW!

What is temperature of snow today? _____

What is temperature of air today? _____

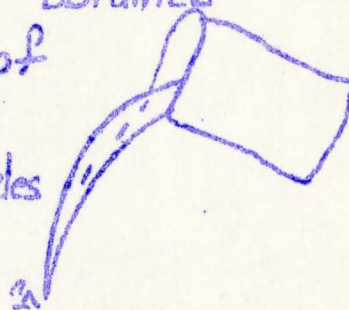
Which is the warmest today? _____



Melt a beaker full of snow (not packed).
How many cm of water did you get in your beaker? _____

Is the snow a wet or a dry snow? _____

Filter the water you just obtained when you melted your can of snow through a paper towel.
Were there any dirt particles in your snow? _____

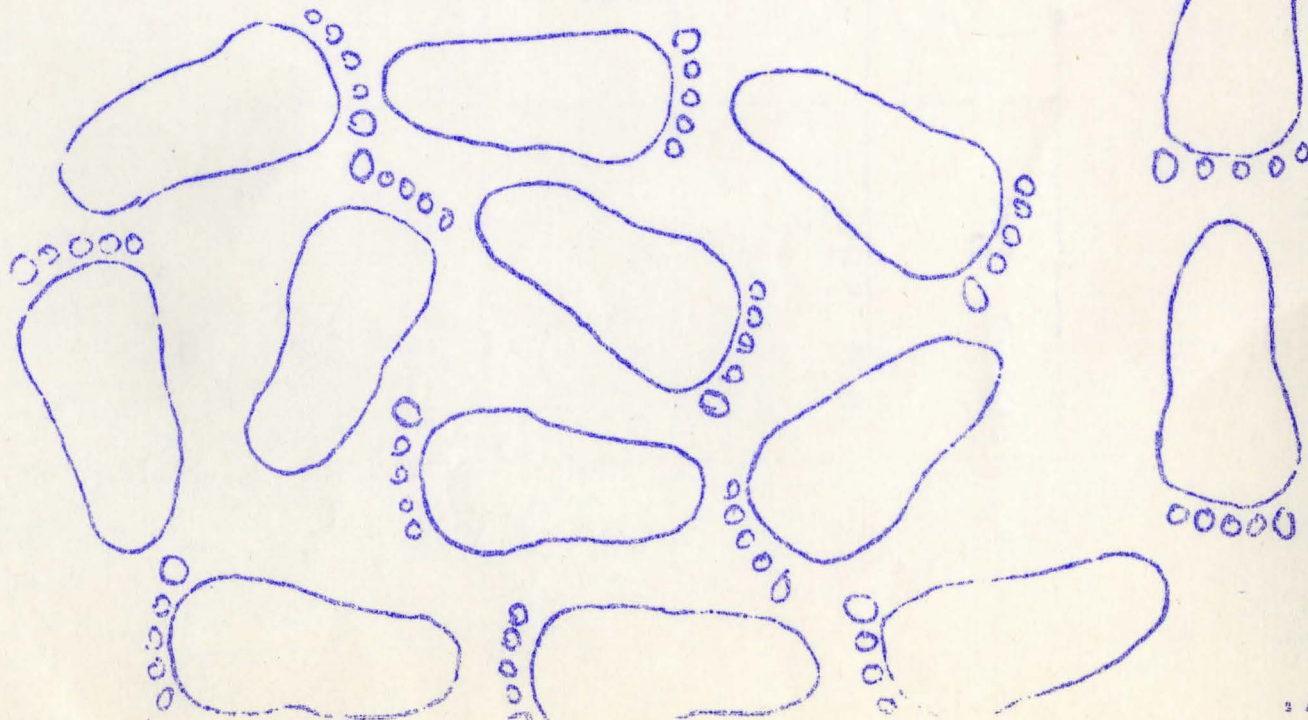


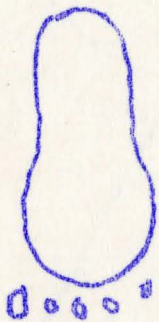
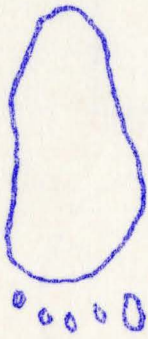
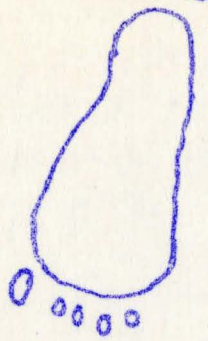
Weigh an empty beaker. Now fill the beaker with snow and weigh it again. Subtract the weight of the empty beaker from the weight the beaker when it is full of snow.
What does the snow weigh? _____



Find something that you have never seen before. Identify it.

HAVE A GREAT TREASURE HUNT !!!

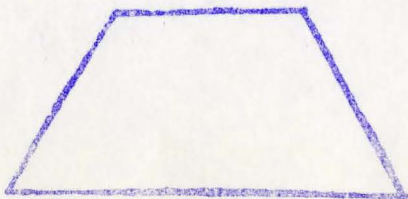
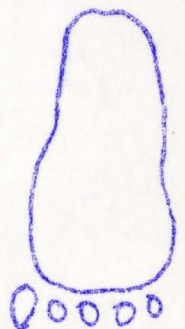
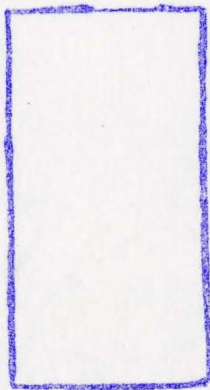
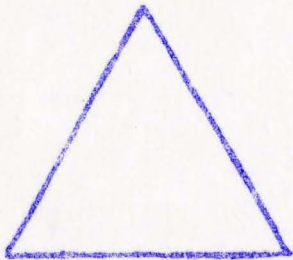
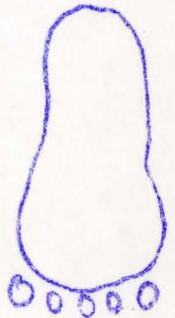
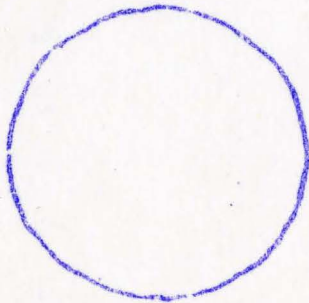
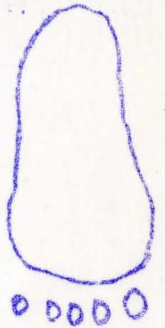
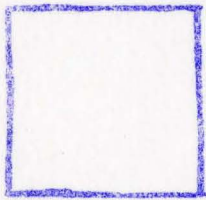




container	weight		appearance of contents
	before	after	before
Nylon Stocking			
Mesh bag with large holes			
Plastic Bag			

Recycling in Soil

A careful observer will be able to find many shapes in nature. Next to each shape below list and draw objects in nature that you have observed that are similar to that shape or contain that shape. You will receive 1 point for each object.



C

Q

NATURE'S VOCABULARY

A

A.

B.

C.

D.

E.

F.

G.

H.

I.

J.

K.

L.

M.

N.

O.

P.

Q.

R.

S.

T.

U.

V.

W.

X.

Y.

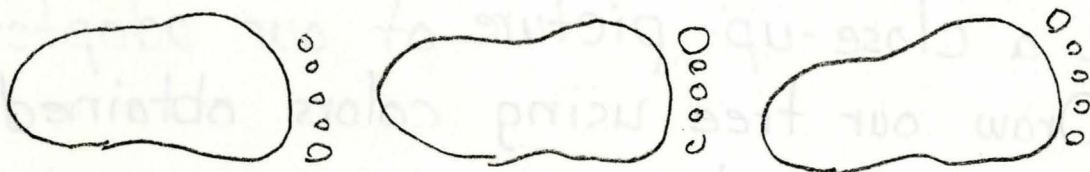
F

H

K



BURSTING BUDS

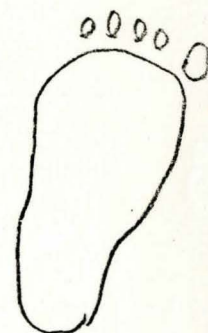
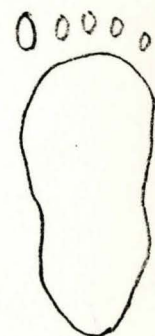
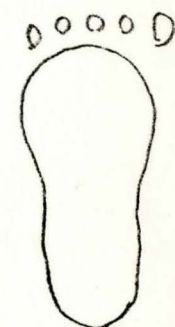
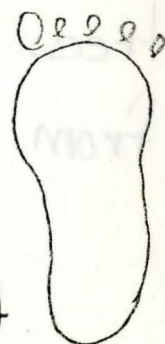
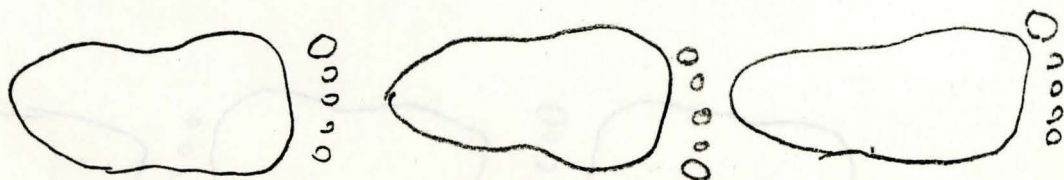


Locate a deciduous tree branch. Examine the branch carefully. Discover the little group of leaves that has grown out of one bud.

Count the number of leaves in each bud group on the branch.

Bud	1	_____
Bud	2	_____
Bud	3	_____
Bud	4	_____
Bud	5	_____
Bud	6	_____

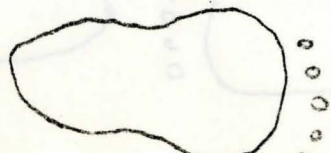
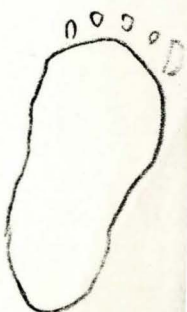
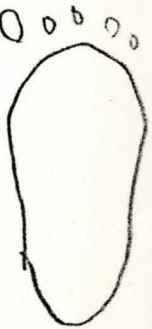
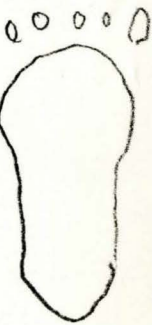
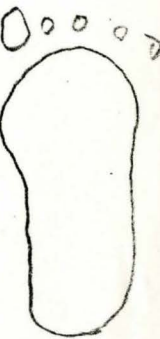
Draw a picture of the branch with buds and leaves you observed.



Colors from Nature

Pretend you have a camera and are going to take a close-up picture of our adopted tree. Draw our tree using colors obtained from natural materials.

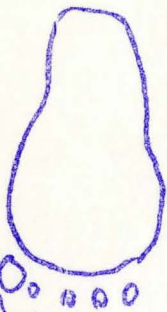
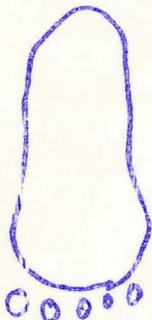
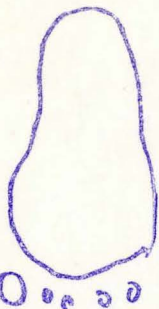
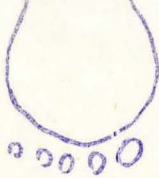
- _____ Bud 1
- _____ Bud 2
- _____ Bud 3
- _____ Bud 4
- _____ Bud 5
- _____ Bud 6





You receive 1 point
for each bird you see;
2 points for each bird
you see and identify;
5 points for each bird
you identify by only
hearing its voice.

THE FALLEN LOG



Locate a rotting log
20 cm in diameter. Carefully
observe the log.

Condition of bark - _____

Plant growth on log - _____

Animal activity on or around the log.

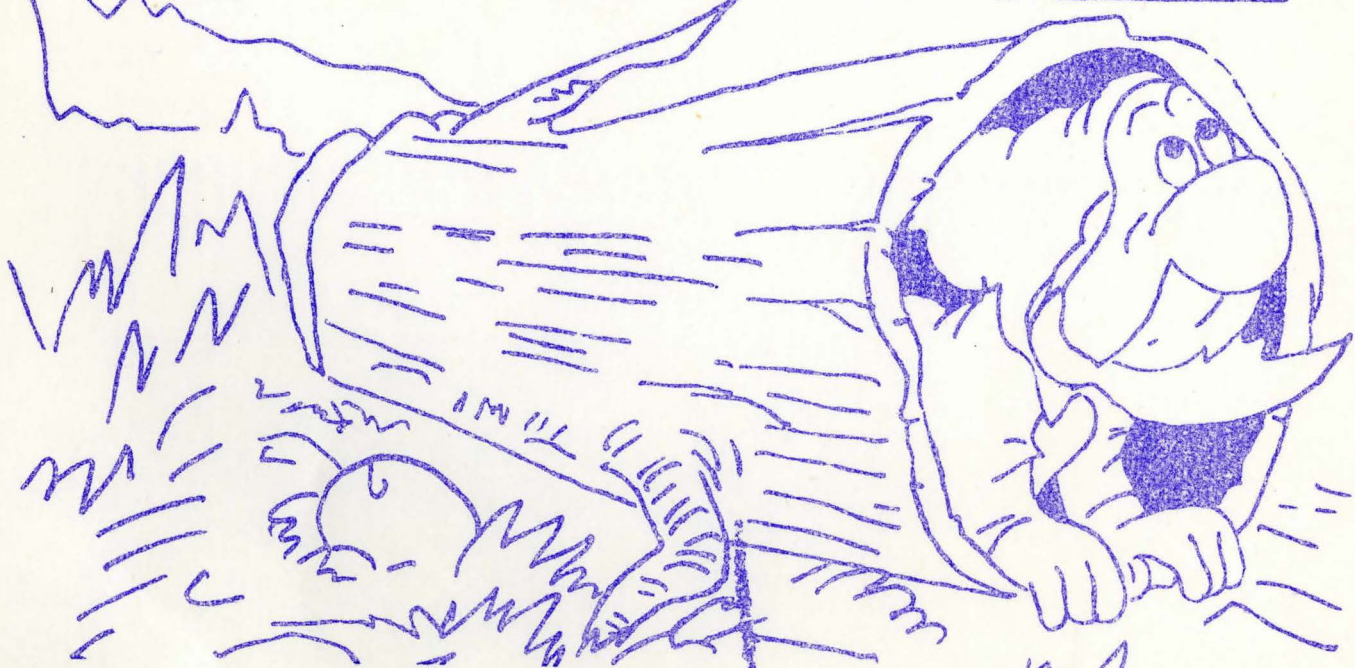
Examples of animals or plants INSIDE
the log. Do not destroy their homes.

Kind of tree _____

Age _____

Cause of death _____

When it died _____



BIRD NESTS

Name of Bird _____

My Bird's nest is made of:
(circle all materials you use)

twigs	green grass
pine needles	dried grass
green leaves	hair or feathers
dried leaves	mud or dirt
bark	other _____

And is lined on the
inside with _____

My bird builds its nest:
(circle one)

on the ground
in a clump of grass
in a tree
in a bush
other _____



Sample Unit

BEGINNING PHOTOGRAPHY

Day 1

- Objectives:
1. Each student will learn to use the camera as a tool for learning about the environment
 2. Each student will become familiar with their surroundings by being denied sight.
 3. Each student will discover common photographic problems.

- Materials:
- 1 blindfold per student
 - 1 camera "instant"
 - 1 roll film with 1 frame per student

- Procedure:
1. Take students to the site in the outdoor classroom.
 2. Each student will have a chance to take one picture of something in this immediate area.
 3. Each student will have a tagboard cutout frame the size and shape the picture will be. The object or scene each student will take should be approximately ten feet away to simplify focus and depth.
 4. Each student will understand the boundaries they are to remain in.
 5. After each student has selected their picture and regathered in a group, use of the camera will be explained; and then answering any questions.

Day 2

- Objectives:
1. Each student will learn to use the camera as a tool to discover the importance of holding a camera steady.
 2. Each student will understand vertical and horizontal viewing with a camera.
 3. Each student will discover common photographic errors - in particular movement causes blurred pictures.

- Materials:
- 1 camera "instant"
 - 2 rolls of film with 5 frames per student

- Procedure:
1. Take students to the playground outdoors.
 2. Each student will take the five following photographs in this sequence:
 - a. Jump and take a picture of a preselected classmate
 - b. Stand perfectly still and take another picture of that same classmate.
 - c. Stand perfectly still and take a picture of the same classmate moving his arms like propellers.
 - d. Take a picture by pressing the shutter release as fast as possible
 - e. Take a picture by pressing the shutter release as slowly as possible.

m

*New Unit Program
being developed. 1985-86*

3. Following developmentt, the photographs will be discussed for sharpness and blurriness.

Day 3

- Objectives:
1. Each student will be more aware of the number of perspectives "Our Adopted Tree" can be viewed from.
 2. Each student will be encouraged artistic creativity in photography.
 3. Each student will become familiar with their surroundings by using a camera.
 4. Each student will understand vertical and horizontal viewing with a camera.

Materials: 1 camera "instant"
1 roll film allowing 1 frame per student

- Procedure:
1. Take students to the site of our adopted tree in the outdoor classroom.
 2. Each student will take one picture of our tree. Explain this tree has a personality much like you, and that you are going to use the camera to capture that personality.
 3. After development of the film further discussion will be held. The students will realize no two students see our tree in the same perspective - some may be close-ups, others from the bottom looking up, some describe its surroundings, some give more intimate looks at its related parts.

Since we adopt-a-tree each year and observe this same tree in fall shortly after school starts, in the middle of the winter, and in the spring; I find this is another way students can develop their observations and learn some basic photography skills. Hopefully this will develop into photography of many of the wildflowers, birds, , etc. we have in our outdoor classroom.

References:

Project Learning Tree
Birds, Beasts, Bugs, and Us
Adventures with Your Camera