

**ENGLISH LANGUAGE DEVELOPMENT  
THEORY AND PRACTICES:  
BACKGROUND INFORMATION  
FOR “EE” PROVIDERS**

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Environmental Education Training and Partnership (EETAP) Program in partnership with  
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## Contents

- I. Introduction
- II. The Demographics: Who Are California’s English Language Learners?
- III. Joining Together: How Are Environmental Education (EE) and English Language Development (ELD) Linked?
  1. EE Supports Two Kinds of Language Proficiency
    - a. Conversational Language Proficiency
    - b. Academic Language Proficiency
  2. EE as a Means for Providing “Comprehensible Input” to ELLs
- IV. What Strategies Can EE Providers Use to Ensure Comprehensible Input for All ELLs?
  1. Assessing and Adjusting the Instructional Language Used in the EE Lessons
    - a. Using Contextual Clues
    - b. Modifying the Linguistic Output
    - c. Checking Frequently for Understanding
  2. Assessing and Adjusting the Instructional Practices Used in EE Lessons
    - a. Presenting a Lesson with ELLs in Mind
    - b. Encouraging Active Language Production
    - c. Strengthening Language Development and Knowledge Construction
  3. Assessing and Adjusting the Structure of EE Lessons
    - a. Adding Primary Language Support When Previewing the Lessons
    - b. Connecting ELLs’ Prior Knowledge to the New Knowledge in the Lesson
    - c. Creating an ELD Focus
    - d. Examining the Procedural Steps of the EE Lesson
    - e. Providing Primary Language Support When Reviewing the Lesson
    - f. Assessing and Evaluating the Lesson
    - g. Considering Ways to Extend, Vary, or Enrich the Lesson
  4. Summary

Appendix A: References

Appendix B: Stages of Language Development and Proficiency

Appendix C: Sample Adjusted EE Lessons

Appendix D: Suggestions for Accommodating ELD Educators During Workshops

Appendix E: Definitions of Acronyms and Terms Commonly Used in ELD Circles

Appendix F: Useful Contacts and Other Resources

## I. Introduction

Imagine you are preparing to present an environmental education activity to a group of 25 enthusiastic students who have very limited use of English. You and their teacher do not speak any of the students' native languages, and the five parent volunteers have limited English proficiency and different native languages. As you review various activities—such as Project Learning Tree's "Every Tree for Itself," Project WILD's "What's for Dinner?" or Project WET's "The Incredible Journey"—you ask yourself: *What should I do with this group? What do I need to know in order to help these children learn the important ecological concepts in each lesson? Can I help them expand their understanding and use of English at the same time they learn these concepts?*

With this scenario in mind, California's Project Learning Tree, Project WILD, and Project WET programs, funded by a grant from the U.S. Environmental Protection Agency's "Environmental Education Training and Partnership" program, teamed up to provide a five-hour workshop for program facilitators. The goal of this effort was to help program facilitators expand their understanding of the needs of educators working with children described as "English Language Learners" (ELLs). The workshops, held in seven locations in 1998, focused on these objectives:

- To increase the facilitators' familiarity with the theory and practices of English Language Development (ELD) and to demonstrate how the academic content of environmental education (EE) lessons can be adjusted in order to accommodate the needs of ELLs so that they can build environmental knowledge and literacy.
- To motivate facilitators to provide workshops for teachers of ELLs so that environmental education is extended to these children, a group often underserved by EE providers.
- To assist facilitators in using workshop strategies and techniques that will accommodate the needs of ELD educators, and their students, thereby expanding the participation of both teachers and children in environmental education.

The following pages provide a synopsis of information presented at the workshops. Though very limited in scope, these notes review ELD theory and practices and serve to help EE providers apply this information when planning and carrying out lessons and activities such as those presented in the Project Learning Tree, Project WILD, and Project WET activity guides.

## II. The Demographics: Who Are California's English Language Learners?

English Language Learners (ELLs) are the fastest growing group of students in the United States, with nearly 41 percent of the nation's ELLs attending schools in California (cited in Berman, et al, 1995). By federal standards, students are considered to be ELLs when their native language is other than English and their difficulties in understanding, reading, or writing English impair their opportunities for experiencing academic achievement in English-only classrooms and for participating fully in society (NCBE, 1996).

Between the 1980 and 1990 national census reports, the number of students who are ELLs grew two and one-half times faster than the general student population, especially in large urban areas. More than 9.9 million students come from language minority families and approximately 50 percent of these students are considered to be ELLs (Berman, et al, 1995). California now has 1.5 million ELLs among the state's 6 million K-12 students – or more than one in five students. The number of ELLs in California has more than doubled in the last decade (CDE, 1997).

In California, 80 percent of ELLs speak Spanish, making it the most common native language of ELLs. Another 8 percent speak Cantonese, Vietnamese, or Hmong as their primary language (UC Davis, 1997). Some demographers project that by the year 2050, more than 25 percent of the nation's population will be Latino, and that the Asian population also will continue to increase (Farley, 1997). These demographic changes not only challenge what society considers the norm for language use in schools, but also challenge all aspects of the social institutions that support what was once thought of as the “dominant culture.”

ELLs arrive at school displaying a wide range of linguistic and academic abilities and needs. Some have attended school in their country of origin and enter schools here with developmentally and age appropriate levels of native language and academic skills. Among ELLs born here, many often enter school with inadequately developed skills in both their native language and English. Research strongly demonstrates that acquisition of literacy is connected to a child's early and rich exposure to language use. In fact, participation in such an environment, in any language, has been shown to be one of the most significant predictors of later English academic achievement (UC Davis, 1997). Also repeatedly validated is the positive effect primary language maintenance has on academic achievement (Thomas and Collier, 1997).

Federal regulations require that ELLs receive instruction through some form of *pecially designed* program. In practice, however, many ELLs are simply left adrift in English-only classrooms where they eventually “sink or swim” academically (NCBE, 1996). Until recently in California (September 1998), 30 percent of ELLs were taught in classrooms where a mix of primary language academic instruction and English Language Development (ELD) was used to achieve English proficiency and academic success; 22 percent received ELD instruction through “Specially Designed Academic Instruction in English” (SDAIE), a method used

with older ELLs who have an intermediate level of English proficiency; 20 percent received occasional informal help in the primary language, usually from their peers or classroom aides; and the remaining 28 percent received no specialized instruction at all (UC Davis, 1997).

With the passage of Proposition 227 in June 1998, the “English Only” initiative, circumstances have changed for California’s ELLs. At present, it is unclear exactly how this mandate will affect classroom instruction for ELLs. However, based on past educational research patterns and equivalent ones that are emerging, society most likely can expect lower levels of academic achievement to occur among ELLs and significantly higher numbers of ELLs to drop out from the educational process (Thomas and Collier, 1997).

### **III. Joining Together: How Are Environmental Education and English Language Development Linked?**

Over the last thirty years researchers in the area of second language development have accumulated extensive data on how people acquire a second language. One of the key factors identified is the nature of the educational conditions that successful second language students experience. It is this key factor that can unite the curriculum efforts of EE and ELD and makes possible an educational climate that is mutually supportive of each other's educational goals.

Contributing to the creation of the educational conditions that link EE and ELD is the process of supplying "comprehensible input." In terms more familiar to environmental educators, comprehensible input is comparable to the many ways EE supports students in the construction of meaning from what is being communicated in a lesson. Since it is thought that humans have an innate predisposition for language development when the conditions are favorable, ELD strives to create conditions that promote an abundance of content-based, comprehensible input for a student's acquisition of social language and learning an academic language (Freeman and Freeman, 1995).

Since mastering a new language is a socially active, complex, and developmental process (Freeman and Freeman, 1994), the educational conditions make a big difference in becoming proficient in a second language. According to recent research, attaining proficiency in a second language closely resembles the process children experience when learning their native or first language. For ELLs to achieve grade-appropriate second language proficiency, it usually requires between five to seven years. ELLs who receive quality curriculum-based ELD instruction and have grade-level literacy in their first language generally take less time to attain proficiency than those students who experience learning conditions lacking in one or both of these factors (Cummins, 1996; Krashen, 1982; Thomas and Collier, 1997).

#### **1. EE Supports Two Kinds of Language Proficiency**

When the term "language proficiency" is used it refers to two distinct yet interrelated kinds of language usage. Called "conversational" and "academic" language, each exhibits unique linguistic characteristics that demand different levels of cognitive involvement and contextual support. Exploring the distinctions between these two kinds of language proficiency is one place to begin the process of understanding the link between EE and ELD and how best to use EE activities with ELLs.

##### **a. Conversational Language Proficiency**

Sometimes called basic interpersonal conversation skills (BICS) or social proficiency, conversational language is the easier of the two kinds of proficiency to acquire. Much of it is simply "picked up" during concrete and purposeful communication situations that occur

within the context of everyday living. Some examples of this informal kind of language use include:

- playing games and sports
- going shopping
- watching television
- doing chores
- getting uncomplicated needs met
- conducting routine interpersonal exchanges
- having simple conversation with friends, teachers, and family members

Some ELLs take up to two years to achieve on-grade-level conversational fluency, and it is important that they learn to read and write this type of language as well as to comprehend and speak it accurately. However, educators need to avoid the mistaken assumption that fluency in conversational English means that ELLs are ready and capable of learning the academic curriculum in English-only without further ELD instruction.

As the examples above illustrate, conversational language most often occurs in conditions that are called “context embedded and cognitively reduced.” In context embedded conditions, language use is stimulated by and corresponds with what is presently happening in the immediate surroundings. In such a context, the cognitive effort needed to construct meaning is simplified, or reduced, through the many nonverbal cues that accompany language use. The conditions of conversational language generally provide ELLs with a highly conducive language learning context. Anxiety about using a new language is usually low because ELLs are focused on exchanging messages that are rich in contextual cues. By using context embedded language to introduce new words and concepts, educators create a “linguistic comfort “ zone that reduces the cognitive effort required by second language students. When ELLs are operating primarily inside this zone, they are freed to focus on the really challenging aspects of a lesson. When this happens, they move into their “linguistic stretch” zone where new meanings are forged. Language development requires movement between the two zones. When both are present, students’ confidence and comfort in their ability to understand and express themselves in a new language is energized.

#### **b. Academic Language Proficiency**

Sometimes called cognitive academic language proficiency (CALP), academic language proficiency is the kind of language use and proficiency that is directly related to cognitive development and school achievement. It requires complex thinking and literacy skills, and the ability to process increasingly abstract and cognitively demanding content matter from all subject areas. One must be able to respond to questions or draw conclusions on the “logic” of instruction or textbooks, rather than from immediate or prior personal experiences. Without on-grade-level proficiency in academic English, subject matter instruction often is beyond the “linguistic stretch” of many ELLs. Consequently, they can become easily discouraged and anxious about academic learning tasks, especially when expectations for their academic success are based on their mastery of conversational English, rather than an accurate assessment of their academic English proficiency.

Using language to accomplish academic tasks and to understand important subject area concepts often occurs in conditions that are the opposite of what happens when developing conversational proficiency. It is not unusual, especially beyond the elementary grades, to find academic instructional conditions that lack, or offer only a few, situational cues and opportunities for active participation by ELL students. Consequently, ELLs can get quickly lost during a lesson as they focus their cognitive attention on unraveling the meaning of a series of unfamiliar words that are used without much extra-linguistic assistance. When academic language is produced in such barren and mentally difficult conditions, it is sometimes referred to as “context reduced and cognitively demanding,” just as language occurring within conversational conditions is sometimes called “context embedded and cognitively reduced.” The wisdom of providing ELLs with academic instruction in conversational-like settings is now widely accepted and validated by research (Thomas and Collier, 1997).

## Conversational and Academic Language Proficiencies Compared

### Conversational Language Proficiency Involves

- Communication that is not very intellectually (cognitively) demanding.
- Concrete and real-life experiences, situations, and events that help create a shared reality.
- Face-to-face interaction that is meaningful in the lives of the participants.
- Language with extensive gestures and other nonverbal clues that help clarify meaning.
- Construction of the linguistic “meaning” of the immediate events by drawing upon prior life experiences.
- Use of common and frequently repeated words, phrases and simple sentence patterns.
- Feeling comfortable, safe, and confident in using language.
- Time to “negotiate” and clarify the meaning of messages.

### Academic Language Proficiency Involves

- Much more intellectually (cognitively) demanding communication.
- Use of complex thinking skills and processes.
- Students independently struggling to process abstract words, ideas, and concepts.
- Use of fewer or no nonverbal clues for clarifying meaning.
- Use of words, phrases, and complex sentence patterns that do not repeat or are unfamiliar.
- Less time to negotiate and clarify meaning and to construct knowledge.
- Lectures or less participatory class discussions where opportunities to clarify meaning of language and concepts are not readily available to students.
- Typically two-to-five years of ELD language experience before acquiring on-grade-level proficiency.

## 2. EE As a Means for Providing “Comprehensible Input” to ELLs

Within ELD circles “comprehensible input” is the term used to describe what educators can do to create instructional conditions that resemble a conversational setting for the purpose of developing both academic and conversational language proficiency (Krashen, 1982). When educators use comprehensible input, they make it easier for ELLs to construct meaning from what is being communicated in a lesson or activity. Furthermore, by using the vocabulary and content of academic subject matter in the ELD process, ELLs can be exposed early on in their English language development to the academic language that is needed to support cognitive development and academic achievement (Freeman and Freeman, 1995). Consequently, they are prepared with the necessary kind of English language proficiency for a gradual and successful transition into learning subject matter content exclusively in English.

This emphasis on the development of academic English distinguishes ELD from traditional English as a second language (ESL) program, where conversational proficiency is typically emphasized. As a result, most ELLs graduating from ESL programs experience undue difficulty in negotiating academic instruction when transferred into mainstream English-only instruction (Thomas and Collier, 1997).

Environmental education's constructivist orientation, which is active, hands-on, and student centered, embodies instructional conditions that are highly compatible with the needs of ELD students. Filled with academic language and content from various subject areas, and requiring the use of different cognitive (thinking) processes, EE lessons generally provide a certain amount of comprehensible input. Therefore, they provide a comfortable learning context for students still in the process of acquiring English as a second language. The chart on p. 12 outlines some similarities that link EE and ELD instructional strategies.

It is important to note, however, that because ELLs pass through developmental stages in the process of acquiring English proficiency, educators need to become familiar with assessing the *match* between ELLs' development stages and the language and cognitive characteristics needed to participate in a lesson with success. The activities in Project Learning Tree, Project WILD, and Project WET provide learning conditions that simultaneously require the use of and have the potential to advance both conversational and academic language proficiency. These activities range from those that are usable as written to those that need considerable adjustments, a determination that has much to do with the stages of language proficiency of the ELLs participating in the lesson.

The next section offers strategies for assessing and adjusting lessons EE for ELLs. Also see the Appendices for suggestions for modifying particular Project Learning Tree, Project WILD, and Project WET activities.

## **Shared Instructional Strategies: Environmental Education *and* English Language Development**

**ENVIRONMENTAL EDUCATION.....and .....ENGLISH LANGUAGE DEVELOPMENT**  
Facilitates Communication \_\_\_\_\_ Focus on Communication

### **Preferred Learning Conditions**

Cooperative Groups and Collaborative Projects

Experiential – Concrete – Hands-on

Highly Active and Participatory

Supportive and Positive Affective Environment

Student-centered

### **Preferred Curricular Orientations**

Process-based

Use Integrated Approach – Multidisciplinary

Use Complex Thinking Skills to Solve Problems

Learning Related to Student’s Interests Experiences and Prior Knowledge

### **Home - School - Community - Global Connections**

Uses themes to examine the home, school, community and world

Incorporate students’ perspectives – cultural knowledge – native languages

Encourage students’ participation in setting goals and making decisions

**Uses a Multidisciplinary Approach \_\_\_\_\_ Enhanced by Multidisciplinary Approach**  
**ENVIRONMENTAL EDUCATION.....and.....ENGLISH LANGUAGE DEVELOPMENT**

Adapted from: Mock, Rhonda. 1992. California State University, San Bernardino. MA Project.

## **IV. What Strategies Can EE Providers Use to Ensure Comprehensible Input for All ELLs?**

Using a variety of strategies when communicating with ELLs is one of the best ways that environmental educators can help make content area lessons more comprehensible. This discussion will be organized around the following three key lesson assessments or adjustments:

- The type of instructional language used to carry out the lesson;
- The instructional practices recommended; and
- The way a lesson is structured.

A good place to begin is by asking yourself how strategies from these three areas already are suggested in an EE lesson or activity. Lessons that already use many of the following suggestions will need the least modification for use with ELLs. However, further refinements may be necessary depending on the specific developmental level of language proficiency and academic achievement displayed by an ELL.

Ideas presented in this section draw primarily on the work of Jim Cummins (1996), David and Yvonne Freeman (1994), Stephen Krashen (1981; 1991), and Alfredo Schifini (1994). Consulting any of these resources will increase your understanding of ELD and ELLs.

### **1. Assessing and Adjusting the Instructional Language Used in the EE Lessons**

Take a good look at the instructional language that is required for a particular lesson you plan to teach. When speaking with ELLs (or providing reading material) be conscious of the level of complexity of the language used and the situational support included. In the beginning of a lesson, ELLs need comprehensible input that is within their linguistic comfort zone; but as a lesson unfolds they need to begin experiencing input that is slightly beyond what they themselves can produce. This is usually referred to as “input + one” or language that is within their linguistic stretch zone. This task depends on a sound familiarity with the following general strategies and the specific strategies associated with each stage of language proficiency. See Appendix C for suggested modifications to a specific Project Learning Tree, Project WILD, and Project WET activities. See Appendix B for the linguistic and instructional characteristics of the five stages of language development. The more cognitively demanding language becomes, however, the more necessary contextual aids become in negotiating the meaning of the language used. The following techniques facilitate this kind of progressively more complicated communication.

#### **a. Using Contextual Clues**

- Use animated facial expressions and precise gestures.
- Use lots of visual and tactile materials (overhead transparencies, maps, props, real objects, manipulatives, etc.).
- Act out or role play the meaning of what you are saying.

- Make simple drawings of concepts or instructions as you speak.
- Use graphic/cognitive organizers regularly (e.g., Venn diagrams, word webs or clusters, flow charts, bar graphs, decisions-making charts, or outlines).
- Write down key ideas and words as you say them, and later place them around the room with visuals.

#### **b. Modifying the Linguistic Output**

- Accentuate key vocabulary and change pace in speech to give emphasis where needed (but do not compensate by speaking too loudly, slowly, or simply).
- Pause noticeably between key ideas and use clear enunciation.
- Restate what you said in different ways (paraphrase) and regulate sentence length.
- Use cognates whenever possible (words that are similar across languages).
- As ELLs master vocabulary, introduce more sophisticated vocabulary for the same concept (e.g., *accelerate* for *go faster*, *discuss* for *talk about*, *remove* for *take away*).
- Control use of idiomatic expressions, using them only in situations where the meaning is simplified by the immediate circumstances.
- Ask ELLs questions that “match” their proficiency level.

#### **c. Checking Frequently for Understanding**

- Use a range of open-ended questions that help promote active listening, generate extended student language responses, and invoke higher level thinking skills. Examples include questions that encourage ELLs to describe, elaborate, clarify, reflect, compare, infer, synthesize, evaluate, or summarize important ideas and concepts.
- Ask questions as the lesson unfolds so you know which concepts and vocabulary need reviewing and can thus help ELLs construct accurate meaning and knowledge for the lesson’s content.

## **2. Assessing and Adjusting the Instructional Practices Used in EE Lessons**

When conducting an EE lesson, a variety of techniques can be used to make the lesson’s content more accessible to ELLs. These include practices that are used while presenting the lesson, ones that encourage “active” language use, and others that strengthen language development and knowledge construction. Collectively, the following practices can make both language and concepts more comprehensible to ELLs, thereby effectively advancing cognitive growth and linguistic production or “output.”

#### **a. Presenting a Lesson with ELLs in Mind**

- When introducing new concepts, move from lesson conditions that are concrete and experiential (context embedded, cognitively reduced language) to conditions that are more abstract and inactive, as is the case when conceptual knowledge is gained through lectures and reading (context-reduced, cognitively demanding language).
- In general, move from lessons that are cognitively less to more demanding.
- Avoid breaking explanations into too small of parts or focusing just on sub-concepts or word definitions. This may cause students to lose track of the “big idea” as well as their interest.

- Doing some kinds of lesson several times with ELLs can be very beneficial. The first time serves to introduce them to the activity, the second time they are freed to focus on the language, and the third time they are able to unite language use and knowledge construction.
- Use a variety of learning modalities to advance the development of concepts and language.
- When provided with comprehensible input, ELLs can usually tolerate ambiguity and are willing to guess at the meaning of unknown words. Provide them with help in developing guessing methods, such as “fill in the missing word” so they can increase their guessing accuracy.
- Focus less on the communication accuracy of ELLs and more on their effort to communicate. Proficiency comes with using language in unstressful and favorable conditions.
- Model the use of language elements that are giving ELLs difficulty. If difficulties continue, take notes on the common errors and provide a lesson to correct the difficulty and make them aware of the language structure or function involved.
- Plan the lesson so that listening and speaking activities in a lesson precede reading and writing activities using ways that approach the lesson as an integrated whole.
- Show a lot of faith in what ELL students are able to do, but make sure not to give false praise.

#### **b. Encouraging Active Language Production**

- Use cooperative grouping and peer-pairing extensively. ELLs can benefit from being in native language groups or pairs when previewing and reviewing newly introduced concepts. However, it is important that they also work in mixed-language groups or pairs while constructing knowledge, thus encouraging the use of both languages for the purpose of academic learning and language development.
- Use peer-tutoring and cross-age tutoring frequently. Such tutoring can occur between students who speak the same language for the purpose of providing intensive primary language support when building new knowledge. It can also occur between students who are at different stages in English language development or between native-speakers of English and ELLs.
- Collaborative projects designed, completed, and presented by members of cooperative groups or pairs provide excellent opportunities for active language use. A drama that youths write, cast, direct, and present is one example. A neighborhood project where students work with community members to identify a need, gather information, and plan and take appropriate actions is another example.
- Provide ample opportunities, encouragement, and incentives to integrate writing and reading into all collaborative, paired, and individual projects. A recommended practice is to begin a writing project with a class brainstorming session that generates a theme. Next, use cooperative groups to explore the theme, then break into pairs to help each other organize, write, and edit an individual product.
- The practice of “reporting out” helps ELLs consolidate and extend knowledge created when participating in collaborative, hands-on activities. While doing the activity students make drawings or take notes, then they collaboratively report on what they did, observed, and concluded. After reporting out, an individual document is written by each group member.
- With ELLs begin a formal process of learning to read, the “Language Experience Approach” provides the most integrated and comprehensible input as it begins reading instruction using the language they can understand and speak (see Appendix E for fuller definition).

### **c. Strengthening Language Development and Knowledge Construction**

- Organize a curriculum focus and lessons that draw upon students' prior knowledge and background—including their academic, personal, cultural, and family experiences.
- Use a theme-based, student-centered approach to organizing the use of EE lessons.
- Assist students in choosing themes that have meaning in their lives and in posing questions that will help direct aspects of the study.
- Strive to connect lesson and theme concepts to real-life happenings, concerns, or issues students experience outside of school. Use graphic organizers to show links between their lives, and lesson or theme concepts.
- Assist students in conducting interviews, surveys, or oral histories with their families or community members on the study theme (all the “Project” activity guides have great suggestions for doing this).
- Using classroom observations, provide ELLs with frequent feedback on their linguistic and academic performance, including strategies for overcoming difficulties observed. This helps ELLs build language awareness and knowledge of efficient learning strategies.
- Help ELLs to regularly self-assess and self-monitor their own language and academic performance. Examples include: maintaining a daily written or pictorial journal, keeping a portfolio of their best work, and video- or audio-taping themselves speaking and reading.
- Provide primary language support whenever possible, especially for ELLs who are in the initial stages of acquiring English language proficiency. Informal support can be furnished through primary and mixed-language cooperative groups, peer, cross-age, and community tutors/assistants, written material in students' primary language, and by creating family homework projects that prompt an exploration or discussion on an upcoming EE lesson.

### **3. Assessing and Adjusting the Structure of EE Lessons**

Although the structural components or format of EE lessons vary across Project Learning Tree, Project WILD, and Project WET, they all include:

- ways of connecting students' prior knowledge to the new knowledge in the lesson;
- a series of instructional or procedural steps;
- suggestions for lesson assessment or evaluation; and
- ways to extend, vary, or enrich the lesson.

When teaching ELLs, you will need to add two additional components to the lesson's format: providing primary language support and creating an ELD focus. You also can expect to make adjustments in one or more of the existing structural components. The specific nature of the adjustments required will vary according to the language proficiency of the ELLs participating in the lesson. What follows now is an introduction to the kinds of general lesson modifications that can be made to facilitate the provision of comprehensible input to ELLs.

#### **a. Adding Primary Language Support When Previewing the Lesson**

One of the surest ways to provide comprehensible input to ELLs is to build on knowledge they already have about the lesson's content. Grade-appropriate levels of native language proficiency and academic achievement help ELLs to more readily comprehend instructional messages given in English and to use English in the construction of knowledge. This is because academic *knowl-*

*edge* in one's primary language provides a foundation for acquiring the academic *language* for the same kind of knowledge in a second language. Therefore, it is important for teachers of ELLs (who are not able to provide formal primary language instruction) to use a variety of strategies to “preview” in the primary language the key concepts to be covered in an upcoming lesson. Some examples include:

- Classroom involvement of family and community members who are fluent in a language other than English.
- The use of a mostly nonverbal activity by the teacher—such as an art project, a focused nature walk, or a student pantomime—to introduce students to the main idea and key vocabulary of the upcoming lesson and prompt a related discussion or exploration in primary language cooperative groups.
- The use of mixed language cooperative groups where students who are ELLs, bilingual, and English-only can interact and help each other by using material and prompts related to the lesson's content and language.
- Family homework assignments given in advance of the lesson, especially ones that prompt a cooperative exploration and discussion of the key concepts of the upcoming lesson.

By striving to provide some form of primary language assistance, both teachers and students benefit: teachers are less frustrated because what they say is more comprehensible to ELLs and students are more confident and relaxed during English-only instruction. Previewing the lesson in ELLs' primary languages, even minimally, gives these students an all important frame of reference for organizing the academic language and concepts they will be hearing during the English-only lesson and for connecting the upcoming lesson's knowledge with whatever knowledge they already may possess. For ELLs with minimal English proficiency, this added structural component is essential to both their linguistic and academic growth.

### **b. Connecting ELLs' Prior Knowledge to the New Knowledge in the Lesson**

In second language learning, prior knowledge plays a major role in helping to transform instruction in a second language into comprehensible input. For example, if a group of ELLs already knows a lot about the concept “watershed,” the academic language used in such lessons as “Water Wonders” (Project Learning Tree) or “Color Me a Watershed” (Project WET) will be less daunting for them to negotiate. As they struggle to make sense of the instructional language, their prior knowledge will allow them to make connections and inferences about the meaning of the English being used. Therefore, ELLs benefit tremendously when teachers help them “activate” what they already may know about the content of a lesson. Unless teachers assist ELLs in explicitly realizing what they already may know about an upcoming lesson, these students may not be able to draw upon this very essential prior knowledge.

Helping ELLs bring to consciousness their prior knowledge also allows teachers to assess what lesson vocabulary in English they may or may not know. Equipped with this knowledge, teachers can supply or emphasize the needed vocabulary prior to and during a lesson. In sum, helping ELLs to recognize the knowledge they already have permits them to understand more complex language and to pursue more cognitively demanding activities than they might otherwise have been able to do.

Part of the bond between EE and ELD can be found in their shared emphasis on connecting a lesson's content with students' prior knowledge. The suggestions in the "Project" activity guides on how to accomplish this task are excellent. Therefore, do not skip or skim over this important lesson component. If anything, give it extra time and effort — the results will be well worth the work.

The following suggestions are representative of techniques used in ELD for tapping into and building upon students' prior knowledge, a procedure that can be done with the entire class, in small groups, or in pairs. Because this aspect of the lesson is so crucial to making the remainder of the lesson accessible and recognizable to ELLs, detailed examples from Project Learning Tree, Project WILD and Project WET are provided.

- Use lots of visual aids to stimulate observation and discussion on a lesson's content. For example, for Project Learning Tree's "Water Wonders" use an enlarged photocopy of the water cycle drawing to ask the questions given in "Part A, Step One." After the discussion, highlight the most frequent responses given by students and use as an introduction to the rest of the lesson. A more elaborate version for identifying key ideas is found in "Idea Pools" in the teaching strategies section of Project WET.
- Provide lots of manipulative and concrete objects to stimulate language use that matches the ongoing interaction focused on the objects. As students talk and investigate, they are both accessing and building background knowledge and language proficiency. The activities "Owl Pellets" in Project WILD and the "Fallen Log" in Project Learning Tree are examples of lessons with manipulatives that can be explored *before* the lesson begins for key ideas students may already know.
- Use the diverse cultural backgrounds of students to elicit different cultural knowledge of the content to be studied. For example, in the "No Bellyachers" activity in Project WET, a cultural emphasis could be placed on how the students (or people in their countries of origin) understand how people contract a cold or the flu, and on what preventive measures are taken to avoid becoming ill. On the basis of the information exchanged, students could be asked to predict the role of water in both catching and preventing these types of illness.
- Use writing prompts to unlock and focus students' attention on their prior knowledge. Using graphic organizers (such as word trees), quick-writes (one-minute individual brainstorming on paper), responding to statements (People litter because... ), or doing more extended journal writing on a prompt can help students become aware of their prior knowledge and provide an opening to connect it with the upcoming lesson. Most lessons could be introduced or extended in this fashion. The lesson "Ethi-Thinking" in Project WILD is an example of an activity where an individual quick-write or verbal prompt might improve the quality of the group list and discussion that is suggested as the first step in the lesson.
- Use existing "linking" techniques to connect prior knowledge to new concepts. In the K-W-L model, a paper is divided into three sections. Under the "K" students list "What I know." Listed under the "W" is "What I want to find out," and when the lesson is completed students write under the "L" all that "I have learned and still need to learn." The latter helps students to monitor their own learning, as well as focus their thought on the direction new learning might take. For example, in the activity "Humpty Dumpty" in the Project WET guide, students could be shown photographs of altered or degraded natural environments and be asked

the questions, “What do you already know about restoring land such as these to their original condition?” and “What would you like to find out?”

### **c. Creating an ELD Focus**

The ELD focus is the segment of the lesson where teachers give concentrated attention to customizing instructional strategies for the linguistic characteristics exhibited by participating ELLs. Toward this end, a variety of instructional strategies that make both language and concepts easier to comprehend are woven together. As always, the aim of this segment is to advance students’ English language proficiency and to help them construct accurate conceptual knowledge and apply it in appropriate and meaningful ways. When ELD strategies are used in content area lessons, however, it is essential to keep in mind the subtle distinctions between conversational and academic language development.

For ELLs at the conversational language stage, ELD accentuates the acquisition of language through subject matter content and vocabulary. On the other hand, ELLs at the academic language development stage receive instruction that stresses cognitive academic development through the expansion and refinement of academic English proficiency. Although ELLs in the conversational language stage of ELD typically acquire the academic words and phrases quite readily, the conceptual meanings they attach to them can be quite simple. The more proficient ELLs become in English, the more complex meanings they are able to construct for the conceptual language being used. (See Appendix B for more detailed information about the stages of language development.)

### **d. Examining the Procedural Steps of the EE Lesson**

If ELLs and English-only students are mixed in the same classroom, it is likely that the ELLs will be operating at several different proficiency levels. In the ELD portion of the lesson, ELLs can be grouped to receive prior instruction that is keyed to their specific language abilities. By using the vocabulary and concepts found in a lesson, ELLs are prepared for participation in the complete lesson with their classmates. Therefore, when assessing and adjusting the procedural steps given in a lesson, try to make the lesson “comprehensible” to as many students as possible. In most cases, the English-only students will also benefit! You can successfully modify the procedural steps of an EE lesson by applying some of the strategies suggested previously for assessing or adjusting instructional language and instructional practices. If you expect new concepts to be learned by a class with varying levels of English language proficiency, instruction needs to be carefully planned.

Inclusive instructional practices, such as teaching thematically or organizing questions around issues of interest to the students or the community, can create a positive social and cultural learning environment that promotes active language use and successful involvement by ELLs. Regularly structuring activities to be carried out in pairs or in cooperative groups, where ELL students of different levels and English-only students can assist each other, is another recommended ELD practice. Directing questions during the lesson that match the specific language proficiency level of an ELL is another successful practice to use. While these suggestions are usually considered to comprise just plain good teaching, they become essential teaching strategies when instructing ELLs.

### **e. Providing Primary Language Support When Reviewing the Lesson**

A primary language review of the lesson provides ELLs an opportunity to discuss what they have learned through using their English. Misinterpretations can be corrected, accurate understandings reinforced, and additional meanings constructed as they reflect on and discuss their experiences with the lesson. Through discussion, they can solidify their knowledge and usually can express it in more complete and complex ways than their English proficiency will permit. A native language review can serve as an assessment of the knowledge they have constructed using two languages, especially if the review incorporates the lesson's suggestions for doing student assessments. To conduct a review, use peer-language groups, cooperative mixed-language groups, cross-age tutors, and community or parent volunteers who are proficient in the ELLs' primary languages.

### **f. Assessing and Evaluating the Lesson**

When assessing a lesson, consider these two aspects: assessment of the construction of knowledge and of the language development achieved by participating ELLs. Identifying the stage of a student's language development is as essential to conducting a fair assessment of their knowledge construction as it was to selecting appropriate instructional strategies. Also, a primary language review can contribute to the assessment process. Keeping journals or portfolios; using word banks, drawings, or graphic displays; and allowing students to construct responses, words or phrases, however limited, will reinforce both their language development and content area knowledge. Helping students self-assess their acquisition of new words, language skills, and content knowledge will provide rewards that will motivate and keep them involved in the learning process.

### **g. Considering Ways to Extend, Vary, or Enrich the Lesson**

The extension or variation component of an EE lesson often contains instructional suggestions that are very appropriate for use with ELLs. For example, suggestions on how to simplify the lesson for use with younger students often mirror strategies useful for ELLs. Other suggestions frequently create conditions that promote "active" language use through strategies similar to ones listed above. When planning your lesson delivery, take a look at this part of the lesson for instructional ideas to replace some of the instructional steps given in the main body of the lesson.

Of greatest significance is the opportunity this segment offers for introducing and incorporating knowledge from the students' diverse cultural backgrounds into the lesson. To encourage you to invest your energy and resources in this direction, we offer the following overview on the educational benefits of cultural inclusion for ELLs. With the complexity of so many cultures, languages and dialects used in California, this is a daunting challenge! But one so worthwhile, that it must be carefully considered.

- Considering students' cultural background and knowledge is critical in helping ELLs advance both their social and academic learning. Placing value on what is culturally important encourages students to participate in lessons where new language and content area skills are demanding.
- By encouraging students to use and share information and knowledge from their cultural heritage, especially knowledge or experiences that influence their understanding of concepts,

we can validate their importance within the group and provide a space for their confidence to grow.

- Sharing knowledge, that is both different and similar, can help children gain a greater understanding of each other's perspective and experience. Placing equal value or status on each student's experience and knowledge will help create the supportive atmosphere that nurtures learning of all kinds.
- How students perceive themselves has a lot to do with how well they progress in school. Unfortunately, not all cultures or life-experiences are valued equally in our society, and in many subtle ways this impacts how students feel about themselves and others, which affects how they learn.
- Mixing native speakers of English with ELLs creates a sympathetic situation where the students learn not only how to negotiate meaning of words and concepts, but also social status and relations.
- Working in small or cooperative groups can build multicultural friendships, increase cross-cultural respect, and heighten self-esteem. In these situations the perceived status of ELLs rises, both in the minds of the ELLs and of their peers.
- A safe, caring, confidence-inspiring atmosphere comes from respecting and using multiple cultural knowledge when staging any type of learning activity.
- Many of the strategies inherent to EE, such as using cooperative groups and collaborative projects, motivate the natural exchange of cultural information, experiences, and perspectives on the content being studied. With a little effort, EE can easily become a multicultural endeavor.

#### **4. Summary**

Familiarity with the generalized strategies for creating comprehensible input while teaching EE lessons achieves three main outcomes:

- It provides a source for assessing and adjusting the instructional language and practices to be used when teaching the main body of an EE lesson to a mixed group of ELLs and English-only students.
- It gives a sound foundation for customizing our instructional language and practices to "fit" with the characteristics of specific language proficiency levels.
- Collectively, these general strategies create a positive social and cultural learning context where students' cultural knowledge is expressed, shared, validated, and used in constructing new knowledge. When this occurs, ELLs are more fully motivated to invest themselves in the learning process. This sharing and constructing of collective knowledge among teacher and students is the backbone of multicultural education and is far more profound in creating cross-cultural understandings, multicultural friendships, enhanced self-esteem, and equalized status relations than the more typical holidays, heroes, and traditions approach.

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## **Appendix B: Stages of Language Development and Proficiency**

Mastering a new language is a dynamic and developmental process and takes most students five to seven years to complete. In achieving native-like proficiency, ELLs pass through various distinct phases of linguistic growth which the California Department of Education has recently reorganized into five new descriptive stages. These stages relate to the Department's newly developed "English Language Development (ELD) Standards" that define the linguistic characteristics associated with each of the incremental stages of development. The characteristics include descriptions of what might be accepted language use for both conversational and academic tasks and settings.

Each proficiency level encompasses many aspects of language such as grammar, pronunciation, syntax and functions (or uses), and fluency. All these aspects of language contribute to an ELL's overall proficiency across all academic and conversational tasks and contexts. That is, some ELLs may be more proficient in using English for succeeding in writing tasks than in reading, or in telling stories about themselves than recalling the main events of something they have read or heard.

The following provides a brief overview of the stages of language development as described by the California Department of Education. We recommend that you obtain the complete document by requesting a copy from the address listed in Appendix F.

### **Introducing Proficiency Levels 1 and 2**

ELLs functioning at these two levels are focused on acquiring a basic use of English. To expedite their acquisition of both conversational and academic English, ELD uses content-based lessons that expose ELLs to the vocabulary and concepts found in the various subject areas. This means that language mastery will be the focus of EE lessons at this level. Furthermore, because of their limited language skills, the average ELL usually will construct meanings that are far simpler than is the intended goal of the lesson.

To build a solid foundation in environmental literacy with ELLs at these two stages, the optimum instructional program would be to:

- a. First give a complete native language instruction in an EE lesson as written.
- b. Then, using the same lesson later as a source for focusing the ELD. This approach provides ELLs the chance to build academic knowledge in their primary language that later can be transferred to English usage as they acquire the necessary English proficiency to express their prior knowledge.

Helping these students to understand the lesson and build English language proficiency will require more adjustments and use of native language instructional supports than for ELLs functioning at a more advanced level. The ELD portion of an EE activity will be the prominent part of a lesson for them, and should be conducted incorporating some of the strategies provided in Section IV. When these ELLs participate in the full lesson in English with their classmates, every effort should be made to give commands and ask questions that correspond with, yet are slightly

beyond their linguistic and cognitive characteristics. This recommendation is true for ELLs at any stage of language development and is referred to as “comprehensible input + 1” or teaching within their “linguistic stretch” zone.

In general, EE’s offers outdoor experiences (“Pollution Search” in PLT), observational activities (“Wildlife is Everywhere” in WILD), simple hands-on task (“Cold Cash in the Ice Box” in WET) and art activities (“The Rainstick” in WET) that are most suitable for use with ELLs at levels 1 or 2. Some of the simple EE simulation activities that involve students in kinesthetic game experiences also can be modified for use with these students (“Birds and Worms” in PLT; “The Edge of Home” in WILD-Aquatic). However when ELLs are receiving formal native language instruction conceptual vocabulary of any activity can become the seed for an ELD lesson.

## **Level 1. Beginning Proficiency** (Also called “Pre-Production Phase”)

**Typical Time to Master:** 1-2 years

### **Generalized Characteristics of Level 1 Learner**

- Stage of most dramatic language growth.
- Is able to comprehend high frequency words and basic phrases in immediate surroundings.
- Can follow simple classroom routines and schedules.
- Can express basic personal and safety needs, often with use of gestures.
- Can respond to oral comments with actions and gestures and to simple questions with one-two word answers and phrases.
- Is able to produce learned words and phrases verbally and in writing.

### **Common Instructional Techniques**

*Comprehension*—Use the “Total Physical Response” (TPR) method for building comprehension and prompting non-verbal and short oral responses. TPR uses modeling and simple commands to provide context embedded, cognitive-reduced content language. This behavior allows for a period of extended listening comprehension which permits the natural emergency of spoken language. Teachers use visual aides, objects, and actions to explain a simple concept and then model what ELLs are to do before giving a command. Examples include: point, draw, touch sort, use, give, do, arrange, say, name, and write. [See Appendix E for more information on TPR.]

*Speaking*---Use the “Natural Language Approach” (NLA) to ask questions or make statements, accompanied by visual aids or actions to elicit short verbal responses.

- Yes/no Questions—“Is this a growth ring?” “Can your taproot move?”
- Either/or Questions—“Is this a taproot or a branch?” “Do these represent water or sun?”
- Fill-in Sentences—“Ana is drawing a..(growth ring)?” “A tree without nutrients usually..(dies).
- Response Questions—“What is happening to Sing’s tree? (“it’s dying”).
- Word Listing Questions—“What do you see on the ground?” (sunlight oxygen, water, etc.)

*Moving into Print*—Use the “Key Word” sight-method for initiating reading and writing of words and phrases ELLs can already understand and say. Students can select words they want to learn and write each on a 3x5 card with a drawing on the back. They can study them throughout

the day using sight word techniques. They can keep these words in a “word box” arranged alphabetically or make a visual-print bilingual dictionary.

## **Level 2. Early-Intermediate Proficiency Level**

**Typical Time to Master:** 2-3 years

### **Generalized Characteristics of Level 2 Learner**

- Is able to respond to more varied communication tasks in the immediate surroundings.
- Can comprehend a sequence of information on familiar topics.
- Can recognize and interact with words and phrases from previously learned material.
- Can produce basic three to four word statements and questions, verbal and written, in direct informational exchanges on familiar and routine subjects.
- Can initiate simple, face-to-face conversations with peers and familiar adults.

### **Common Instructional Techniques**

*Comprehension*—Continue using TPR, increasing the complexity of the explanations and the commands by giving them in sequence. For example: “Pick-up the water jug, point to the water, pour your water in a cup, and give the jug to Jose”. However, at this level it is also important to begin involving ELLs in listening comprehension activities that require more cognitive complexity and elaborate actions. For example, after giving a simple set of instructions (using gestures and props), help students to draw the sequence of a story or of the main idea or steps.

*Speaking*—Continue using the NLA to asks questions and make statements, accompanied by visual aids/actions. Questions should be open-ended to elicit responses of several words and short sentences.

- Use the five “W” (who, what, where, why and how) questions—After giving instructions or doing a step in an experiment, pose a question and accept however much an ELL can say.
- Model and help them practice asking questions for a simple survey with yes/no responses. Use a preference survey where answers are recorded on a bar graph or a demographic survey where answers are circled.

*Moving into Print*—Continue using the “key word” method and begin using the Language Experience Approach (see Appendix E for a description of LEA)

## **Introducing Proficiency Levels 3, 4 and 5**

Level 3 is a transitional stage where ELD instruction begins shifting from an emphasis on English language mastery through content-based lessons to learning academic content through continued development and mastery of English. This requires a subtle but significant instructional shift in how we support an ELL’s ability to acquire and use language acceptably for academic purposes.

From Level 3 onward, customizing EE lessons will depend increasingly upon the more generalized strategies presented in Section IV. The phrase “Specially Designed Academic Instruction in

English” (SDAIE) is often used to describe educational practices recommended for Level 3, 4 and 5 students. For SDAIE to be used in its fullest potential, however, ELLs must have some corresponding academic knowledge in their primary language and be in a teaching environment where they experience positive learning conditions. ELLs fitting this description will be capable of making the shift early on in Level 3, while those lacking background and/or positive affective conditions may be delayed. ELLs at these stages can still benefit from native language support prior to an EE lesson delivered in English-only

### **Level 3. Intermediate Proficiency Level**

**Typical Time to Master:** 3-4 years

#### **Generalized Characteristics of Level 3 Learner**

- Begins to refashion learned material to meet immediate communication and learning needs.
- Can produce sustained conversations on an expanding variety of topics.
- Can comprehend main ideas and basic concepts in written and spoken content areas.
- Can initiate simple conversations with English speakers outside school.
- Can produce expanded verbal and written responses in contextualized settings.

#### **Common Instructional Techniques**

- Use the generalized strategies suggested in Section IV. Some examples of tasks students can do include: creating a Venn diagram to compare and contrast common themes, ideas, and concepts from two different sources; using flow charts to document the order in which events occurred; drawing a tree web where main ideas are represented by the branches and supporting ideas are represented by leaves; doing a group “report out”.
- For maximum comprehension and valuing of student’s cultural knowledge, incorporate a native language preview and a review of the lesson into the procedural steps.

### **Level 4: Early-Advanced Proficiency Level**

**Typical Time to Master:** 4-5 years

#### **Generalized characteristics of Level 4 student at the end of this stage**

During this level, ELLs begin creating original ideas and language patterns in English and become increasingly able to function in more complex, cognitively demanding contexts. They can:

- Use English for learning in other academic areas.
- Can comprehend detailed information in more complex and unfamiliar topics.
- Can write to satisfy academic needs through recombination of previously learned material, vocabulary, and structures.
- Can produce, initiate and sustain spontaneous language interactions when necessary.

#### **Common Instructional Techniques**

- Use the generalized strategies suggested in Section IV. Some examples of tasks students can do include: recalling, summarizing, interpreting, and defending an idea; retelling a story with

all the elements appropriately included; producing simple reports; using language to infer, analyze, synthesize, and evaluate.

- For maximum comprehension and valuing of students' cultural knowledge, incorporate a primary language preview and a review of the lesson into the procedural steps.
- Preview-review.
- Recall, summarize, interpret, initiate group discussion, research, and report.
- Subject matter instruction begins using SDAIE strategies.

## **Level 5. Advanced Proficiency Level**

**Typical Time to Master:** 5-7 years

### **Generalized Characteristics of Level 5 student at the end of this stage**

During this level, ELLs become increasingly able to communicate effectively with various audiences in a variety of contexts and on a wide range of familiar and new topics to meet both social and academic needs and demands. They can:

- Participate with increasing ease and greater success in grade-level academic subjects.
- Comprehends abstract jokes and topics with increasing ease.
- Recognize language subtleties (idioms, jokes, riddles).
- Comprehend most grade-level written materials.
- Can communicate effectively with various audiences in a variety of settings.
- Can self-correct language errors, create new language patterns and paraphrase.
- Participate fully in all non-academic settings requiring English.

### ***Common Instructional Techniques and Tasks***

- Use the generalized strategies suggested in Section IV to modify lessons that are very cognitively demanding. The majority of lessons will need very little or no adjustments for students at this level.
- For maximum comprehension and valuing of students' cultural knowledge, incorporate a native language preview and a review of the lesson into the procedural steps.
- Continue subject matter instruction using SDAIE.

## **Appendix C: Sample Adjusted EE Lessons**

The following examples of EE activities have been modified for classroom use with ELLs who are functioning at various levels of English proficiency. As presented, the lessons are most suitable for ELLs at Level 3 (intermediate proficiency) and beyond. The lessons represent the application and integration of different suggestions provided in Section IV.

Before ELLs at Levels 1 or 2 can participate in a modified lesson, they should receive instruction with an ELD focus to acquaint them with the key vocabulary, sentence patterns, and concepts covered in the lesson (refer to Section IV for an overview). This can be done through the use of strategies such as “total physical response,” “key word approach,” and the “language experience approach” (refer to Appendix E and G for descriptions of these approaches).

It is essential (if possible) to provide students at level 1 and 2 with a preview of the lesson in their native language. These strategies are discussed in Section IV. If most students speak Spanish, another option is to select a lesson from Project Learning Tree or Project WILD that has been translated into Spanish. Place a student who can read Spanish in each group of students and allow them time to preview the lesson together. Present the lesson in English and after each key idea, give the students several minutes to confer among themselves to check for comprehension of what has been explained in English.

Remember, when working with a group of ELLs who represent different language proficiency levels, it is important to ask individual students questions that are within their proficiency level in order that they comprehend and answer. Appendix B provides sample questions for each level.

### **I. Sample Lessons:**

**“Every Tree for Itself”** (Project Learning Tree Activity Guide, pp. 83-84)

#### **Objective**

Students will simulate how trees compete for their essential needs and describe how varying amounts of light, water, and nutrients affect a tree’s growth.

#### **Overview**

This activity, formatted as a game, helps to reinforce students’ understanding of the conditions that trees need to live and grow, and introduces the concept that trees must often compete for their needs.

#### **Modified Activity**

A potted plant and a watering can sit in front of the room. Behind the plant, there are two pictures: one of a tree cross section and another of the whole tree with the word “needs” written underneath. In the background are other posters of forest habitats. The room includes a library with both English and primary language books on plants.

The class and the teacher count the rings on the picture of the cross section. They determine the age of the tree. They find the ring when the school was built, when the teacher was born, and other dates. The teacher emphasizes and reinforces words such as *outside*, *inside*, *before*, *after*, and *between*.

The teacher gives “tree cookies” (actual cross sections of a tree) to the students. In same-language cooperative groups, students determine the age of their tree cookie. They discuss quietly among themselves in their primary language. They draw a cross section of their tree cookie, then label events on the drawing such as when they were born, when they started school, and when their family immigrated to this country.

Pointing to the props in front of the room, the teacher asks the students what plants need to live. Working in their cooperative groups, the students draw a tree on a large sheet of construction paper, listing the tree’s needs. They share their drawings with the class, while the teacher uses their explanations to emphasize water, sunlight, and nutrients by adding these needs to a picture of a tree drawn on the board.

Since one of the teacher’s objectives is for students to keep a written record of the results of the simulation, the teacher passes out a simple chart for students to complete during the game. Pointing to the picture of the tree on the board, the teacher shows the color of the poker chip that will represent that need. Each poker chip has the name or a symbol of the need such as a picture of a sun. The teacher explains the rules of the game showing students the collection of poker chips, and referring frequently to the tree picture on the board to help students understand that their own bodies will simulate trees.

Students fill in their charts as they complete a round of the game. To help them complete their charts, the teacher uses an overhead projection of the chart. The lesson continues with a second round of “crowded trees.” At the end of the two rounds, students use their charts to discuss the differences between the simulation of the crowded and uncrowded trees, using their charts as props for discussion.

## **“What’s For Dinner”** (Project WILD Activity Guide, pp. 48-49)

### **Objective**

Students will generalize that all animals, including people, depend on plants as a food source, either directly or indirectly.

### **Overview**

In order to help students trace human and other animals’ dependence on plants for food, they analyze a dinner menu from home and then, in class, create a flow diagram or chain that shows the foods that they have eaten.

### **Modified Activity**

The night prior to the lesson, the students complete a homework assignment. Working with a family member, the students list everything they might eat for dinner on a particular evening. When they return to class the next day, a school lunch sits at the front of the room. The teacher has pinned on the bulletin board a picture of a child with the word “me” underneath. Around the room are posters of food chains and habitats. The teacher has also prepared pictures and corresponding words of food chain elements such as a milk carton, a cow, a chicken, grass, trees, etc.

Selecting milk from the school lunch tray, the teacher places a picture of a carton of milk on the board next to the child, putting an arrow between the pictures to indicate the energy flow. The teacher asks the class from where milk comes. A child volunteer selects a picture of a cow and pins it on the board next to the picture of the carton of milk. The teacher adds an arrow between the milk and the cow emphasizing that the milk comes from the cow. The teacher continues the lesson by asking for another volunteer to find the cow's food among the pictures and to pin it on the board. This time, the teacher emphasizes that grass is a plant, pinning the word “plant” above the picture.

The teacher selects another lunch item and repeats the procedure of finding the food chain elements connected with that item.

Once the children understand the procedure, the students work in same language groups to discuss their own dinner menus. After they write a food chain for each item on their menu, the students work in pairs to complete a picture of one of their food chains. Student pairs share their drawing with the class explaining their food chain. They add their pictures to the bulletin board. The teacher culminates the lesson by using the pictures on the bulletin board to emphasize that all animals need food and depend on plants.

## **“The Incredible Journey”** (Project WET Activity Guide, pp. 161-165)

### **Objective**

Students will describe the movement of water within the water cycle and identify the states of waters as it moves through the water cycle.

### **Overview**

Students role-play a water molecule to conceptualize the multi-dimensional pathways water takes through out the water cycle.

### **Modified Activity**

Dangling from the ceiling are several signs on strings with the words “water vapor.” A covered jar of ice water sits in the fronts of the room. A large poster of the water cycle decorates the side wall. Below it is a display of books about water in both English and the primary language.

The teacher prints the word “water” on the board, and asks the students where water can go on the Earth. The teacher clusters the student suggestions around the word “water.” Next to the cluster, the teacher gradually draws a water cycle picture that includes the nine stations that will be used in the game, adding and explaining any of the stations not mentioned by the students.

The teacher divides the class into nine different cooperative groups and assigns each group one of the stations in the game. The students draw a large sign of the station and also smaller pictures of all the stations to use as the faces of the dice.

The teacher points to the water condensing on the outside of the jar and asks the class from where the water came. After allowing the students to make hypotheses, the teacher gradually introduces the vocabulary: condensation, evaporation, precipitation, and water vapor. Raising his or her hands above the head, the teacher wiggles his or her fingers downward to indicate precipitation and moves them upward to demonstrate evaporation. The teacher simultaneously chants the science words to reinforce their meanings. (At this point, a teacher might use a community volunteer or teacher assistant to explain these difficult concepts in the primary language.)

Handing a glass of water to a student in the ocean group, the teacher says “water evaporates from the ocean and goes to the clouds.” The teacher indicates that the child should pass the water to someone in the cloud group. After the child does so, the teacher continues the activity with another statement such as “the water precipitates from the clouds and goes to the soil.” The child passes the water to the soil group. This continues until the children have a firm grasp of the vocabulary. Some of the children make their own water movement statement as they pass the jar.

Now the teacher asks the groups to select from their smaller pictures, the ones that show where the water can go from their station. They share their choices with the class. After discussing their choices with the class, the groups glue their selections to the sides of the box to use as a die.

The teacher divides the class into two groups, an inner circle and an outer circle. The students in the outer circle receive a copy of the water cycle (p. 162) and acts as observers, recording the movements of the students in the inner circle, who play the game. The teacher simplifies the game, leaving out the rule about traveling in pairs, since it is not a critical concept of this activity. After the inner circle plays the game, the children switch roles, allowing the outer circle a chance to play. The students take their graphic home with them to discuss it with family members.

## **II. Discussing the Sample Lessons**

### **A. Assessing and Adjusting the Instructional language Used in EE Lessons**

#### **Using ELD Strategies**

Help the students develop language skills through use of ELD techniques. In “The Incredible Journey” example the teacher asks students to pass around a glass of water, using a technique called Total Physical Response to develop their understanding of key vocabulary.

Giving students many opportunities to speak helps them develop the English language. In the “What's For Dinner?” example, students are asked to share their food chain pictures; and students make oral predictions in “The Incredible Journey” example.

Use the natural interest of children for environmental education as a springboard for English language development. For example, in the “Every Tree for Itself” modification, the teacher uses the activity to reinforce prepositions often difficult for ELLs.

### **Using Contextual Clues**

Provide a lot of real objects such as the potted plant and the watering can in the “Every Tree for Itself” and the school lunch in the “What’s for Dinner?” examples. Manipulatives such as the tree cookies in “Every Tree for Itself” reinforce conceptual understanding.

Using lots of pictures and posters gives students visual clues to help auditory learning. For example, by the end of the “What’s for Dinner?” modification, students have created a bulletin board that helps the class both learn and review the concepts.

Using graphic organizers and key words not only give students contextual clues, but provides a tool for teachers to assess understanding. In both “Every Tree for Itself” and “The Incredible Journey” examples, the teachers develop a simple chart for students to follow.

Sometimes one key word can help students focus on the lesson and make the language input comprehensible, for example simply writing the word *needs* under a picture of a tree in the “Every Tree for Itself” modification helps students understand the important point of the activity.

Whenever possible, use physical gestures and role playing to increase understanding. For example, the teacher in “The Incredible Journey” pantomimes the new vocabulary words.

## **B. Assessing and Adjusting the Structure of EE Lessons**

### **Adding Primary Language Support**

Whether or not you provide primary language support, it is important to determine the basic concepts needed by the ELL student in order to ensure understanding of the lesson. It is particularly important in EE simulations, for example, that ELL students understand what they are emulating; in “Every Tree for Itself,” students would need to understand what the poker chips represent and why they are collecting them.

If you do not speak the primary language, students can provide primary language support for themselves through use of same-language cooperative learning groups. If you have primary language support, you can choose those critical concepts for reinforcement in the primary language.

You can also consider ways to use the family and homework to provide primary language support. In “The Incredible Journey” modification, sending the water cycle home to discuss with the family helps the child reinforce the concepts. In the “What’s for Dinner?” example, having the child write his or her dinner menu with the family helps involve the family and introduces the activity in the primary language.

When possible, provide resource books in both English and the primary language to assist with the development of both the English and the EE concepts.

**Connecting ELLs’ Prior Knowledge to the New Knowledge in the Activity**

Making the lesson relevant to the students’ lives help all students learn, but for ELLs relevance is especially important in helping them place the new language into a context. In “Every Tree for Itself,” for example, comparing tree rings to events in their lives helps them more clearly grasp words such as *before*, *after*, and *between*.

Creating culturally familiar lessons help language development. In the “What’s for Dinner” modification, for example, students use their own diet to understand food chains.

Short pre-activities such as the clustering around the word *water* in the “The Incredible Journey” allows students to organize prior knowledge with new concepts.

**Appendix D: Suggestions for Accommodating ELD Educators During Workshops**

One of the most important considerations in providing ELLs access to EE is to prepare ELD teachers to effectively use EE activities in a variety of learning situations where subject area and

language development are both the focus. By preparing yourself to better understand the needs of ELLs, you will also help ELD teachers who attend your workshops gain a greater insight on the value of EE.

When presenting a workshop attended by ELD teachers, consider these ways to advance the linkage of the needs of ELL students and the introduction and use of EE:

- Using a ten-point scale, ask participants to locate their level of teaching experience with ELLs and their level of knowledge of ELD. Use this to evaluate how much time you should spend on demonstrating how to adjust lessons for ELLs.
- Provide time for teachers to talk about their understanding of why it is important for ELLs to participate in EE.
- Demonstrate activities that are appropriate for each stage of language development.
- When reflecting on an activity that you have presented, ask teachers to “place” it in its most appropriate level of language development.
- Ask teachers to discuss how an activity rates in terms of its “comprehensible input.”
- Discuss ideas of how EE involves “active learning” and its value to ELD.
- Deliberate about how cultural issues affect teaching EE in the multicultural classroom (different view of the natural world, belief systems, etc.).
- Demonstrate how EE uses cooperative group strategies.
- Have teachers work in groups to find an activity they would use with ELL students. Ask them to identify the stage of language development for which the activity would be most appropriate, and to suggest modifications to make it more effective.
- Help teachers make connections with local resources that can enrich their teaching by providing materials, field trips, realia, etc. for classrooms.
- Discuss ways to involve parents/family members.
- Demonstrate home-school-community connections
- Demonstrate or have participants make adjustments to a lesson that highlights key vocabulary, sentence patterns and concepts.

## **Appendix E: Definitions of Acronyms and Terms Commonly Used in ELD Circles**

**Academic English or CALP:** CALP is the acronym for a complex and abstract form of language proficiency and thinking called “cognitive academic language proficiency.” This kind of

language proficiency is necessary for successful academic learning and achievement, and therefore is increasingly called “academic English.” CALP consists of the specialized conceptual language, abstract ideas, and thinking processes associated with academic subject content.

**CABE:** acronym for California Association for Bilingual Education, a state affiliate of the National Association of Bilingual Education (NABE). CABE provides ongoing instructional assistance through its annual conference (usually held in January or February), frequent regional one-day conferences, and bimonthly newsletters that offer articles on theory, research, and instructional practices related to ELLs and ELD.

**Conversational English or BICS:** BICS is the acronym for “basic interpersonal communication skills,” and because this is the kind of language associated with the concrete world of everyday living it is increasingly called “conversational English.” It is typically characterized by the use of phrases and gestures that relate to (a) immediate and concrete social activities and exchanges, (b) satisfying immediate and basic needs, and (c) conveying strong emotional feelings (such as enthusiasm or discontentment) for an immediate experience.

**ELD:** acronym for “English Language Development,” and describes the theory that California uses to explain the process of how English language learners acquire and develop proficiency in English as a second language (“L2” denotes a “second language”). Included within the ELD framework are English language standards and suggested instructional strategies. Because ELD usually interacts with students’ prior academic knowledge in their native or first language (“L1” denotes a student’s “first language”), an understanding of this relationship is considered important in the ELD process, as is the kind of classroom socio-cultural climate that promotes positive self-identity and cross-cultural friendships.

**ELL:** acronym for “English language learner.” Currently, in California ELL has replaced the acronyms “NEP” and “LEP” when referring to students in the process of acquiring and learning English as a second language. NEP stood for a “non-English-speaking” student and LEP stood for a “limited-English-speaking” student. The change was made to emphasize what the students were gaining, rather than what they lacked.

**ESL:** acronym for “English as a Second Language,” a phrase to describe the teaching theory and strategies used with students whose native or primary language is other than English. A typical ESL program stresses the development of conversational English, with little attention given to academic English. Instructional themes center on everyday language needs.

**LEA:** acronym for “Language Experience Approach,” a language teaching approach that asserts that reading and writing are as integral to human communication as speaking, listening, and conceptual thinking. It also assumes that all human activity is interconnected and motivated by meaningful experiences. With respect to this manuscript, an EE activity provides ELLs with a purposeful and relevant experience, while ELD strategies develop language proficiency. For most ELLs, learning to write (encode) and read (decode) is most readily accomplished by using words and sentences that are known to them. By using students’ broad base of experience to interpret an EE activity, the LEA introduces students to the notion that culture mediates how one sees the world. Using LEA usually involves a progression through steps such as:

- Involving the student in an initial “exploratory” activity (or experience) where students interact with the subject and use a lot of oral language;
- Teachers and students spend a lot of time communicating about the subject (or experience) in a variety of forms (e.g., art, movement, music, drama, role playing, poetry, etc);
- Observations and opinions about the subject are exchanged, further expanding and developing oral language skills;
- Students respond to the subject (or experience) by individually, or through dictation, writing an “account” that becomes the “text” from which further reading and writing is developed;
- Teacher reads the “text” about the subject (or experience) followed by the student’s repeated reading of the “text”;
- The “text” becomes a source of both concept analysis and word recognition.

**LEP:** acronym for “Limited English Speaker,” an older term for students who do not speak English.

**NABE:** acronym for National Association for Bilingual Education.

**NATURAL LANGUAGE APPROACH:** a communicative approach based on the fact that the acquisition of a second language takes place in a manner similar to the way we “naturally” acquire a first language. A teacher using this approach expects a “silent” period while the student is learning to comprehend the language rather than produce it. Use of an abundance of visuals, realia, and other materials helps provide the student with input that is comprehensible. The learning environment does not dwell on error correction or pronunciation drills. Characteristics of the “Natural Approach” also include:

- Situations in which students are motivated to communicate;
- Understanding is more important than speaking
- An emphasis on vocabulary development;
- An absence of correcting errors;
- Input is interesting and comprehensible;
- A low anxiety learning environment.

**PHLOTE:** acronym for “primary home language other than English.”

**SDAIE:** acronym for “Specially designed academic instruction in English,” a complex of teaching strategies used with students who are mid-way (levels 3-5) through their English language development. These techniques assume that language and content can be developed together as long as the “input” is comprehensible.

**SHELTERED INSTRUCTION:** an older phrase that was replaced by the phrase “Specially designed academic instruction in English (SDAIE)”. This change was primarily made to accentuate the need to develop academic language proficiency and to reinforce the position of second language educators who feel these techniques are best suited for ELLs who have reached Stage 3 with their English language proficiency.

**SOL:** acronym for “Speakers of other languages,” which refers to English Language Learners.

**TESOL:** acronym for “Teachers of English to Students of other languages.”

**TPR:** acronym for “Total Physical Response,” a strategy recommended for use with ELLs at the first two stages of language proficiency. It is designed to provide a focus on the comprehension of key words and concepts essential to a lesson and allow ELLs to respond within their linguistic comfort zone. Initially this means the students uses nonverbal responses that eventually progresses to one or two words and eventually short sentences. The following steps are suggestive of this approach:

- The teacher begins by modeling simple commands that require the manipulation of objects and visual aids (e.g., “give my the sponge”, “show Lucia the sponge”, “pour the water”.
- Next, using the same commands and object/visuals, the teacher directs students to perform the command. Comprehension is checked by the accuracy of the performance.
- As students become more proficient, commands become increasingly more complex (e.g., “use to sponge to soak up the water”, “draw a branch and paste it on the trunk of the tree”, “count the tree rings to find the tree’s age”.
- As students’ speech begins to emerge, questions are posed to them. These should be based on familiar commands and be accompanied by objects or visuals previously used and be within their language proficiency level. (Refer to Appendix B for specific examples.)

## **Appendix F: Appendix F: Useful Contacts and Other Resources**

**California Association for Bilingual Education.** 650 South Figueroa St., Suite 1040, Los Angeles, CA 90017; Phone: (213)532-3850; Fax: (213)532-3860;  
*<http://www.bilingualeducation.org/>*

**California Department of Education. Bilingual Education Unit.** 721 Capitol Mall, P.O. Box 944272, Sacramento, CA 94244-2720.

**Educational Resources Information Center (ERIC).** Clearinghouse on Rural and Small Schools (Including American Indians, Alaska Natives, Mexican Americans, Migrants, Outdoor Education), Appalachia Educational Laboratory, P.O. Box 1348, Charleston, WV 25325-1348; Phone: 800-624-9120; Fax: (304) 347-0487; *<http://www.ael.org/eric/>*

**National Association for Bilingual Education.** 1220 L Street NW, Suite 605, Washington, DC 20005-4018; Fax: (202) 789-2866.

**National Clearinghouse for Bilingual Education (NCBE).**  
The George Washington University, Graduate School of Education and Human Development, Center for the Study of Languages and Education, 1118 22<sup>nd</sup> Street, NW, Washington DC 20037;  
*<http://www.ncbe.gwu.edu/askncbe/faqs>.*  
National Center for Research on Cultural Diversity and Second Language Learning,  
*<http://www.ncbe.gwu.edu/miscpubs/ncrcdssl>*

**National Clearinghouse for ESL Literacy Education.** 4646 40<sup>th</sup> Street, NW, Washington DC 20016-1859; Phone: (202) 362-0700; Fax: (202) 362-3740; *<http://cal.org.ncle/>*

## **Appendix G: Why Bilingual Education?**