



## Three Approaches to Early Vocabulary Development and Communication

Mary Sweig Wilson, Ph.D. (F-CCC-SLP)  
Professor Emerita, Communication Sciences, University of Vermont  
President, Laureate Learning Systems, Inc.

Both linguistic and social knowledge are critical to the development of communicative competence. Humans have an innate capacity to acquire linguistic knowledge. Given an adequate social environment, the typically developing child acquires language with no apparent effort and certainly without tutorial intervention. This is not the case for most children with ASD. Even the acquisition of an initial lexicon or vocabulary is problematic. Laureate offers three series of programs to help students build an early vocabulary. Each series provides a different training environment for developing receptive, expressive, and communication competence. These evidence-based programs help students with ASD master vocabulary and become better communicators.

The establishment of a core vocabulary is an important step for children with ASD. From the beginning, intervention should be geared to facilitating the development of receptive, expressive, and communication competence. Early language goals for children with ASD should include developing vocabulary comprehension, expressive use of vocabulary in structured supportive environments, and using vocabulary in social contexts. We'll look at three different software series that can be used to help children with ASD learn words, say words, and use words.

### **Receptive Language: *First Words, First Words II, and First Verbs Sterling Editions***

Linguistic theory and research has demonstrated that new vocabulary and syntax forms are learned more quickly using receptive language training than expressive training.

### **Expressive Language: *Exploring Nouns and Exploring Verbs Sterling Editions***

Once a student has acquired new forms whether lexical or syntactic, software can provide the context for expressive use of those forms. Structured expressive intervention has been shown to be effective in developing or increasing the use of known words and structures.

### **Communication: *Talking Nouns I, Talking Nouns II, and Talking Verbs Sterling Edition***

Communication competence is developed through the use of language in social settings. Software can provide opportunities for interactions with others and encourage communication.

### **Building Vocabulary Comprehension Through Receptive Training**

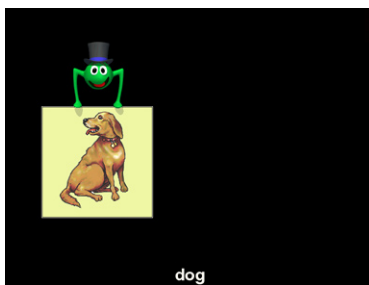
The Early Vocabulary Development Series programs, *First Words, First Words II, and First Verbs Sterling Editions*, provide explicit and systematic receptive language training. *First Words* and *First Words II* each train 50 early developing Nouns. Two illustrations and two photographs are available for training each Noun. *First Verbs* trains 50 early developing Verbs using two animated illustrations. To promote basic semantic vocabulary development, illustrations depicting each word are presented together with the spoken word. This strengthens the association between the lexical representation of a word and the perceptual cognitive properties the word is intended to reference. To ensure that children are learning the syntactic elements associated with the trained words, innovative word-specific post-trial reinforcement animations feature the just-trained Noun or Verb in various syntactic contexts with an assortment of grammatical forms. As such, these routines contribute to receptive language training while students see them as engaging feedback for a job well done.

*First Words, First Words II, and First Verbs Sterling Editions* all have an *Optimized Intervention*<sup>®</sup> expert system to select appropriate training material and to adjust instructional support in relation to emerging skills and competencies, resulting in highly individualized and efficient vocabulary instruction. The programs begin by probe testing vocabulary items in developmental order to ascertain the appropriate place to begin training. Once training begins, *Optimized Intervention* determines what material a student needs to work on and how much instructional support the student may require to make progress. The programs also feature the *Sterling Administration System* with extensive data collection and reporting capabilities. This greatly simplifies the process of tracking student progress and generating reports detailing areas of strength and weakness. Custom reporting items let a variety of professionals create reports specific to their interests. For example, speech-language pathologists can get lists of Nouns and Verbs that have been mastered as well as those still in training. Occupational therapists can compare response latency from the left and right side of a touch sensitive screen for assessing and tracking crossing midline problems. Assistive technologists can evaluate responding with varying interfaces.

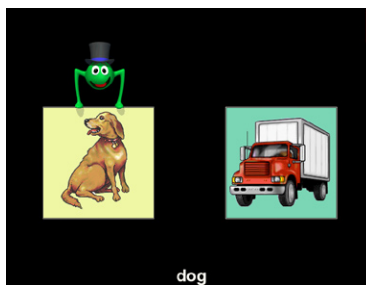
A number of additional instructional activities are available to complement the training provided by the *Optimized Intervention (OI)* system. Educators have the option to train on one of the five Levels of instruction that are used in *OI*:

1. **Instructional Introduction** presents a single word in the middle of the screen, provides instruction, and then asks the student to find it. Reinforcement is provided.
2. **Single Picture Training** presents a single word, provides instruction, and then relocates the picture to the left or right with a cue. The student is then asked to find the word. Reinforcement follows correct responses while reprompting, and then reinstruction follows error responses.
3. **Basic Two Picture Training** provides instruction and cueing on a single picture located in the middle of the screen. The picture then relocates left or right with its cue and a second “foil” picture appears with it. Reinforcement, reprompting, and reinstruction are used as before.
4. **Intermediate Training** is the same as Basic Two Picture Training except that there is instruction only. There is no cue to the correct answer. Events following responses are the same as in Basic Two Picture Training.
5. **Advanced Training** is the same as Intermediate except that there are no antecedent events before a response request. Instruction is faded before a trial but feedback following responses remains the same.

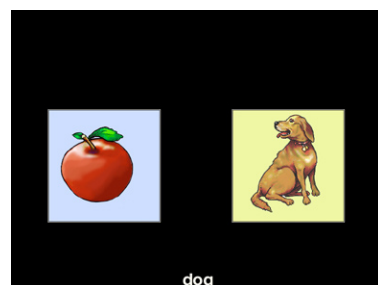
**First Word Training Level Examples:**



**Level 2**  
Single Picture Training



**Level 3**  
Basic Two Picture Training



**Level 5**  
Advanced Training

There is a **Test Activity** that can be used to complement the testing in *OI*. Additionally, there are three Supplemental Activities:

- **Word Introduction** presents one word at a time on a black background
- **Slide Show** presents one word at a time as a slide show
- **Zot Routines** provide exposure to enriched language using the target word in a variety of syntactic contexts

The first two activities are ideal for introducing a student to the Early Vocabulary Development Series programs. This would be appropriate for the student who has the concept of cause and effect but is only at the very beginning stages of word understanding. They can also be used as reinforcement following training sessions. The third activity, **Zot Routines**, can be used to provide exposure to words in training in varying linguistic contexts. And Zot provides a world of fun while providing evidence-based instruction.

The preferred sequence for training using the Early Vocabulary Development Series programs is to start with *First Words*. As soon as the student has mastered 5 Nouns, *First Verbs* should be introduced and the two programs should be used simultaneously. Once a student has mastered the Noun vocabulary in *First Words*, *First Words II* should be introduced. Once a student comprehends 20 words, the Exploring Series can be used to provide a supported environment for expressing known words.

### **Building Expressive Vocabulary**

*Exploring Nouns Sterling Edition* and *Exploring Verbs Sterling Edition* are designed for students who need repetition but can work within a less structured learning environment than that provided in *First Words*, *First Verbs*, and *First Words II Sterling Editions*. *Exploring Nouns* trains over 120 Nouns in ten full screen scenes while *Exploring Verbs* trains 50 Verbs presented in eight scenes. The rich, full-screen scenes in these programs encourage open-ended exploration and collaborative learning. In addition to the core 170-word vocabulary trained in these programs many more Nouns are available for users to explore. For the student who responds to a more open-ended environment than provided in the Early Vocabulary Development Series, these programs can be used for receptive vocabulary training. Once a student has acquired the knowledge of a core group of words, the Exploring Series programs can be used to encourage expressive use of known words.

*Exploring Nouns* and *Exploring Verbs Sterling Edition* offer a number of activities for training and exploration. The activities can be used to teach a core receptive vocabulary, present opportunities for expressive use of learned vocabulary, and provide the context for communication exchanges with adults and peers. The Activities are:

- **Optimized Intervention**
- **Identification**
- **Testing**
- **Exploration**
- **Mixed Explore/Identify**
- **Supplemental**

The first three Activities are primarily designed for receptive use. Laureate's *Optimized Intervention*<sup>®</sup> technology provides the most efficient and effective way to teach the words in *Exploring Nouns* and *Exploring Verbs*. This approach increases the efficiency of training by keeping the focus on material that has not yet been mastered, and by providing an appropriate level of instructional support for each Noun or Verb on each trial. When **Optimized Intervention** is initiated, the program monitors student performance on a trial-by-trial basis and adjusts program variables accordingly. In particular, the *Optimized Intervention* system (a) determines whether a student can identify each Noun or Verb, (b) maintains the focus of training on Nouns or Verbs that have not yet been learned, and (c) adjusts the level of instructional support used with each Noun or Verb on a trial by trial basis in relation to the student's ongoing performance.

While the **Optimized Intervention** Activity is ideally suited for teaching comprehension of the 120 Nouns in *Exploring Nouns* and the 50 Verbs in *Exploring Verbs*, other Activities can be used to complement this receptive training.

The **Identification Activity** like *Optimized Intervention* is primarily designed to be used in receptive language training. This activity can be used to assess a student's response to varying levels of instructional support without the program being affected by student responses as it is in *Optimized Intervention*.

The **Testing Activity** can be used to determine a student's current knowledge of the vocabulary trained in *Exploring Nouns*. This can help in determining which Nouns to include in training activities such as *Optimized Intervention*. The Testing Activity can also be used to provide further documentation of success following the use of the program.

The remaining three Activities lend themselves to expressive training and encouraging social interaction. The **Exploration Activity** is designed to allow a student freedom to choose any Noun or Verb s/he wants. All Nouns and Verbs in all scenes can be explored, or you can limit exploration to selected Nouns and Verbs in chosen scenes. The **Exploration Activity** provides a convenient way to have a student practice expressive use of known Nouns or Verbs. To use the program in this way, from the Select Scenes & Vocabulary button on the Program Settings menu choose only those scenes and vocabulary items your student has mastered in *Optimized Intervention* using either the Early Vocabulary Development or Exploring Series. For example, a student may have learned car, cow, hat, horse, or shoes using either *First Words* or *Exploring Nouns*. For these particular items you can use the Early Noun Set Farm scene.

The Early vocabulary Farm scene appears as follows:

### Exploring Nouns



Farm Scene

Using this display, let the student choose a word. For this use, we recommend setting the Animated Reinforcement to Noun with the Item Labels “On.” While the enriched speech is spoken, press “Shift & P” to temporarily pause the program and ask the student to name the item or repeat the name of the item. Encourage the use of the word but do not insist on a repetition. You are trying to make expression of words an enjoyable activity.

The **Exploration Activity** can also be used to encourage interaction among peers. Students can take turns choosing items on the screen. More verbal peers can be encouraged to name items chosen.

The **Mixed Explore/Identify Activity** provides a combination of instructional approaches. Students are asked to alternatively Explore and Identify words in the scene. The Identify trials can be delivered at three different levels of instructional support (Beginning, Intermediate, and Advanced Training). This activity can be used by a single student but it provides an excellent environment for peer interaction. Choose a student who has already mastered the words in a scene and pair him or her with a peer who is still working to master the vocabulary. Assign the more competent language-using student to the Identify turns and the student who is still working on vocabulary mastery to the Explore turns. Include a mix of words the student in training has mastered as well as those s/he is still working on.

Students should be encouraged to talk about their choices. You can use “Shift & P” to pause the program and ask for the students to name the items they have identified and explored. For the student who is less competent, you would ask him or her only to name those words they know. This activity provides a combination of instructional approaches.

Three different **Supplemental Activities** can be used to introduce and/or review the Nouns and Verbs trained in the Exploring Series. The three supplemental activities are as follows:

**Word Introduction (Cards):** Pictures showing a single Noun or Verb are presented one at a time, and the Narrator asks the student, “What’s this?” or “What’s the Noun doing?” When the student responds with any form of input, the Noun is identified, animates, and is used in a sentence.

**Word Introduction (Scene):** One of the *Exploring Nouns* or *Exploring Verbs* scene backgrounds is presented without its vocabulary items. The narrator then asks the student to “Make something happen.” When the student responds with any form of input, a Noun or Verb is added to the scene and identified. It then animates and is used in a sentence.

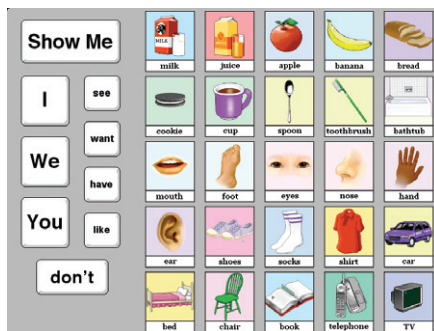
**Reinforcement Routines:** Small scenes show routines that feature either Zot the animated reinforcement character from *Exploring Nouns* or Annie and Toby who are from *Exploring Verbs*. A single Noun or Verb is presented one at a time, and the Narrator asks the student “What’s this?” or “What is the Noun doing?” When the student responds with any form of input, an amusing animation routine featuring the Noun or Verb is presented.

These activities can be used in several ways: They can provide an appropriate introduction for students who are not yet prepared to begin training. They can also be used to provide focused exposure to a subset of Nouns or Verbs that a particular student may be struggling with. For more advanced students, an opportunity to play the Zot routines may be an appropriate and educational reward for a job well done.

The **Supplemental Activities** can also be used to encourage expressive use of the trained vocabulary. These open-ended activities can provide the basis for encouraging peer interaction.

### Developing Communication Competence

Once a student has established a core receptive vocabulary of around 50 words, we introduce them to the Talking Series. *Talking Nouns I*, *Talking Nouns II*, and *Talking Verbs Sterling Edition* were designed to encourage language use, promote communication, and train pragmatic skills. Communication competence requires the acquisition of both linguistic knowledge and pragmatic skills. The Talking Series programs are ideal for developing social communication skills. They are also useful in assisting students who will become augmentative communication users develop skills necessary to become competent AAC users. The programs use templates that appear on the screen from which the student can choose words using a mouse, touch sensitive screen, or single switch. Below are sample displays from *Talking Nouns I* and *Talking Verbs*.



Talking Nouns I



Talking Verbs

All three programs in this series have as their core activity **Interactive Communication** with two options available: Single Touch Activation and Sequenced Activation. In **Interactive Communication-Single Touch Activation** each word and picture key speaks as soon as it is chosen. In **Interactive Communication-Sequenced Activation**, students must sequence words to form a sentence before it is spoken. Only grammatically correct sequences are allowed and the student always hears a syntactically correct sentence.

These two activities can play an important role in the development of conversational competence. Students with ASD experience limitations in the quantity and quality of their utterances. When an alternative output mode to spoken language is provided, these children are encouraged to talk. By providing tools which can be used dynamically in a communication dyad, the development of conversational competence is encouraged. Dialogues can be carried out using the Talking Series programs as the only communication output mode. Alternatively, the conversation dyad can include both computer speech output and human speech. Gesture can also be used in the communication dyad. The two activation options available for interactive communication allow you to work on different aspects of developing communication competence.

Three additional activities with multiple options complement the two core communication activities. In the **Word Identification Activity** students hear a word and must find its picture and/or text on the template display. In the **Word Matching Activity** students must find a picture and/or text match from the template display. Finally, the **Exploration Activity** can be used to introduce a student to the noun or verb vocabulary in the Talking Series.

If you are going to begin using the Talking Series as a conversational tool and to develop pragmatic skills, choose **Interactive Communication-Single Touch Activation**. This activity creates a rich environment for turn-taking within the teacher-student dyad and can be used with peers as well. This option is also a good choice as a focus for incidental language teaching. Since sentences are not constrained in this option, the student can play with any sequence of words.

The **Interactive Communication-Sequenced Activation** option provides a very different communication environment than the single touch mode. Utterances are not spoken until a grammatically correct sequence has been generated. Since sentences are constrained to always be syntactically correct, the student can't possibly be grammatically wrong. By discovering which key sequences are needed to produce sentences, the user learns to produce grammatically correct utterances to encode various thoughts including comments and requests. Within a communication dyad you can encourage the use of more varied utterances by using the templates for modeling as well as expansion and commenting. You can facilitate the development of conversational competence through dynamic turn-taking exchanges.

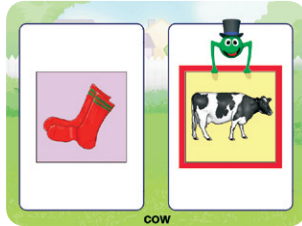
We frequently use *Talking Nouns I & II* and small objects to set up dynamic exchanges that facilitate the development of requesting and commenting. Place a number of small toys and objects on the table that correspond to the pictures shown on the template you're using. You can start the conversation by activating the key sequence [I] [see] [dog]. This sequence will then speak the sentence "I see the dog." Then give the dog to the student and activate [You] [have] [dog] which will speak "You have the dog." Now assist the student to activate [I] [have] [dog] which will speak "I have the dog." You can provide additional comments as well. We have found this activity to be especially engaging for students as it does not require them to speak yet enables them to participate in a communication dyad. *Talking Verbs* can be used in a similar dynamic dyad to assist students with ASD to comment on and express feelings.

The programs in the Early Vocabulary Development Series, the Exploring Series, and the Talking Series can be used to introduce children with ASD to the world of words. Use *First Words*, *First Words II*, and *First Verbs Sterling Editions* to receptively train a core 100 Noun and 50 Verb vocabulary giving the student knowledge of words. Use *Exploring Nouns* and *Exploring Verbs Sterling Editions* to encourage the use of known words in a stimulating supportive environment. Finally, use *Talking Nouns I*, *Talking Nouns II*, and *Talking Verbs Sterling Editions* to assist your students in developing communication competence. Your students will reach their goals of knowing words, saying words, and using words in social contexts.

# First Words, First Words II, and First Verbs

## First Words Comes with FREE Card Deck!

This program focuses on the 50 earliest developing nouns. The program uses an encouraging voice, colorful pictures, and animated reinforcements to engage the learner.



Sample command: "Find the cow."

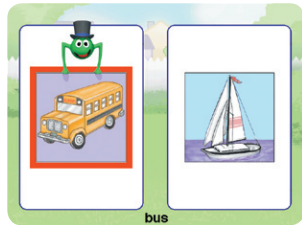
### First Words (Mac/Win CD)

1-4 copies	104-B19	\$235 ea.
5-9 copies	104-30-B19	\$165 ea.
10-19 copies	104-40-B19	\$141 ea.
20-49 copies	104-50-B19	\$118 ea.
50+ copies	Call for pricing.	
Network License	104-NW-B19	\$1,175

Includes Both Mac Classic and OS X Native Versions

## First Words II Comes with FREE Card Deck!

This program continues early vocabulary training with 50 more basic nouns. You'll find the same carefully thought-out design and format as *First Words* as well as all-new animated reinforcements.



Sample command: "Find the bus."

### First Words II (Mac/Win CD)

1-4 copies	105-A19	\$235 ea.
5-9 copies	105-30-A19	165 ea.
10-19 copies	105-40-A19	141 ea.
20-49 copies	105-50-A19	118 ea.
50+ copies	Call for pricing.	
Network License	105-NW-A19	\$1,175

Includes Both Mac Classic and OS X Native Versions

## First Verbs Comes with FREE Card Deck!

Learning verbs is more difficult than learning nouns. This unique program makes verb training much easier. *First Verbs* teaches 50 verbs, each represented by two pictures that show the verb in action.



Sample command: "Find eating."

### First Verbs (Mac/Win CD)

1-4 copies	106-A19	\$235 ea.
5-9 copies	106-30-A19	\$165 ea.
10-19 copies	106-40-A19	\$141 ea.
20-49 copies	106-50-A19	\$118 ea.
50+ copies	Call for pricing.	
Network License	106-NW-A19	\$1,175

Includes Both Mac Classic and OS X Native Versions

## Buy All Three Programs and Save!

### First Words, First Words II, First Verbs Package

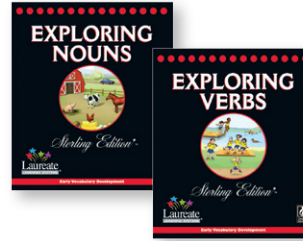
1-4 Packages	820-A19	\$528 ea.
5-9 Packages	820-30-A19	\$370 ea.
10-19 Packages	820-40-A19	\$317 ea.
20-49 Packages	820-50-A19	\$264 ea.
50+ Packages	Call for pricing.	
Network License	820-NW-A19	\$2,640

See page 45 for System Requirements, Network Licensing information, and other pricing options.

For interface options and other valuable information, please see the Laureate Program Features chart on page 43.

For a list of vocabulary trained, visit...

[www.LaureateLearning.com/fwvocal/](http://www.LaureateLearning.com/fwvocal/)



## Exploring Nouns & Exploring Verbs

### Exploring Nouns

This program is designed to train 120 early developing nouns using 10 engaging, full-screen settings. There is also an option to train 30 of the earliest developing words in 5 simple scenes.



Sample command: "Find the horse."

### Exploring Nouns (Mac/Win CD)

1-4 copies	304-A19	\$225 ea.
5-9 copies	304-30-A19	\$158 ea.
10-19 copies	304-40-A19	\$135 ea.
20-49 copies	304-50-A19	\$113 ea.
50+ copies	Call for pricing.	
Network License	304-NW-A19	\$1125

### Exploring Verbs

This program is designed to train 50 early developing verbs using 8 captivating, full-screen settings. The first four scenes use girls to illustrate the verbs and the final four scenes use boys.



Sample command: "Find.. The girl is running."

### Exploring Verbs (Mac/Win CD)

1-4 copies	305-A19	\$195 ea.
5-9 copies	305-30-A19	\$137 ea.
10-19 copies	305-40-A19	\$117 ea.
20-49 copies	305-50-A19	\$98 ea.
50+ copies	Call for pricing.	
Network License	305-NW-A19	\$975

Includes Both Mac Classic and OS X Native Versions

See page 45 for System Requirements, Network Licensing information, and other pricing options.

### Eight Activities are Available

#### Optimized Intervention®

This activity tracks student responses and automatically guides the user through the curriculum. The program moves among three training levels, each with a different amount of instructional support.

#### Exploration

This open-ended activity lets students select an item on the screen, hear the word, and optionally, see the associated text and animation.

#### Identification

Students are asked to identify nouns or verbs from selected scenes. You can choose any one of the three training levels.

#### Mixed Explore/Identify

With this option, the program alternates between the Exploration and Identification trials.

#### Testing

This activity can be used to document pre- or post-training performance.

#### Three Supplemental Activities

- *Word Introduction (Cards)* presents a single word and its associated animation on a black background.
- *Word Introduction (Scene)* introduces vocabulary items one at a time until a full scene is displayed.
- Animated routines use enriched language to expand knowledge of selected nouns and verbs.

## Buy Both Programs and Save!

### Exploring Nouns and Exploring Verbs

1-4 packages	809-A19	\$315 ea.
5-9 packages	809-30-A19	\$221 ea.
10-19 packages	809-40-A19	\$189 ea.
20-49 packages	809-50-A19	\$158 ea.
50+ packages	Call for pricing.	
Network License	809-NW-A19	\$1,575



## Talking Nouns I, Talking Nouns II, and Talking Verbs

### Talking Nouns I

*Talking Nouns I* lets users communicate using 50 early developing nouns. Each of the two built-in templates has 25 nouns. Custom templates that use any of the nouns can be developed and saved.



#### Talking Nouns I (Mac/Win CD)

1-4 copies	134-A19	\$150 ea.
5-9 copies	134-30-A19	\$105 ea.
10-19 copies	134-40-A19	\$90 ea.
20-49 copies	134-50-A19	\$75 ea.
50+ copies		Call for pricing.
Network License	134-NW-A19	\$750

### Talking Nouns II

*Talking Nouns II* includes an additional 50 early developing nouns. This program expands vocabulary and increases communication opportunities.



#### Talking Nouns II (Mac/Win CD)

1-4 copies	135-A19	\$150 ea.
5-9 copies	135-30-A19	\$105 ea.
10-19 copies	135-40-A19	\$90 ea.
20-49 copies	135-50-A19	\$75 ea.
50+ copies		Call for pricing.
Network License	135-NW-A19	\$750

### Talking Verbs

*Talking Verbs* lets users communicate using 40 early developing verbs. This program increases communication opportunities.



#### Talking Verbs (Mac/Win CD)

1-4 copies	136-A19	\$150 ea.
5-9 copies	136-30-A19	\$105 ea.
10-19 copies	136-40-A19	\$90 ea.
20-49 copies	136-50-A19	\$75 ea.
50+ copies		Call for pricing.
Network License	136-NW-A19	\$750

Includes Both Mac Classic and OS X Native Versions

#### Buy All Three Programs and Save!

##### Talking Nouns I, II, and Verbs Package

1-4 packages	817-A19	\$337 ea.
5-9 packages	817-30-A19	\$236 ea.
10-19 packages	817-40-A19	\$202 ea.
20-49 packages	817-50-A19	\$169 ea.
50+ packages		Call for pricing.
Network License	817-NW-A19	\$1,685

See page 45 for System Requirements, Network Licensing information, and other pricing options.

For interface options and other valuable information, please see the Laureate Program Features chart on page 43.

For a list of vocabulary trained, visit...  
[www.LaureateLearning.com/talkvocab/](http://www.LaureateLearning.com/talkvocab/)

## Buy All Eight Programs and Save!

### The Complete Vocabulary Acquisition Package

Includes *First Words*, *First Words II*, *First Verbs*, *Exploring Nouns*, *Exploring Verbs*, *Talking Nouns I*, *Talking Nouns II*, and *Talking Verbs*

1-4 Packages	975-B19	\$1,100 ea.
5-9 Packages	975-30-B19	\$770 ea.
10-19 Packages	975-40-B19	\$660 ea.
20-49 Packages	975-50-B19	\$550 ea.
50+ Packages		Call for pricing.
Network License	975-NW-B19	\$5,500



Laureate Learning Systems, Inc.  
 110 East Spring Street  
 Winooski, VT 05404

Phone: 800 562-6801  
 802 655-4755  
 FAX: 802 655-4757

[www.LaureateLearning.com](http://www.LaureateLearning.com)

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