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### ABSTRACT

To assist teachers in knowing about environmental study and their availability for class studies, the West Linn, Oregon School District #3 has developed this "first step" survey. Information for each local study area describes its history, general physical appearance, vegetation, wildlife, special features, present physical development, seasonal variations, and natural hazards. In addition, supplemental information for teachers regarding group size and suggested usage of the area is included. (BL)

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# ENVIRONMENTAL EDUCATION



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Quality of life in our beautiful Pacific Northwest, indeed, the world in its entirety, will depend upon how we protect and develop our valuable natural resources today. As intelligent adults and teachers we must now set about the task of imparting a love and full understanding for our "earth, sky and water" to our charges, the students of our classrooms. Each of us must use every talent and resource at our command in order to meet this most important challenge.

West Linn School District #3  
Clackamas County  
West Linn, Oregon  
April 5, 1971

## INTRODUCTION

As an aid to the teachers of the West Linn Schools in knowing about environmental study areas, and their availability for class studies, the District Environmental Committee has completed a "first step" survey which follows. It is hoped that many teachers, at any grade level, will utilize these areas where practical in fostering the understandings so necessary at this time. Art, science, health and other areas of study lend themselves to the utilization of such areas.

Further programs are being planned to assist teachers with more specific learning experiences for their students. Whether or not environmental studies are important or are utilized as part of our curriculum for children will depend upon you.

W. J. Falkenstein  
Curriculum Director

### DISTRICT ENVIRONMENTAL CURRICULUM COMMITTEE

Larry Minard, Chairman	- 7th & 8th grade Sunset
Barbara McKillips	- 7th & 8th grade science Bolton
LaVerne Blake	- 2nd grade CedarOak Park
Jane Stickney	- 3rd grade Stafford
Martin Warner	- 7th & 8th grade science Willamette
Don Oldenstadt	- 6th grade Wilsonville
Rod Juranek	- Agriculture High School
Sam Nixon	- Director, Athletics High School
Catherine Aschenbrenner	- Speech Correction Special Services
W. J. Falkenstein	- Curriculum Director Administration Building

## GOALS

- That teachers will know how to utilize our environmental sites in relationship to their subject or group age and will be able to teach youth an understanding of man's relationship to nature and nature's relationship to man.
- To get as many teachers actively involved as possible.
- To teach why we must conserve our natural lands.
- To teach how to constructively enjoy nature for our emotional well being.
- To develop an environmental library.
- To build trails to make areas accessible.
- To gather materials needed to study our environment and develop it such as tools, ponchos, boots.
- To investigate the possibility of getting state or federal money or private donations to develop and use our natural lands.
- To study the actions of other districts in the area of environmental curriculum. To share ideas with resource people and gradually develop our own curriculum.
- To produce in the summer of 1971 an Environmental Study Guide.
- To inventory the wilderness land available to the district and determine how it is and can be used in the future.
- To formulate recommendations for the building of new schools in a well planned environment.
- To provide inservice instruction for teachers on environmental education.
- To stimulate small groups in conservation projects.

## SUNSET SCHOOL ENVIRONMENTAL STUDY AREA

This site was donated to the school district by Crown Zellerbach in 1970. The district has a continuing lease on the land that restricts its use to ecological study and outdoor laboratory use only. No major changes can be made, nor can it be converted to playground area.

The site consists of about 2 acres.

### General Physical Description

Primarily the south slope of a small ravine, the land runs from 5% grade to 20% grade. About 20 % of the land is level. The level area is along the south side, which is adjacent to the Sunset School property and provides the access to the area. There is a small intermittent stream at the bottom of the ravine. This stream runs from November until May. There are several suitable open areas for class assembly. Several good trails crisscross the entire area.

### Vegetation

The entire plot is covered with trees, shrubs and small ground cover plants. There are many old growth and second growth Douglas fir; a considerable stand of big leaf maple, and vine maple; there are several large oak trees, dogwood, elderberry, holly, wild crab apple, cedar, alder, and hawthorne. Small plants such as fern, Oregon grape, blackberry, salal and wild rose are found in abundance. There are also mosses of many types throughout the area. In the damper areas several species of fungus can be seen. Most of the common Oregon wood and wild flowers are present. All of the poison oak has been removed.

### Wildlife

The area is relatively undisturbed considering the closeness to the school yard. Wildlife of many varieties is abundant. Many species of birds can be seen and heard; deer tracks are always present and the deer are often seen. Other known animals in the plot include: opossum, skunk, raccoon, squirrels, pheasant, quail and grouse. The nature of the area provides abundant habitat for insects and rodents of many kinds.

### Special Features of the Area and its Development

There is a considerable depth of "old" soil giving a deep layer of rich top soil in most parts of the plot. Along the stream bed there is a layer of sub soil easily observable with bedrock in some parts. At the southwest corner there is a large out cropping of rock, probably put there when the school basement was dug, that makes a wonderful area to sit and talk.

The nature of the vegetation provides a study in open, semi-open, shaded and heavy shade zones.

There is a need to plant species of trees in the plot that are native to the area but not present. Some would be: pine, hemlock, and spruce. Also there is room to plant additional species of deciduous trees.

At the present there is a temporary shelter being built. If the weather is bad, bring a heavy plastic tarp to cover the frame of the shelter. However, the area is close enough to Sunset School to make it possible to use the school for shelter in an emergency.

Other special features include several old dead logs in various stages of rotting which provide excellent study in the re-cycling process that is constantly going on. Changes in elevation, water supply, density of large vegetation, create a wide variety of plants and wildlife in a small area.

### Seasonal Variations

Because this is part of a drainage system, contains lots of large trees, and is wilderness in nature, it is very easy to trace distinct changes from season to season. The quality of the trails throughout the plot allows year around access to the entire area.

### Natural Hazards

There are no known hazards in the area. However, steep trails, soft stream banks, low hanging limbs, and blackberry vines do provide the possibility of accident if proper common sense is not used.

### Group Size

It is recommended that not more than one class at a time use the area. The areas suitable for group discussion are small, and the noise factor would distract from its use.

### Suggested Usage

This area offers unlimited opportunity to explore the environment from the ecological approach. The following activities are just a few of the possibilities.

1. After a chance to explore and discover write about how the visit makes you feel.
2. Make sketches of some thing that is happening in the area.
3. Collect specimens of plants and try to discover how many different plants are growing in the plot.
4. Formulate hypothesis on what the area looked like 50 to 100 years ago. Show evidence that supports your hypothesis.
5. Plant a new kind of tree or plant in the area.
6. Write a poem about something in the area.
7. Test for soil types, water presence, soil ph, etc.
8. Discover what man has done to the area.

## OPPENLANDER PROPERTY

This property was purchased several years ago from Mrs. Oppenlander as a future site for a primary school. There are 14½ acres in the site. It is to our advantage to become very familiar with this site as we want to be in a position to make recommendations on its future development.

### General Physical Description

The property is located just east of the Y in the Rosemont Road. The south end runs along the upper Rosemont Road. Access is through a wooden gate that closes off the driveway leading back some 100 yards into a grove of old growth Douglas fir. There are two old buildings on the site that may be used for shelter.

The lay of the land is fairly level although there is a gradual drop in elevation as you go toward the north end. There is a shallow dip about 2/3's of the way back on the property.

Other than the large grove of 25 or so large fir and a grove of old fruit trees, is covered only with heavy sod. This has been farm land for many years. Recently the district has just kept the high grass cut.

### Wildlife

Although most of the land offers little cover for animals, there is a wide variety present. The stand of trees offers wonderful refuge for birds and small animals. The fence rows have tall grass along them and provide excellent cover. It is not uncommon to see deer and fox out in the open areas. Pheasant are there in abundance.

### Present Physical Development

There have not been any changes made in the site since it was purchased by the district. In fact there has been little change here for many years. What really needs to be considered is what, if any, changes to the land should be made.

### Seasonal Variations

Other than the cycle that fruit trees go through and that can be observed in heavy grass land little seasonal change takes place here. The land is open to use the year around and might be considered when some of the other sites are too wet to use.

### Natural Hazards

There are no natural hazards in the area unless a child got extremely careless and got into barbed wire or fell in a small animal burrow.



## Group Size

Because of the size of the area there would be little restriction on the size of the group that might want to use it at the same time.

## Suggested Usage

1. Set out bird feeders.
2. Experiment with different kinds of fertilizers.
3. Test soil for: water content, ph, depth of layers, etc.
4. Reconstruct how the land has been used in the past.
5. Develop best use of the land in the future plans.
6. This is an inspiring place to hold an art class, or creative writing class.
7. It would be possible to spend the entire day on this site working out problems related to most or all of the areas of the curriculum.

## PROPERTY ADJACENT TO CEDAROAK PARK SCHOOL

### General Physical Description

There are 2 acres of land which lie at a westerly direction from Cedaroak Park School which are level generally, but gently rolling.

### Vegetation

There are deciduous trees including pussywillow, fern, scotchbroom, blackberry vines and other underbrush. The land is largely clear with the vegetation growing in clumps leaving the majority of the area covered with grass and interlaced with honda trails.

### Wildlife

In past years the underbrush served as a retreat for pheasant and wintering birds. The grass hid small snakes, lizards, rabbits, mice and tree frogs, however very little is now observable in the way of wildlife because of the honda traffic.

### Seasonal Variation

Seasonal changes may be observed due to the climate. The elderberries hang purple and the snowberries are white in the fall, the catkins appear and the buds swell as the leaves burst forth in the bright green of spring.

### Natural Hazards

There are no traffic problems. The honda trails are very muddy when it rains, but safety is possible with usual caution. There is no possibility of anyone getting lost.

### Group Size

Supervision would be no problem because all areas are visible and there is no water or road traffic to prove a threat to safety. A teacher with an aide could very easily handle one classroom of children.

### Suggested Usage

The teachers of Cedaroak Park School voiced a similar plea that the area be restored to its natural state with replantings of natural fauna and flora including Oregon grape, azalea and rhododendron. They also feel that it should be closed to all motorized vehicles.

There was a suggestion that a small pond be added for wild ducks and fish. Log benches for resting places to sit quietly and observe would help develop the area into one invaluable as a

teaching resource and a restful park to be enjoyed by the whole community.

Another suggestion was that an area be set aside where children could construct miniature dams, mountains, etc., of a temporary nature which would promote a "do-learn" process outdoors instead of in a restricted classroom.

There was one suggestion that the site be developed into a play area, however the rest desired it to be encouraged back into its natural wild state with paths through it to make study and pleasure possible.

Under the heading of science we find many suggested studies which include the study of: plants, soils, water, geology, ecology and wildlife. Specifically the children might establish and study bird life at feeding stations, learn to recognize labeled trees and shrubs, learn how animals and plants live and study the seasonal changes which occur to plants and animals -- how the climate affects their lives.

Social studies might include conservation and geography which would incorporate map making and following directions.

Outdoor safety skills, camping methods and sports typically of the woods might be employed quite successfully in the natural area.

Language arts would include writing and reading about trips into the area and the activities enjoyed there. The observations would be excellent for creative writing.

In the creative arts the following would be enjoyed. Nature walks, observations for art projects, color and shape walks for teaching observation, gathering leaves, weeds and seed pods and sketching.

All of the projects mentioned have been either tried or the teachers would like to try them. The addition of the trails, tree and shrub labeling, possible shelters, etc. will make the area of even greater value than it is now. It has been actively enjoyed ever since Cedaroak Park School was built, but its value has greatly diminished because of the careless way the native materials have been ruined.

## CUMBERLAND SITE - WILSONVILLE AREA

On January 13, 1966 the West Linn School District purchased 63.13 acres in the Wilsonville area to be used as a future school site. This property is located on the east side of Clackamas County Market Road #12, approximately ½ mile south of the United Church of Christ in the Frog Pond area. The property is also adjacent to the Glen Cumberland residence.

### General Physical Description

Geologically the area developed as a result of old alluvial deposits from the Willamette River. Evidence of this can be proven by examining the soil in the area.

The property contains two definite types of land. There are 38 acres planted to agricultural crops which has a slope variation of 0-3%. The timber and brush land varies in slope from 0-25% in the gully along Market Road 12.

### Vegetation

The 38 acres of crop land is planted to various examples of cereal grains common to the Willamette Valley. Also some ground is left for summer fallow to aid in weed and grass control.

The remaining 25 acres of uncleared land contains the following types of vegetation along with the normal related species:

2nd growth Douglas fir	Grand fir
stumps and snags of old growth fir	Willow
White oak	Pacific Madrone
Wild cherry	various wild blackberry sp.
Red alder	Dogwood
Western red cedar	Salal
Sword and Bracken fern	Oregon grape

### Wildlife

Not many of the larger species of animals are readily available for classroom observation. Blacktail deer are present but generally fresh tracks will be the only sighting. Ringneck pheasant, quail and various hawks are present and will be seen on many occasions. Many small animals are to be found in the soil, rotted logs, and in the small gullies.

### Present Physical Development

Present plans call for development of several soil profile pits to aid in the study of soils. These will be permanent year-round sites with a key for teacher usage.

Another goal set for the year is to locate and tag in a trail or trails that would survey this land parcel and its unique features. As this is developed it will lend itself to a variety of observations in a natural state. Hopefully it will have uses for grades 1 through 12.

### Seasonal Variations

A small watershed or natural drainage area is included in this property. During the fall and spring natural drainage is present and can be observed and studied. One small water source comes to the surface near a large oak tree located on the map. The other surface water drainage system can be observed along the east property border. These water sources decline in mid-May, and return after the fall rains have saturated the soil surface, therefore field trips should be planned accordingly.

### Natural Hazards

Adequate parking space is available so that students are not in danger from the traffic on Market Road #12. Several leaning trees will be removed to eliminate accidents from occurring. Where the trail is developed it will be safe as long as students stay on the specified paths.

### Group Size

Any normal class can probably be supervised by the teacher and one adult.

### Suggested Usage

1. Due to the large size of the tract it lends itself to a variety of group oriented projects. These might include trail development, plant species identification, etc.
2. Soil studies are easily conducted as both crop land and natural soil developed under conifer cover can be covered. This activity makes an excellent comparison.
3. Another concept easily covered is that of land measurement and plotting. Math can easily be presented in this manner.
4. A study of typical crop land and its management can be observed at this site. Generally activity is greatest in October and July with land preparation and planting followed by harvesting in the summer.
5. Small scale studies of a watershed and the importance of such lands are easily observed on this site.

Specific uses and activities can be found in the following references:

Conservation Tools for Educators

Putting Conservation to Work Series  
US Dept. of Agriculture-Forest Service  
1970

Outdoor Education in Oregon Schools

Oregon State Board of Education  
1968

Conservation Vistas

Pacific Northwest Region  
Forest Service, Portland, Oregon  
USDA

Environmental Education

Milwaukie School District, 1970

(Available from any member of the Environmental Committee)

The Community School Site

US Department of Agriculture  
Soil Conservation Service  
1970

Putting Conservation to Work Sheets Series

Various areas: plant, soil, wildlife, water  
US Forest Service  
Region 6, Portland  
1965