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Adapting the Outcome-Based Education Instructional Process to a Fourth Grade Social Studies and Science Curriculum in the Cascade School District

Daniel J. Roche

ADAPTING THE OUTCOME-BASED EDUCATION

INSTRUCTIONAL PROCESS TO A FOURTH GRADE

SOCIAL STUDIES AND SCIENCE CURRICULUM

IN THE CASCADE SCHOOL DISTRICT

A Project Report

Presented to

The Graduate Faculty

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In Partial Fulfillment

of the Requirements for the Degree

Master of Education

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by

Daniel J. Roche

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ADAPTING THE OUTCOME-BASED EDUCATION
INSTRUCTIONAL PROCESS TO A FOURTH GRADE
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The purpose of this project was to utilize the Outcome-Based Education (OBE) instructional process to develop a curriculum in social studies and science for fourth grade students at Osborn Elementary School, Leavenworth, Washington. To accomplish this purpose, student learning objectives, unit objectives, lesson objectives, and lesson plans were adapted to the OBE instructional model.

ACKNOWLEDGEMENTS

I wish to thank Dr. Jack McPherson for his guidance, leadership, and professionalism in the preparation of this project. My thanks to Dr. Tim Young, and Dr. Gregory Chan for their involvement as members of my committee.

My special thanks to Debbie, my wife, and my children Steve, Shannon, and Marc for their support, encouragement, and patience in helping me reach my goals.

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CHAPTER I

Background of the Study

<u>Introduction</u>

Curriculum organization is a fundamental district and school activity in implementing outcome-Based Education. Because it can consume considerable energy, it is important that districts and schools address issues of curriculum organization efficiently and not impede the implementation of other components of Outcome-Based Education.

In the above statement, Burns (1987) addressed the importance of curriculum organization in the implementation of Outcome Based-Education (OBE). Burns has defined OBE as a system based on a philosophy that says all students can learn what we want them to learn, but at different rates. Burns has further stated that teachers and schools have the power to create all of the conditions for success in learning to improve schooling by closing the gap between what we know and what we do.

Champlin (1989) explained how OBE has also generated a process that has focused on the intentional alignment of instructional goals at every level in the schools. It has been Champlin's contention that school professionals need to know what we're doing and why we're doing it. Said Champlin:

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We need to be always looking for the best possible way to achieve what we want through clear district goals. These goals need to be outcomes based on desired student exit behaviors (p. 1).

The present study involved faculty and staff in the Cascade School District in the process of adapting the OBE instructional process to a fourth grade social studies and science curriculum development project.

Purpose of the Project

The purpose of this project was to utilize the Outcome-Based Education (OBE) instructional process to develop a curriculum in social studies and science for fourth grade students at Osborn Elementary School, Leavenworth, Washington. To accomplish this purpose, student learning objectives, unit objectives, lesson objectives, and lesson plans were adapted to the OBE instructional model.

Limitations of the Project

For purposes of succinctness and focus, it was necessary to set the following limitations for this study:

1. Scope: The project was confined to the development of the fourth grade curriculum in social studies and science at Osborn Elementary School in the Cascade School District, Leavenworth, Washington.

2. Participants: The project included all members of the Cascade School District Outcome-Based Education

Core Team. A total of twenty district administrators, teachers, and classified staff participated.

3. Literature and Research: The literature reviewed in Chapter II was essentially limited to research current within the past ten years.

4. Time: The project focused on the 1991-92 school year.

Definition of Terms

Significant terms used in the context of this study have been defined as follows:

1. Outcome-Based Education (OBE): A system based on a philosophy that all students can learn what schools want them to learn, but at different rates. Teachers and schools create the conditions for this successful learning process (Champlain, 1991).

2. Outcomes Driven Developmental Model (O.D.D.M.): The term used synonymously with the OBE definition (Champlain, 1991).

3. Instructional Process: A thorough, intensive, and sequential learning experience where the teacher totally controls the intensity and the pace of learning (Champlin, 1989).

4. Mastery Learning: An approach to individualized instruction in which students are allowed the time necessary to master units of curriculum before proceeding to the next learning unit (Block, 1971).

5. Cooperative Learning: A group participation process
in which the learning outcome results from common
effort. The learning goal is shared and each person's
success is linked with every other's (Kohn, 1986).

CHAPTER II

Review of Related Literature

Introduction

The review of literature and research summarized in Chapter II has been organized to address:

1. An analysis of the instructional process.

2. The task of the teacher in developing a learning environment in which students can achieve success.

3. The use of cooperative learning in the classroom.

4. Research compiled to create a data screen for instructional decision-making.

5. The importance of mastery learning in implementing the OBE system.

6. Curriculum organization in Outcome-Based Education.

7. Summary.

Data current within the past ten years were identified through an Educational Resources Information Centers (ERIC) computer search.

An Analysis of the Instructional Process

Champlin (1989) has identified the seven essential elements of the OBE instructional process, paraphrased below:

1. Developing comfort with the Instructional Process: A number of critical checkpoints allow the teacher to critically assess each pupil. Expectations need to be established at the beginning. Provisions need

to be established for students who disregard expectations. It is critical that the teacher insist the expectations be met.

2. Correctives: Activities and experiences especially designed to help a learner gain in reducing incomplete learning.

3. Extensions: Providing structured experiences for learners to utilize critical learning in situations expecting that higher cognitive thinking processes are to be sucessfully employed.

4. Grading: A measure of the power a student has demonstrated in an assessment on a particular learning task.

5. Testing/Evaluation: A measurement of the power a student reflects through formal or informal measures. There are four types of evaluation: pre-entry, formative, summative, and exemption assessment.

6. Retesting: An additional assessment to determine when a learner has grown to critical learning standards or for a pupil who has contracted to become eligible to be re-assessed to demonstrate higher levels of learning.

7. Incompletes: A temporary indicator to reflect that the critical learning level has not been attained.

Research conducted by the Johnson City Central Schools, Johnson City, New York, identified the seven instructional components paraphrased below which have characterized "The Johnson City Model."

1. Teaching includes cue-setting, in which an overview is presented to enhance student readiness. Motivation is then used to tell the student the importance of the lesson now and in the future. The teacher uses best shot instruction in which the teacher chooses the best method to teach the information.

2. Correctives are activities and experiences especially designed to help a learner gain in reducing incomplete learning. These correctives are initially and intentionally provided as part of the instructional process during the regular class period. They are very specific in that they deal with a demonstrated learning deficiency. They may require direct reteaching or may be satisfied in a number of other creative ways. A good rule of thumb to follow is that correctives should never be later than tomorrow.

3. Extensions refer to the phase above and beyond critical learnings in which the student takes what they learn and use it in a new way. These extensions require that higher order thinking skills are brought into play.

4. Grading is a measure of the power a student has demonstrated in an assessment on a particular learning task.

5. Critical learning contains the essential skills and understandings prerequisite to continued learning.
The total value of reaching this level is for the student to achieve 80 points, which is not necessarily 80%. This level must be achieved before the student can move on to extended learnings. The temporary grade of "I" is employed until the grade of 80 is earned. Since this grade reflects the power of learning, all other factors (discipline, tardiness, etc.) must be excluded.
These behaviors need to be dealt with as separate issues. The only time a "F" grade is utilized is when all other interventions fail, and the pupil refuses to accept responsibility for his learning.
6. Testing: Used to measure the power of a student's learning reflected through either a formal or informal measurement tool.
7. Retesting: The assessment of the student after he/she has satisfactorily completed the necessary correctives to be re-certified.

Incompletes are temporary indicators that the critical learning level has not been attained. This temporary measure needs to be dealt with within two or three days. A student may receive an incomplete and move on to the next task as long as it can be made up in the stated time frame.

Rubin and Spady (1984) discussed one school's successes in the instructional delivery system used in its mathematics

program in New Canaan, Connecticut. Center School has sixteen (16) classroom teachers and a heterogenous population of 400 K-6 students from a middle-class community. The instructional model used in its mathematics program has embodied all of the features of outcome based education. Data from the school's mathematics program for the past six years indicated that the delivery strategy enabled all students to meet or exceed traditional expectations, as summarized below:

1. Between 10 and 20 percent of the 6th graders each year complete the equivalent of the first half of Algebra I, and many have completed the entire course.

2. No more than one or two students per year in the entire school failed to reach grade level on standardized math tests.

3. In 1981, a representative year, over half of the 6th graders and over one quarter of the 5th graders scored 12.9 (99th percentile) on the Metropolitan Achievement Test in Mathematics.

<u>The Task of the Teacher</u>

<u>in Developing a Learning Environment in</u>

<u>Which Students Can Achieve Success</u>

The role of the teacher in developing a positive learning environment has been a number one priority in

the implementation of an outcome-based philosophy.
According to Abraham Maslow,

> Let people realize clearly that every time they
> threaten someone or humiliate or hurt unnecessarily or
> dominate or reject another human being, they become
> forces for the creation for the creation of
> psychopathology, even if these be small forces. Let
> them recognize that every man who is kind, helpful,
> decent, pyschologically democratic, affectionate, and
> warm, is a psychotherapeutic force even though a small
> one (p. 43)

Purkey (1970), contended that several studies have
shown that it is possible to develop a curriculum in which
the expected academic learning takes place while positive
self concepts are being built. Purkey further stated that
six factors are particularly important in creating a
classroom atmosphere conducive to developing favorable self
images in students. These are: (1) challenge, (2) freedom,
(3) respect, (4) warmth, (5) control, and (6) success.

Purkey summarized his research by stating that the
teacher needs to give the development of self-concept much
more emphasis than before. The teacher has the power to
create a wonderful, warm, and caring environment for
learning. Conversely, he has the capabilities to destroy
and extinguish the light of learning. The teacher can go a
long way to enhance learning by keeping the student's

self-concept in mind.

Glasser (1986) has also identified a list of important needs for people. He believes that all people have needs which drive us. His needs include: (1) to survive and reproduce, (2) to belong and love, (3) to gain power, (4) to be free, (5) and to have fun. Glasser believes that the need for power is the most unique because the way we continually struggle for power is exclusively human.

Coopersmith (1967) has suggested that children who are brought up in a permissive environment tend to develop less self-esteem than those reared in a firmer and more demanding atmosphere. He further states that clearly established and relatively firm guidance produces more self-esteem in children and this can be applied in the classroom.

According to Wylie (1961), perhaps the single most important step that teachers can take in the classroom is to provide an educational atmosphere of success rather than failure. After reviewing over a dozen experiments, Wylie made the statement that students are likely to change their self-evaluations after experimentally induced success or failure. Costello (1964) supported Wylie's findings when stating that that over-all, regardless of the task or the ability of the students, praise produces more improvement in performance than blame. Ludwig and Maehr (1967) showed that the approval of significant others caused an increase in self-ratings and an increased preference for activities

connected with the criterion task, and that disapproval resulted in a lowered self-rating and a decreased performance for related activities.

The Use of Cooperative Learning in the Classroom

Cooperative learning has been a key component in the Outcome-Based instructional process. According to Brandt (1987):

> We Americans like to think of ourselves as rugged individualists, but few of us resemble our self-sufficient ancestors. Instead, we work in complex organizations where to get things done, we must collaborate with others (p. 3).

Brandt further stated that students in classrooms across the country are joining forces to "sink or swim together." He explained that group work not only develops social skills, it is also a powerful tool for teaming. People understand and remember things better if they talk about them with others; this cognitive processing helps them transfer learning from short-term to long-term memory. Finally Brandt stated that cooperative learning has the potential for influencing peer pressure. In cooperative classrooms, students encourage their teammates to do well, because they also benefit.

Slavin's research (1987) has supported the need for cooperative learning in cooperative schools. He stated that there is now evidence to show that students working together

in small cooperative groups can master material presented by
the teacher better than can students working on their own.
He further stated that the idea that people working together
toward a common goal can accomplish more than people working
by themselves. Practical cooperative learning strategies
for classroom use have been developed, researched, and found
to be instructionally effective in elementary and secondary
schools. Slavin claimed that certain forms of cooperative
learning are considerably more effective than traditional
methods in increasing basic achievement outcomes, including
performance on standardized tests of mathematics, reading,
and language.

Slavin's report identified six major components of a
cooperative learning model for use in the elementary school.
They are:

1. Cooperative learning in the classroom.

2. Integration of special education and remedial
services with the regular program.

3. Peer coaching.

4. Cooperative planning time.

5. Building-level steering committee.

6. Cooperation with parents and community members.

David and Roger Johnson of the Cooperative Learning
Center at the University of Minnesota (1987) stated that:

What you want for every child-but especially for
those with a lot of ability-is a cheering section

urging that student to work to maximal capacity.

What you want is teachers cheering each other on

so that if a teacher has a particular strength or

plans a new unit or comes in with new materials,

the others say that's terrific (p. 16).

According to the Johnsons, good, constructive, helpful, committed support can come from peers and subordinates as well as from superiors. In many ways, this kind of support is better coming from peers than from anyone else.

Research Compiled to Create a Data Screen for Instructional Decision-Making

Bloom (1976) found that a diagnosis of appropriate cognitive and affective entry levels accounts for 60-70 percent of the variance in mastering a specific task. He further stated that if teachers can identify cognitive prerequisites (skills and knowledge) and affective entry characteristics (attitudes, interests, and self-concept) and ensure that all students possess them, it would be possible to reduce individual differences in student achievement by up to 75 percent.

Rohwer and Howes (1975) discovered that student recall of information from learning materials can be greatly improved if appropriate visual aids accompany verbal materials. Stallings and Gorabell (1976) also agreed that a variety of instructional materials, audiovisual and manipulative materials, can contribute to student learning.

According to Levine and Stark (1981), teachers gear instruction to higher order cognitive skills in successful programs. They further concluded that coordination of teaching the curriculum and timely testing occurs in successful programs.

Bloom (1976) stated that explicit learning outcomes are essential to any sound program of student learning. Doyle (1981) concluded that teachers structure academic tasks in successful schools. Edwards (1979) explained that the basic skill objectives guide instruction in effective programs.

The use of time on task has been analyzed by Bloom (1968). Bloom found that each student has a particular rate of learning varying according to the nature of the tasks to be learned. Further, a student's rate of learning can be enhanced by successful learning experiences in which relative cognitive and affective characteristics are enhanced. He concluded that when students are given extra time and appropriate help, and when they are motivated to learn, 80 percent or more can finally attain the preset mastery level in each learning unit.

The Importance of Mastery Learning in
Implementing the OBE System

Research conducted by Anania (1981) and Burke (1983) concerning mastery learning demonstrated that comparing conventional instruction (C.I.) with mastery learning (M.L.); the (M.L.) students performed better than 84 percent

of the students in conventional learning class. Students in
tutoring plus (M.L.) class performed better than 98 percent
of the students in the (C.I.) class. Bloom also did similar
research in 1976 and 1984 and came up with the same results
as did Anania and Burke.

Burns (1987), defines mastery learning as both a
philosophy about student learning and a set of instructional
implementation techniques.   Burns stated that Outcome-Based
Education has been rooted in two systematic approaches to
instruction and assessment detailed below:

1. Mastery Learning: An approach to individualized
instruction in which students are allowed the time
necessary to master units of curriculum before
proceeding to the next learning unit.

2. Competency-Base Education: A general term applied
to instructional and assessment efforts aimed at
defining and evaluating student performance.

Spady, Filby, and Burns (1986) recently outlined two
fundamental principles shared by all Outcome-Based Education
(OBE) programs.

1. Instructional practice is designed around clearly
defined outcomes that all students must demonstrate.
Instructional decisions about what a student is to
learn next are based on successful attainment of
learning outcomes.

2. Schools must provide the opportunity for all

students to reach the learning outcomes. This means that OBE programs have organizational arrangements that give teachers flexibility in making instructional decisions regarding use of time, grouping arrangements, teaching methods, and materials.

Spady, Filby, and Burns (1986) defended what they termed the optimistic philosophy of OBE programs derived from mastery learning theory. This philosophy has asserted that instruction can be organized so that virtually all students can learn the information, concepts, and skills embodied in the curriculum. Further, teachers can teach in such a way as to insure that virtually all students achieve high levels of learning.

Curriculum Organization in Outcome-Based Education

According to Burns (1987), in OBE programs, the curriculum can be organized around learning outcomes that have been established at the district or school levels. The outcomes determine what should be taught and how the curriculum should be structured into learning units, courses, or programs of study that will best achieve those outcomes. Typically, curriculum segments have: (a) outcomes defined in terms of goals and objectives; (b) standards of student performance which directly embody the goals and objectives; and, (c) curricular material sequenced in a logical fashion to support attainment of the outcomes,

goals, and objectives.   All of these components are then aligned so that what is taught is also tested.

Burns and Squires (1987) explained that curriculum organization is a fundamental district and school activity in implementing OBE.   Specifying learning outcomes is the starting point for curriculum organization in OBE.

Burns and Squires considered useable learning outcomes as a critical first activity.   Once learning outcomes are outlined and organized, the second activity is to adopt or develop appropriate curriculum materials for those outcomes. The real challenge is to go beyond the textbook and organize curriculum materials into learning units.   These learning units outline topics for instruction and specify ways the topics can be taught.

The third activity is to align the curriculum by (a) aligning exit outcomes of existing curriculum documents with lessons objectives and, (b) using district assessment instruments to evaluate the effectiveness of its educational programs.

Summary

The research and literature summarized in Chapter 2 supported the following predominant themes:

1.   The OBE instructional process contains certain identifiable elements.

2. The teacher is the key player in the success of the Outcome-Based Education process and the development of a positive learning environment.

3. Cooperative learning in the classroom has been proven effective in developing mastery for the learner.

4. Research developed to create a data screen for instructional decision-making indicated that development of higher order thinking skills has been evident in successful programs.

5. Mastery learning has proven to be a key instructional element that drives the OBE model.

6. Curriculum organization in OBE has focused on defining outcomes, developing learning units, aligning curriculum, and managing curriculum.

CHAPTER III

Procedures of the Study

The purpose of this project was to utilize the Outcome-Based Education (OBE) instructional process to develop a curriculum in social studies and science for fourth grade students at Osborn Elementary School, Leavenworth, Washington.

Chapter III contains background information detailing:

1. The need for the study.

2. The curriculum adaptation process.

3. Implementation of the Project

Need for the Study

The need to adapt the OBE instructional process for use in the Cascade School District originated with Mr. Howard Cook, the current principal at Osborn Elementary School. Cook had studied about Outcome-Based Education and had attended the National Outcome-Based Education Conference in Phoenix, Arizona in 1989. Excited about the possibilities that OBE held for the Cascade School District, Cook persuaded the school district superintendent to invite Dr. John Champlin to Leavenworth to speak to the entire school district staff.

Dr. Champlin's visit inspired administrators, teachers, and school board members throughout the district of the need to implement the OBE instructional process in the Cascade School District. The superintendent and school board

responded by making a commitment to begin the process of restructuring district schools into the OBE process.

A district core team comprised of twenty staff members including all administrators, and selected teachers and paraprofessionals was established. Core teams from each building were established. This writer, (Daniel J. Roche), was one of the five members chosen from the Osborn Elementary School.

After several training sessions and a weeklong workshop conducted by Dr. Champlin, the determination was made to adapt the OBE instructional process to the development of a fourth grade social studies and science curriculum at Osborn Elementary School. The writer was charged with the responsibility for developing the fourth grade curriculum which was the subject of this project.

<u>The Curriculum Adaptation Process</u>

The fourth grade social studies and science curriculum was developed and adapted for use at Osborn Elementary School during the 1991-92 school year. The writer was given responsibility for organizing the following activities:

1. Adapt district Student Learning Objectives

   a. Establishing unit objectives

   b. Identifying lesson objectives

   c. Adapting learning units

2. Developing lesson plans

   a. Understanding mastery learning rationale

b. Developing learning unit specifications

c. Designing formative and mastery assessment
instruments.

d. Developing extension and corrective activities

Implementation of the Project

Throughout the 1991-92 school year, this writer worked with a five member core team to develop and implement the OBE model at Osborn Elementary School. The OBE instructional process adapted for use with the fourth grade social studies and science curriculum at Osborn Elementary School has been presented in Chapter IV.

Chapter IV

The Project

The curriculum produced as a result of this project has utilized the OBE instructional process to facilitate the teaching of social studies and science in fourth grade classrooms at Osborn Elementary School in Cascade School District, Leavenworth, Washington.

Chapter IV contains a total of eight lesson plans developed to implement the OBE instructional process in social studies and science at Osborn Elementary School.

The chapter has been organized to provide an overview of appropriate lesson plans four (4) social studies student learning outcomes (SLO) and four (4) science student learning outcomes (SLO):

Social Studies SLO #1. Using Map and Globe Skills: (Lesson Plan #1).

Social Studies SLO #2. Having an Understanding of Current Events: (Lesson Plan #2).

Social Studies SLO #3. Demonstrating Knowledge of Geographical and Economic Concepts of the State of Washington: (Lesson Plan #3).

Social Studies SLO #4. Demonstrating a Knowledge of Our Country's Heritage and Geographical Regions: (Lesson Plan #4).

Science SLO #1. Understanding That All Life Can Be Explained in Terms of a Cycle: (Lesson Plan #1).

Science SLO #2. Understanding That the Earth's Surface
is Constantly Changing: (Lesson Plan #2).

Science SLO #3. Understanding that Machines Have
Certain Properties: (Lesson Plan #3).

Science SLO #4. Understanding That Materials in/on
Earth Can Be Used Again: (Lesson Plan #4).

Outcome-Based Educational Instructional

Process For Fourth Grade Social Studies

and Science Students

Osborn Elementary

Cascade School District

Leavenworth, Washington

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SOCIAL STUDIES

SCIENCE

SOCIAL STUDIES

STUDENT LEARNING OUTCOME #1

Lesson Plan One: Hemispheres

CASCADE SCHOOL DISTRICT #228
SOCIAL STUDIES LEARNING ACTIVITIES

PRE-TEACHING

CURRICULUM AREA:

Social Studies

UNIT OBJECTIVE:

Understand the hemispheres and how the equator, prime meridian, and 180 degree meridian identify places in the world.

LESSON TOPIC:

Hemispheres

LESSON OBJECTIVES:

a. Define a hemisphere as any half of a globe.

b. Use the equator to identify the Northern and Southern hemispheres on a globe.

c. Use the prime meridian to identify the Eastern and Western hemispheres on a globe.

RESOURCE:

"Where and Why" A Map and Globe Skills Program, Nystrom, 1980.

TEACHING

LEARNING ACTIVITY:

Cue Set 1. Before listening to the tape, review with the students the difference between a globe and atlas. Tell them about some very important lines that help us know where we are at all times. Discuss

P2

the importance of having lines on a globe.

2. Inform the students what will be learned today and how they can use the information.

Best Shot 3. Pass out globes and marking pens to the students.

4. Put the audio tape "Hemispheres" into the cassette player and turn on. The tape will instruct the students and the students will respond by marking the globe in the appropriate areas.

Practice 5. After finishing the tape, the students will receive a worksheet handout that will allow them to practice the skills they have learned.

Extension 6. The teacher will give the extension activity of drawing a map and using the prime meridian and equator lines on their atlas. The students who have finished the worksheet and have demonstrated competency may proceed with the extension. The students who need more time will be monitored and helped as needed by the teacher.

Closure 7. The teacher will review with the students the learning that took place today and ask for questions or comments from the students.

POST-TEACHING

SUMMATIVE ASSESSMENT:

Review   After the successful completion of the assigned
lessons. The teacher will assess the learning by
looking at the student's work and review questions
directed towards the class. Students who have
completed their assigned work and in the teacher's
judgement are ready are given a summative
assessment (test).

MATERIALS NEEDED:

Nystrom Globe

Washable marking pens

Pencil

Colored pencils

Ruler

SOCIAL STUDIES

STUDENT LEARNING OUTCOME #2

Lesson Plan Two: Current Events

OSBORN ELEMENTARY

CASCADE SCHOOL DISTRICT

PRE-TEACHING

CURRICULUM AREA:

Social Studies

UNIT OBJECTIVE:

To develop an awareness of events happening
around the world and understand how they
relate to us.

LESSON TOPIC:

Current Events

LESSON OBJECTIVES:

a. To develop an awareness of the events
happening around the world and to explore the
connection with how these events effect us.

b. To develop skills in speaking in front of
people.

RESOURCES:

magazines

newspapers

radio

television

TEACHING

LEARNING ACTIVITY:

Pre-requisite   1. The students have been assigned on a previous day to get information about any event happening in the world that is of interest to them. They may use a newspaper, radio, television, or a person as a resource.

2. The students will write their information on a piece of paper, or cut an article out of a newspaper or magazine. The information must contain the who, what, where, when, and why answers.

Best shot   3. The students will be instructed to come in front of the class and report their current event. The teacher will remind them the importance of speaking clearly, loudly, and with correct posture and eye contact.

Feedback   4. The students or teacher may question, comment, or give feedback for any current event. The student will then pin their event on the current events board.

Extension   5. The students will write about their favorite current event and explain why they liked it.

Review   6. The teacher will review the events covered today and use the world map to point out where the event took place.

POST-TEACHING

1. The teacher will reserve the right to bring back the information covered in the current event to supplement other curriculum areas and show a relationship.

MATERIALS NEEDED:

World and U.S. Maps

paper

pencil

SOCIAL STUDIES

STUDENT LEARNING OUTCOME #3

Lesson Plan Three: City on the Sound

OSBORN ELEMENTARY

CASCADE SCHOOL DISTRICT #228

SOCIAL STUDIES LEARNING ACTIVITIES

PRE-TEACHING

CURRICULUM AREA:

Social Studies

UNIT OBJECTIVE:

The student will learn about the geography, industry, and places to see in the State of Washington.

LESSON TOPIC:

City on the Sound

LESSON OBJECTIVE:

To develop an understanding of the city of Seattle by studying it's geography, industries, and places to see.

RESOURCE:

"The Environments of Washington State" a videotaped series about the geography, people, geology, climates, plants, and animals of the State of Washington, by the Clover Park School District, Tacoma, Washington.

TEACHING

LEARNING ACTIVITY:

Cue Set 1. Ask the students what they know about the city of Seattle. Tell them about the videotape and ask them to take special note of the things they will learn. Inform the students that the class will be taking a field trip to Seattle in the spring.

Best shot 2. Show the videotape.

3. After viewing the tape, discuss with the students what they learned. Include in the discussion the places to see, industries, geography, and what wasn't on the tape that they know about Seattle.

4. Put the students in a cooperative learning team.

Practice 5. Handout the worksheets and instruct the students to work together in the cooperative learning model that has been previously taught. The group must start and finish together.

Extension 6. Any group that finishes early and has demonstrated competency by doing the activity correctly, can go on to the extension by writing and comparing what they already knew about Seattle with what they learned about the city.

7. All worksheets are checked in class and correctives applied to fix any errors.

Closure 8. The teacher closes the lesson by reviewing what was learned and asking for student questions or comments.

POST-TEACHING

SUMMATIVE ASSESSMENT:

Review 1. After the successful completion of all of the lessons about the environments of Washington, the teacher will review key vocabulary, places, industries, and geography.

2. This qualification process then will end with the summative assessment.

3. Any students who score at a mastery level (80%) will then go on to a teacher assigned extension.

4. Any students who score below the mastery level will go through correctives from the teacher and then re-test the material missed in a different test.

MATERIALS NEEDED:

pencil

paper

colored pencils

SOCIAL STUDIES

STUDENT LEARNING OUTCOME #4

Lesson Plan Four: The Earliest Settlers

CASCADE SCHOOL DISTRICT #228

SOCIAL STUDIES LEARNING ACTIVITIES

PRE-TEACHING

    CURRICULUM AREA:

        Social Studies

    UNIT OBJECTIVE:

        Understand the culture and lifestyle of the early people in the Pacific Coast Region.

    LESSON TOPIC:

        The Earliest Settlers

    LESSON OBJECTIVES:

        a. Explain how hunting on the tundra changes with the seasons.

        b. Use a map and the text to compare and contrast vegetation in the Pacific Coast region.

        c. Compare and contrast the lives of the earliest settlers in the Pacific Coast region.

    RESOURCE:

        Regions Near and Far; Heath Social Studies Text, 1985.

TEACHING

LEARNING ACTIVITY

Cue Set   1. Explain to the students what will be learned today. Review the word culture and discuss it's meaning.

2. Ask how the changing of seasons has a big effect on their lifestyle and tell them to try and notice the same for the Eskimos.

Best shot 3. Read the lesson aloud.

4. After reading instruct the students to divide a sheet of paper into three parts and label winter, spring, and summer. Then tell them to write in the appropriate column examples of how the Eskimos' lives changed from season to season.

Practice 5. Next, have the students flip their paper over and write the heading used on the legends in the map of their book. Then write which Pacific coast states would have the vegetation given in the headings.

Extension 6. Students who have shown competency in these activities will then be instructed to compare and contrast the lives of the earliest settlers by writing about them.

Correct   7. The teacher will then work with the students who have not reached competency by doing correctives and formative assessments.

Review   8. The teacher will then review what was learned today and ask for questions or comments from the students about the lesson.

POST-TEACHING

SUMMATIVE ASSESSMENT:

1. After successful completion of the assigned lessons and activities, the teacher will review the main objectives with the class and assign a formative assessment to the students who have qualified.

2. Students who reach the mastery level on the summative assessment will then go on to an extension activity.

3. Students who have not reached competency will go to a series of correctives dealing with the learning that has not been completed. When they have reached the level needed, they will take a re-test made in a different way than the original.

MATERIALS NEEDED:

textbook

paper

SCIENCE

STUDENT LEARNING OUTCOME #1

Lesson Plan One: Animal Life Cycles

OSBORN ELEMENTARY SCHOOL

CASCADE SCHOOL DISTRICT #228

SCIENCE LEARNING ACTIVITIES

PRE-TEACHING

CURRICULUM AREA:

Science

UNIT OBJECTIVE:

Understand that life has many changes and takes
many forms.

LESSON TOPIC:

Animal Life Cycles

LESSON OBJECTIVE:

Describe the life cycles of animals and give
several examples.

RESOURCE:

Holt Science Text; 1986

TEACHING

LEARNING ACTIVITY:

Cue set 1. Review with the students what they have already
learned about animal populations. Explain that
this lesson is going to go above and beyond their
previous learning.

2. Explain that all life occurs in a cycle and
give examples of human life. Point out that they
are in the midst of their life cycle.

Best Shot 3. Read the lesson aloud.

4. In a discussion, have the class compare and contrast the reproduction of the amoeba, hydra, and brine shrimp. Illicit from the students information about reproduction of the organisms.

5. Using a transparency, draw the stages of the butterfly life cycle.

Extension 6. The class will engage in an extension activity using brine shrimp. They will get the materials from our science kit and raise the shrimp from eggs. They will analyze the best conditions needed for raising brine shrimp. They will observe the various stages of development and write what they learned at the end of the project. Review with the students what was learned and ask for questions or comments.

POST-TEACHING

SUMMATIVE ASSESSMENT:

1. The teacher will review the unit after all lessons have been successfully completed. Special emphasis will be made towards the critical learning activities.

2. After the students have qualified by having all of the lessons completed, the teacher will give a summative assessment. Students who score at a mastery level (80%) or above will be given an extension activity. Students who score below

competency level will be given correctives
pertaining to the skills still needed to be
learned. They then will be given a re-test that
will be different from the original test but using
the same objectives.

MATERIALS NEEDED:

textbook

brine shrimp eggs

plastic cups

artificial salt water

SCIENCE

STUDENT LEARNING OUTCOME #2

Lesson Plan Two: Moving Continents

OSBORN ELEMENTARY SCHOOL

CASCADE SCHOOL DISTRICT #228

SCIENCE LEARNING ACTIVITIES

PRE-TEACHING

CURRICULUM AREA:

Science

UNIT OBJECTIVE:

The student will understand the relationship of
earthquakes and volcanos with the forming of the
continents.

LESSON TOPIC:

Moving Continents

LESSON OBJECTIVE:

Explain the theory of continental drift, and
identify evidence to support this theory.

RESOURCE:

Holt Science Text; 1986

TEACHING

LEARNING ACTIVITY:

Prerequisite 1. Review with the students about the earth
being divided into plates. Also remind the
students that these plates are constantly moving.

Cue set 2. Tell the students that we are going to try and
determine evidence to support the theory that the
continents were once connected into one
super-continent called Pangea.

P22

Best shot 3. Read the lesson silently.

4. Distribute the following materials to each student: construction paper, tracing paper, scissors, glue, and a map of the world. Instruct the students to trace the map of the world and then cut out each continent and paste it on the construction paper to make their own Pangea.

5. Discuss with the students other clues that would support the Continental Drift Theory.

Extension 6. For an extension activity, have the students trace the continents of South America and Africa and cut them out. Then have them put the cut out continents together and trace them on an index card. Do the same thing with ten successive index cards separating the continents slightly each time. The tenth card should show the continents the way they are today. Staple the cards in the upper left corner and flip through them slowly. The students should get a good concept of drifting continents from this activity.

Review 7. The teacher will review what was learned and ask for comments or questions concerning the lesson.

POST-TEACHING

SUMMATIVE ASSESSMENT:

1. The teacher will review the unit after all lessons have been successfully completed. Special emphasis will be made towards the critical learning activities.

2. After the students have qualified by having all of the lessons completed, the teacher will give a summative assessment. Students who score at a mastery level (80%) or above will be given an extension activity. Students who score below competency level will be given correctives pertaining to the skills needed to still be learned. They then will be given a re-test that will be different from the original test but still using the same critical learnings.

MATERIALS NEEDED:

construction paper

tracing paper

glue

scissors

pencil

textbook

map of the world

SCIENCE

STUDENT LEARNING OUTCOME #3

Lesson Plan Three: The Lever

OSBORN ELEMENTARY SCHOOL

CASCADE SCHOOL DISTRICT #228

SCIENCE LEARNING ACTIVITIES

PRE-TEACHING

CURRICULUM AREA:

Science

UNIT OBJECTIVE:

Understand that machines play a big part in doing work for man.

LESSON TOPIC:

The Lever

LESSON OBJECTIVE:

Explain what a lever is and identify machines that are levers.

RESOURCE:

Holt Science Text; 1986

TEACHING

LEARNING ACTIVITY:

Cue Set 1. Explain to the students that today they are going to learn about levers and understand how they work.

Best shot 2. Bring in a sturdy plank and a small log. Place the plank on top of the plank in the middle. Stand on one end of the plank and instruct the students to one by one start standing on the plank until you are lifted up.

3. Explain to the students to overcome the resistance of the larger person, the smaller person must increase their distance from the fulcrum.

4. Read the lesson aloud.

5. Have the students take out a sheet of paper and draw a diagram showing the fulcrum, lever, load, and force. Label each part.

6. Using an overhead projector, draw several different examples of levers and ask individual students which would be more efficient.

Extension 7. For an extension activity tell the students to make a list of ten levers not discussed in today's lesson.

Review 8. In closing the lesson, ask the student what was learned in today's lesson. Solicit comments or questions concerning the lesson.

POST-TEACHING

SUMMATIVE ASSESSMENT:

1. The teacher will review the unit after all lessons have been successfully completed. Special emphasis will be made on the critical learning activities.

2. After the students have qualified by having all of the lessons completed, the teacher will give a summative assessment. Students who score at the

mastery level (80 percent) or above will be given
an extension. Students who score below the
competency level will be given correctives
pertaining to the skills still needed to be
learned. They then will be given a re-test using
the same critical learnings.

MATERIALS NEEDED:

textbook

sturdy plank

short log

SCIENCE

STUDENT LEARNING OUTCOME #4

Lesson Plan Four: Recycling the Earth's

Treasures

PRE-TEACHING

CURRICULUM AREA:

Science

LESSON TOPIC:

Recycling the Earth's Treasures.

UNIT OBJECTIVE:

Develop an appreciation for the importance of taking care of the Earth's environment.

LESSON OBJECTIVE:

Develop an appreciation for the importance for recycling the Earth's treasures.

RESOURCE:

Local recycling center

"50 Simple Things Kids Can Do to Save The Earth," by The EarthWorks Group, 1991.

TEACHING

LEARNING ACTIVITY:

Cue set 1. Ask student what recycle means and solicit what their families do to recycle.

Best shot 2. Begin the lesson by reading from the book pages 22-30 dealing with home recycling.

3. Reinforce the importance of everyone recycling their aluminum cans, paper, glass, etc.

4. Schedule a person from the state recycling agency to talk to the students about recycling.

5. Schedule a field trip to the local recycling center.

Extension 6. Assign the students to formulate their own recycling plan in their families, including how, what, and where their family intends to do about recycling.

Review 7. Review with the students what was learned and solicit comments and questions.

POST-TEACHING

SUMMATIVE ASSESSMENT:

Each student is to research a business that uses recycled materials to build new products. They are then to present a report to the class about the business.

CHAPTER V

Summary, Conclusions, and Recommendations

Summary

The purpose of this project was to develop a curriculum in social studies and science that uses the instructional process in Outcome Based Education (OBE). To accomplish this purpose, student learning objectives, unit objectives, lesson objectives, and lesson plans were adapted to the OBE instructional model.

Conclusions

Conclusions reached as a result of this project were:

1. Appropriately used, the OBE instructional process can enhance the learning of social studies and science for fourth graders.

2. The purposeful and intentional use of the OBE instructional process provides the alignment for what the student needs in order to succeed.

3. The use of mastery learning helps achieve success by certifying the attainment of the critical learnings.

Recommendations

As a result of this project the following recommendations have been suggested:

1. Teacher inservice programs should require development of the OBE instructional process at every curriculum level in a district that has adopted the OBE model.

2.   OBE school districts need to provide the financial resources that it takes to successfully implement the OBE model. The current state funding does not provide this financial resource.

3.   Teachers at grade levels and subject levels need a common planning time to properly implement the curriculum, it is recommended that OBE school districts develop a commitment to providing the time and materials to make the process work.

4.   OBE is coming to the forefront of education in the State of Washington. It is recommended that the OBE districts participate in the national and statewide OBE organizations and conferences to keep progressing with current information.

References

Abrams, J. (1985, September). Making outcome-based education work. <u>Educational Leadership</u>, 30-32.

Anania, J. (1981). The effects of quality of instruction on the cognitive and affective learning of students. Ph.D dissertation, University of Chicago.

Bloom, B. (1984, May). The search for methods of group instruction as effective as one-to-one tutoring. <u>Educational Leadership</u>, 4-17.

Bloom, Benjamin, and Krathwohl, David (1987). <u>Taxonomy of Educational objectives</u>. New York: Longman Inc.

Brandt, R. (1987, May). Is Cooperation Un-American? <u>Educational Leadership</u>, 3-19.

Burke, A. J. (1983). Students Potential for Learning Contrasted Under Tutorial and Group Approaches to Instruction. Ph.D. dissertation. University of Chicago.

Burns, R., and Squires, D. Curriculum Organization in Outcome-Based Education. ERIC Document Reproduction Service, ED 294 313.

Burns, Robert. Models of Instructional Organization: A Casebook on Mastery Learning and Outcome-Based Education. ERIC Document Reproduction Service, ED 294 313.

Champlin, John (1989). Description of Parts of the Instructional Process. Phoenix, Arizona.

Champlin, John (1989). Outcome-Based Instructional
    Operational Features. Phoenix, Arizona.

Coopersmith, S. (1967). The antecedents of self esteem.
    San Francisco: W. H. Freemand and Co. Publishers.

Costello, C. G. (1964). Ego involvement, success and
    failure: A review of the literature. New York: The
    MacMillan Co.

Glasser, William (1986). Control theory in the classroom.
    New York: Harper and Row.

Johnson, David, and Roger, (1987). Circles of learning.
    Minneapolis, Mn: The Association of Supervision and
    Curriculum Development.

Johnson City Central Schools, (1986, May). Ten Classroom
    Practices. Johnson City, New York.

Kohn, Alfie (1986, September). How to Succeed Without
    Really Vying. Psychology Today, 22-27.

Levine and Stark, (1981). An Analysis of Research
    Compiled For Use By Outcomes Driven Developmental Model
    Districts To Create A Data Screen For Instructional
    Decision-Making. Outcomes Inc. Lubbock, TX.

Ludwig, D. J., and Maehr, M. L. (1967). Changes in self-
    concept and stated behavioral preferences. Child
    Development, 453-67.

Marx, G., & Spady, W. (1984). Excellence In Our Schools:
    Making It Happen. San Francisco, CA: American

Association of School Administrators and The Far West
Laboratory.

Maslow, A. H. (1954). <u>Motivation and Personality</u>. New
York: Harper and Row Publishers.

Murphy, Carol. Outcome-Based Instructional Systems: Primer
and Practice. ERIC Document Reproduction Service, ED
249 265.

Outcomes Inc. (1986). An Analysis of Research To Create A
Data Screen For Instructional Decision Making.
Lubbock, Texas.

Purkey, William (1981). <u>Self-concept and school
achievement</u>. New York: Prentice-Hall.

Robinson, Glen (1986, February). Learning Expectancy: A
Force Changing Education. Education Research Service.

Rohwer and Hughes (1975). An Analysis Of Research Compiled
For Use By Outcomes Driven Developmental Model
Districts To Create A Data Screen For Instructional
Decision-Making. Outcomes Inc. Lubbock, Texas.

Rubin, S., and Spady, W. (1984, May). Achieving Excellence
Through Outcome-Based Instructional Delivery.
<u>Educational Leadership</u>, 37-44.

Slavin, Robert (1988, September). Synthesis of Research
on Grouping in Elementary and Secondary Schools.
Educational Leadership, 67-75.

Spady, W., Wilby, S., and Burns, R. What are mastery
      learning and outcome-based education? ERIC Document
      Reproduction Service ED 318 117.

Southwest Educational Development Laboratory (1989, July).
      Harnessing the Power of Beliefs: Guides for Policy and
      Practice. Austin, Texas.

Wylie, R. C. (1961). The Self-Concept: A Critical Survey of
      Pertinent Research Literature. Lincoln, NE:
      University of Nebraska Press.

APPPENDIX A

INSTRUCTIONAL PROCESS OVERVIEW

INSTRUCTIONAL PROCESS OVERVIEW
(Revised 8/88)

I N S T R U C T I O N

FORMATIVE ASSESSMENT ← →

CORRECTIVES-EXTENSIONS ← →

CLOSURE ← →

Unit guide

Objectives driven by outcomes

Prerequisites

Vocabulary

Material

PLANNING

Tell students what, why & how long

Daily and for unit

Intervene to teach skills | Publish objectives

PREREQUISITE REVIEW FOR UNIT | CUE SETTING MOTIVATION

Tied to essential objectives

At least two modes

BEST SHOT FOR CRITICAL LEARNING

GUIDED PRACTICE

"Mini Best Shot" for extension for all

INDEPENDENT PRACTICE

CORRECTIVES

EXTENSION

HIGHER LEVEL THINKING ACTIVITIES FOR ALL

EXCEPTIONAL

REVIEW FEEDBACK CLOSURE

Tied to objectives

Assess learning

Complete or incomplete

SUMMATIVE ASSESSMENT

PHASE 1:
Pre-Teaching

PHASE 2:
Teaching

PHASE 3:
Post-Teaching

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