



# **Gateway for Snap**

## **USER MANUAL**

### **Advanced Communicator and Text Page Set**

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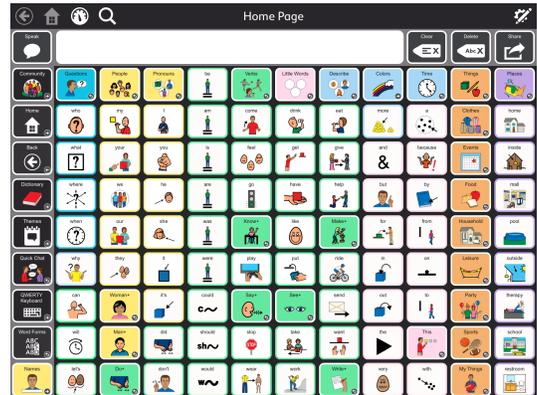
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# Gateway© Advanced Communicator and Text Page Sets

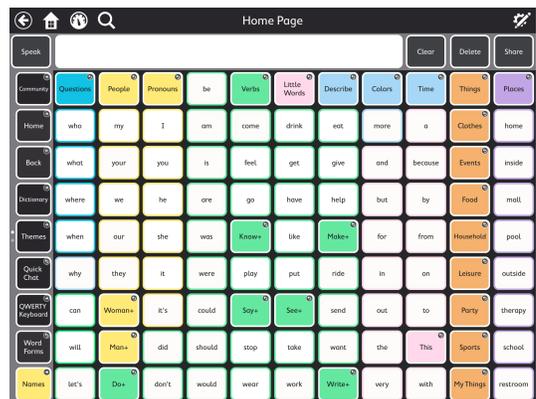
## Overview

The Advanced Communicator Page Set of Gateway© targets individuals creating complex messages, who can benefit from an efficient and powerful core word vocabulary.

The Advanced Communicator Page Set is a logical next step for children using the Developing Language Page Set. *The Advanced Page Set also* targets teen and adult users who require an efficient core word vocabulary with fringe vocabulary related to independent care needs and community activities. Many of the words contained on the *Verbs* and the *Describe* Pages are found in vocabulary lists for 4<sup>th</sup> grade spellers and above. All grid sizes within the Advanced Communicator Page Set can effectively meet the needs of competent communicators.



The Text Page Set (pictured on the right) replicates the core vocabulary and thematic vocabulary contained in the Advanced Communicator. It is created for individuals who prefer a text-based system. Both of these page sets organize words alphabetically. While they are listed as separate Page Sets, the content is the same.



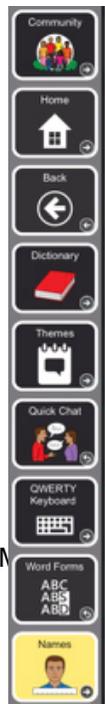
The Advanced Communicator and the Text Page Sets each contain five (4) grid sizes:

- 5\*8 (40 vocabulary buttons);
- 6\*10 (60 vocabulary buttons);
- 8\*10 (80 vocabulary buttons);
- 9\*11 (99 vocabulary buttons);

The primary determiners in selecting the which grid size to use are (a) visual abilities and limitations and (b) fine motor abilities and/or limitations. Ideally the user should select the arrangement with the largest number of buttons he or she can access with at least 95% accuracy. One wants to avoid the need to correct unwanted selections.

## Vocabulary Organization and Features

- Toolbar with Dictionary and Keyboard
- HOME and COMMUNITY Core
- Fitzgerald Key Arrangement
- Theme Pages



## Toolbar

All grid sizes within the Advanced Communicator and Text Page Sets have a *Toolbar*, positioned on the left side of the grid. The buttons within the toolbar have a black background white border and a white font so they can easily be differentiated from the core vocabulary. Using the *Hide* feature of Snap, these buttons can be hidden if they are deemed inappropriate or unnecessary for the user.

The content of the Toolbar varies with the grid size. Grids contain a link to the Community Core, and may include links to Themes, Dictionary, Quick Chat, Keyboard, a Word Forms and customizable Names folder. As the grid size becomes larger, more of these links are available.

The Dictionary icon links to folders that are not represented on the HOME page. They enable a user to more efficiently access a content word without needing to navigate through many pages. The number of folders in the dictionary varies with the number of buttons in the grid.

Since the Advanced Communicator and Text Page Sets utilize the Snap +'s grammar feature and since this feature does not always yield the desired word form, a Word Form Function is essential. A user must first select the targeted word regardless of its word form and then use the Word Form function to access the targeted word.

## HOME and COMMUNITY Core

Each HOME page contains a set of research-based high frequently core used words accessed with a single key selection along with folders linking to word categories such as QUESTIONS, PEOPLE, PRONOUNS, VERBS, LITTLE WORDS, DESCRIBE, THINGS, PLACES, and other categories such as LEISURE, CLOTHES, etc. Depending up the arrangement auxiliaries and model verb forms are included.

Each grid size also contains a COMMUNITY Core that can be accessed by selecting the *Community icon* from the Toolbar. The COMMUNITY Core replicates the contents of the HOME page for core vocabulary and grammatical category folders. The fringe category folders (e.g., CLOTHES, FOODS, HOUSEHOLD, etc.) change to reflect topics needed for use within a school or community setting. These may include AM MEETING, NEWS, TEST, but always includes SCHOOL THINGS, SCHOOL PLACES, COMMUNIY THINGS, COMMUNITY PLACES. This strategy enables users to access topical vocabulary without losing access to the consistent core vocabulary of Gateway's HOME page. Below is an example of the HOME and COMMUNITY Core for the 9\*11 grid size.



## Fitzgerald Key Arrangement

Each word and word category are color-coded according to the Fitzgerald Key format. As seen in the images above, People are yellow; Verbs – green; Little Words – pink; Descriptive Words – blue; Things – orange and Places – purple. Folders are solid colored and buttons have a colored border. This color-coding is consistent throughout all of the Gateway pages and helps ease the transition for an individual moving from one page set to the next level of complexity. Within the Fitzgerald Key, “Little Words” are defined as prepositions, articles and conjunctions and “Descriptive Words” includes adjective, adverbs, and time words.

## Semantic Power Strips

Some grid sizes (e.g. 5\*8; 8\*10) use a Gateway© feature referred to as a *Semantic Power Strip*. *Semantic Power Strips* are sets of paradigmatically associated words, that enable a user to access related vocabulary without scrolling through pages or popup screens. They are represented by a “solid colored button with a following a word. *Semantic Power Strips* are used for words such as *girl+*, *boy+*, and for some *verbs*. For

example, selecting “*girl+*” will open a semantic power strip



containing – girl, mom, grandma, aunt, sister, etc. The number of related words varies with the grid size. That is, a 5\*9 power strip may have fewer vocabulary options presented than an 8\*11 power strip, as there are few buttons on the page.

Users of the Advanced Communicator and Text arrangements also have access to the standard Grammar features of Snap so they can easily add comparatives and superlatives to adjectives and “-ly” to adverbs. Users are able to add morphological endings as needed within the context of natural conversation.

## Themes

All of the Advanced Communicator and Text grid sizes include a set of *Theme* pages to support functional device use within recurring environments. The content of each set of theme pages is the same for all arrangements within the Advanced Communicator and Text Vocabularies.

The *Themes* folder links to six *topical tabs* – *About You & Me*, *Comments*, *Questions*, *Time to Learn*, *Time to Relax*, and *Time in Town*. The *About You & Me* folder must be personalized for the user. It provides a means to provide basic information about one’s self. The *Comments and Questions contents* are self-explanatory.

Since some users of the Advanced Communicator Vocabulary will likely be teens and young adults in high school or in college, the *Time to Learn* folder is provided. There is plenty of open space to customize these pages so students can demonstrate mastery of the Core Curriculum Standards and also to enable them to function independently within the classroom.

The *Time to Relax* tab contains folders that one would use in a leisure setting such as playing cards, Bingo, board games and the like.. The *Time in Town* tab has pages that can be used within the community. Each of these requires some customization so they are most meaningful for the individual to use within functional activities. Pages include topics such as: *At*

*the Mall, McDonald's, Ice Cream, Vacation, Amusement Park and in the Park. The Scouts and Religion* pages are open for customization and there are an additional blank pages to support the personal activities of the user.

## Why Gateway©

- Simple to Learn
- Efficient Organization Results in Minimal Keystrokes Per Word

### Simple to Learn

Gateway is easy to learn. The cognitive demands associated with learning symbol meanings are minimized by the use of single-meaning icons and/or written words to represent vocabulary. For nouns and many other word classes, the selected symbols provide a transparent or intuitive means of representing vocabulary. Text is used to represent many function words. This helps to reduce the need for learning arbitrary symbols to represent the words of our language that cannot be easily be represented by an iconic symbol.

### Efficient Organization Results in Minimal Keystrokes Per Word

Gateway has been organized to provide maximum efficiency for the user. An efficiently designed system enables a user to converse with a minimum amount of effort. In the Advanced Communicator, a user can achieve an average  $\leq 1.5$  key selections per word for the *core* vocabulary. Words considered fringe, or less frequently used vocabulary, may require two or more key selections. The number of words presented per page affects efficiency.

The following table presents sample sentences created using the single word vocabulary of the Advanced Communicator and Text Page Sets.

| Advanced Communicator Comparison           |           | Key Selections |             |             |             |
|--------------------------------------------|-----------|----------------|-------------|-------------|-------------|
| Message                                    | # Words   | 5*8<br>40      | 6*10<br>60  | 8*10<br>80  | 9*11<br>99  |
| We are going to eat chicken.               | 6         | 8              | 8           | 8           | 7           |
| Can you help me?                           | 4         | 5              | 5           | 4           | 4           |
| I want to go to the mall.                  | 7         | 5              | 8           | 8           | 8           |
| Yesterday they helped me with my computer. | 7         | 14             | 9           | 9           | 9           |
| I want to get my sister a present.         | 8         | 11             | 11          | 10          | 10          |
| Will you give it to me?                    | 6         | 9              | 6           | 6           | 6           |
| What do you want me to do?                 | 7         | 9              | 9           | 9           | 9           |
| She has to work tomorrow.                  | 5         | 12             | 8           | 8           | 8           |
| <b>Total Spoken Words – Hits</b>           | <b>50</b> | <b>73</b>      | <b>64</b>   | <b>62</b>   | <b>61</b>   |
| <b>Avg. # Keystrokes Per Word</b>          |           | <b>1.46</b>    | <b>1.28</b> | <b>1.24</b> | <b>1.22</b> |

## How was the Vocabulary Selected?

- Frequency of Use
- Targets Conversational Needs of Teens and Adults
- Educational and Community-based Needs

### Frequency of Use

The core vocabulary selected for use within each of the Gateway® Page Sets are based upon research and by analyzing the vocabulary contents of the communication boards of individuals who can effectively communicate across a variety of topics appropriate to their age and interests. All Gateway® page sets contain a “core” of words such as eat, drink, go, want, and have. No matter what phase an individual is within their language development, these words are a part of one's core vocabulary.

Some words may be important at one phase of an individual's life and not at another. For example, bubbles are important to young children. A razor may be important to an adolescent or adult. The Advanced Communicator and Text Levels were designed to meet the needs and interests of individuals in late middle school through adults.

### Targets Conversational Needs of Teens and Adults

Some older AAC users who are not proficient spellers, often restrict their spoken and written communication to words found within their AAC device. The Advanced Communicator offers many advanced level verbs, adjectives and adverbs. These are words that were found in a range of middle and high school word lists. Since some of the vocabulary differs from the Developing Language Page Set, users who move to this level from the Developing Language Level will benefit from systematic instruction to help teach contents and location of new vocabulary.

### Educational and Community-based Needs

It is expected that some individuals who use the Advanced Communicator Level of Gateway® are middle-school students and teens. To enhance a user's classroom participation and to better enable his or her ability to demonstrate mastery of the core curriculum competencies, all grid sizes within this level of Gateway contain requisite vocabulary for Morning Meeting and links to pages where targeted academic vocabulary can be added.

Grid sizes 5\*8 through 9\*1 include the states, countries and planets. The academic pages have also been designed to interface with the Main page so that a user can respond using single words or use complete sentences. A TEST page can enable a user to complete a test or worksheet without significant adult assistance.

### Customization

#### Domains to Customize

- Understanding Functions and Features of Snap
- Understanding Gateway's Features
- Personal Information, Needs and Interests
- Educational and Social Information

## **Understanding Snap's Functions and Features**

Gateway was designed using the Snap App. In many respects it is comparable to a separate user within Snap. Personalization or customization of Gateway© requires that the person assigned with this responsibility demonstrates a basic level of competency with Snap editing and operational functions. That is, a person needs to know how to edit a button. Minimally editing a button can involve changing the label, the symbol, or the text to be spoken. Gateway uses the standard Fitzgerald key color-coding. A user may opt to change button borders and backgrounds.

Tobii Dynavox has extensive resources to support users of Snap. These resources can be found within the App as well as on their webpage.

## **Gateway's Functions and Feature**

Gateway uses Semantic Power Strips as a tool to provide the user access to semantically related words. After selecting a word from the semantic power strip, the popup automatically closes. This is done as a keystroke saving minimizing the need for a user to close the page after each word.

This same auto-close feature is used throughout Gateway's core vocabulary. When composing a message, a user can select words from the Home page and then access fringe vocabulary selecting folders such as Things, Play, Events, and the like. Each time a word is accessed on the fringe vocabulary page, the page automatically closes. Depending upon where the page is and for what purpose, it will either return to the Home Page or to the Previous Page.

## **Personal Information, Needs and Interests**

To customize Gateway for Snap the facilitator needs to consider both the personal information and the needs and interests of the user. Changes considered appropriate need to be made within Gateway. The process of personalizing Gateway requires knowledge of the vocabulary within Gateway, the color-coding system used within Gateway, and the fundamental categorization of the vocabulary.

Unless Gateway's vocabulary matches the needs, wants, interests and "personality" of the user, it is unlikely that the user will maximize use of the program. A second step in personalizing Gateway is to add and/or change key vocabulary items and expressions. For example, the *Foods* page contains an assortment of foods and beverages considered representative of the typical foods people eat. This may or may not match the preferences of the individual using Gateway. Changes should be made to this page as needed to allow the user to communicate effectively. Family and user input should be considered in determining what changes, if any, are needed. Other pages such as Things and Places will also require the same type of consideration in evaluating the "appropriateness" of the vocabulary provided.

## **Educational and Social Information**

In order to help an individual meet his or her educational and social goals, it is imperative that the user is able to express the vocabulary targeted for the range of spoken

and written educational tasks associated with each core curriculum competency. While it is recognized that Gateway does not contain all of the educational vocabulary needed by each user, it is believed that Gateway does create a framework to enable a user to meet many educational competencies. Individuals working with a Gateway user (i.e., the teachers, therapist, aides) must take an active role in adding appropriate vocabulary to this program as needed. This requires that these individuals become familiar with the contents of Gateway. It also requires that they know what vocabulary is needed to complete daily lessons. Vocabulary that is needed, and that is *not* currently stored within the Gateway vocabulary, should be added if and when determined necessary by the student's team.

In addition to the content or subject pages that have been left open to customize for lessons as indicated, there is a Test page that enable a student to quickly complete tests that can be answered with True/False or multiple choice answers.

## **Implementation**

- Where Do We Begin?
- Evaluating the AAC User's Abilities
- Learning to Communicate with Gateway
  - Teaching Vocabulary Contents and Location.
  - Highlight the Organizational Structure.
  - Using Gateway to Converse.
  - Create Opportunities to Learn New Words
  - Writing
  - Communicating Through the Academic Pages
  - Using the Recreational Pages

### **Where Do We Begin?**

The specific approach used to implement Gateway will vary with the needs and language abilities of the user. Gateway should be introduced to the user in a variety of functional contexts. Successful implementation requires a commitment on the part of the individuals working with the user (i.e., the facilitator, teacher, SLP) to become familiar with Gateway's vocabulary contents and the location of these words. It also requires a commitment to personalize the program to match the needs, interests and abilities of the user.

### **Evaluating the AAC User's Abilities**

While one may have a sense of a user's abilities and limitations, it is often helpful to formally assess a user's skills to set appropriate goals and to measure or document progress. While with a competent adult communicator, this may not be necessary, it is considered important when implementing Gateway with any school-aged student. Gateway provides an AAC user the tools to demonstrate his/her abilities and weaknesses. It contains the necessary words and word morphology features to allow a user to respond to questions on various formal tests. The user's responses will be influenced by his/her knowledge of the vocabulary contents of the system. Assuming the user has a solid knowledge of the vocabulary contents of the Gateway arrangement being used, the user's responses can be considered indicative his or her language abilities. The tests have not been normed on this population. As such, they

should be used to determine performance skills rather than to obtain percentiles, standard scores or mental ages. A user's physical and behavioral characteristics need to be considered in the testing process

Unlike working with a speaking individual, evaluating an AAC user's expressive language performance must follow the user's introduction to his/her communication system. If we want to see how a individual uses language, we must first let the user become familiar with the core vocabulary. Depending upon variables such as how often the user has had access to the system and how much intervention is being provided, a therapist's assessment can occur within 3-4 weeks after the system is introduced. The more opportunity the user has to become familiar with the vocabulary, the more reliable the assessment will be.

Once the user learns what words are available in the system and how to access these words, one can then assess a range of expressive abilities from grammar and semantics, to problem solving and critical thinking. Assessment can be informal or formal.

### **Learning to Communicate with Gateway**

The general strategies used to teach Gateway are straightforward. The primary goals must be to insure that the user learns the vocabulary contents and organizational structure of Gateway. Once specific language intervention goals are identified, functional activities can be designed and implemented.

For an individual who has functionally used a communication board or other AAC App with a significant number of single words prior to receiving Gateway, introduction to this program should flow as a logical extension of his or her use of the manual board or App and to the teaching strategies already in place. That is, the individual will need to be oriented to where vocabulary is located, and what vocabulary is available, but it would be expected that the individual's performance with the Gateway program should eventually mirror or exceed his or her performance with his/her other system. As the individual learns more vocabulary, and is exposed to advanced language features, it would be expected that the individual's language performance and competency in using the vocabulary to communicate would improve. Strategies that have been used successfully to help older students and adults include:

Teaching Vocabulary Contents and Location. Teaching contents and location can be accomplished through focused intervention as well as through games and recreational activities. If the user does not know what words are available to him/her to create a message, unless the user can spell, he will not be able to formulate messages to express needs, wants, or ideas. Some strategies that can be used to teach the single word vocabulary include: (a) highlighting the organizational structure, (b) using Gateway to "talk", (c) creating opportunities to learn new words, (d) writing and (e) traditional language intervention

Highlight the Organizational Structure. Regardless of which Gateway grid size (e.g., 5\*8, 6\*10, 8\*10, 9\*11) is selected for the user, the augmented communicator should be systematically introduced to the Home page, which is the core of the single word vocabulary. Each of the color-coded word categories should be pointed out along with its corresponding color-coded page link. A rationale for the color of some command keys has been established. It is felt that the color-coding may help some augmented users learn to locate words more quickly.

Using Gateway to “Talk”. Many individuals who began using AAC as young children, do not talk for the purpose of sharing information. They use their devices to request and to respond. Efforts should be made to engage the user in a dialogue. Teach the vocabulary by talking with the augmented communicator. This dialogue may need to begin with simple questions to help frame or focus the conversation.

Create Opportunities to Learn New Words. Based upon the age and or abilities of the augmented communicator, it may be helpful to systematically introduce each page, and when doing so, integrate vocabulary from other pages as appropriate. To teach the “people” on the Home page or on the People page, a therapist can show a user his family photos or other people. The user can tell “who” the person is; name the other people who live in the same house; tell how the person is related (i.e., friend, aunt, uncle) and so on. This often leads to spontaneous interaction as individuals enjoy talking about family and friends. Similar activities may be done to introduce the other pages such as, *Little Words*, *Describing Words* and *Places*.

Writing. Writing is also an excellent way to help a user master the Gateway core and also to expand expressive language performance. Writing activities can be as simple as having the user complete a fill in the blank activity, or it can be as complex as having a user write a complex narrative. Most importantly, the writing activity should match the user’s expressive language performance and life goals.

Learning Gateway Through Traditional Language Intervention. The Gateway core contains many of the frequently used words of our language. As such, for older users many games and therapy materials can be used with only minimal modifications. Some materials may require more modifications than others. When an “off the shelf” game or activity contains words of little interactive value to the AAC user (e.g., kite, mouse, umbrella), it is suggested that the activity be modified rather than changing the vocabulary of the Gateway program to accommodate the program unless changing that vocabulary will ultimately increase device use long term.

There are many ways to teach Gateway. How it is taught can, and should vary with the needs and abilities of the user. The suggestions provided here are just that, suggestions. The user’s speech language pathologist is key in the implementation process. A therapist or communication partner should communicate to the child while using Gateway, creating messages with the words of the Gateway program.

Communicating Through the Academic Pages. Enabling a user to master the core curriculum standards is a challenge for those using AAC devices. It is impossible to include all needed educational vocabulary in any page set. Even if the space was available to do so, recalling the location of the needed vocabulary would be extremely difficult to achieve based the fast pace of a regular classroom setting. In an effort to help users of Gateway page sets actively participate in their educational programs and/or demonstrate mastery of the core curriculum standards a framework for customization has been established. There are open pages tied to subject folders. These can be customized as needed. It is recognized that a year’s worth of classroom vocabulary cannot be stored, but typically there is room to accommodate chapters.

Using the Recreational Pages. There is no question about the fact that almost everyone enjoys engaging in leisure activities. Within Gateway there are a variety of pages designed to

enable a user's to participate in leisure activities while communicating with peers. They will be able to easily learn the device contents while engaged in a functional activity.

## Sample Exercises for Using the Advanced Communicator

### Practice Sentences for grid sizes 6\*10 and higher.

**Exercise 1.** The goal of this exercise is to practice using words from the HOME page and the folders for THINGS, FOODS, CLOTHES, TOYS, and PLACES.

| HOME           | THINGS      | FOOD    | CLOTHES  | LEISURE  | PLACES        |
|----------------|-------------|---------|----------|----------|---------------|
| I go to        |             |         |          |          | McDonalds     |
| I want to go   |             |         |          |          | to the picnic |
| You have the   | credit card |         |          |          |               |
| I want to wear |             |         | Uggs     |          |               |
| They eat       |             | dessert |          |          |               |
| You give him   |             |         |          | the iPad |               |
| I made the     |             |         | bracelet |          |               |
| She has the    | medicine    |         |          |          |               |
| I want         | something   |         |          |          |               |
| Drink the      |             | tea     |          |          |               |
| He made the    |             |         | painting |          |               |

**Exercise 2.** The goal of this exercise is to practice asking “questions” using words from the Question folder and combining them with words from the HOME page and the folders for verbs (ACTIONS), THINGS, FOODS, TOYS, HOUSEHOLD and PLACES.

| QUESTIONS     | HOME | VERBS   | HOME | FOOD   | HOUSEHOLD | PLACES        |
|---------------|------|---------|------|--------|-----------|---------------|
| Who will she  | help |         |      |        |           |               |
| Where are we  |      | meeting |      | dinner |           |               |
| Where is the  |      |         |      |        | towel     |               |
| Can he        |      | work    |      |        |           |               |
| Couldn't you  |      |         | go   |        |           | to the parade |
| How come they | eat  |         |      | fish   |           |               |

**Exercise 3.** The goal of this exercise is to make sentences combining words from the HOME page with words from PEOPLE, LITTLE WORDS, TOYS, and PLACES.

| PRN   | PEOPLE     | HOME        | LIT WDS | CLOTHES  | PLACES       |
|-------|------------|-------------|---------|----------|--------------|
|       | My teacher | went (go)   |         |          | to the zoo   |
|       | His friend | wore (wear) |         | shorts   |              |
| They  |            | went (go)   |         |          | to the store |
| She   |            | knows       |         |          |              |
| Their | neighbor   | made (make) |         | costumes |              |

### Exercise 4 - Learning to Use Semantic Power Strips

| Subject | Semantic Link | Target Word | Verb, Adverb or Object |
|---------|---------------|-------------|------------------------|
| I       | is+           | am          | happy (Describe)       |

|     |                        |       |                               |
|-----|------------------------|-------|-------------------------------|
| You | <i>is+</i>             | are   | pretty (Describe)             |
| we  | <i>is+</i>             | are   | afraid (Describe -> Feelings) |
|     | <i>mom+</i>            | she   | eats ice cream                |
|     | <i>dad+</i>            | he    | wears sandals                 |
|     | <i>write+</i>          | color | the kite (Toys)               |
| I   | <i>Say+</i>            | call  | dogs (Thing)                  |
| I   | Verbs -> <i>buy+</i>   | buy   | present (Party)               |
| Dad | <i>say+</i>            | yells |                               |
| I   | Verbs -> <i>drive+</i> | fly   | home (Place)                  |

## Summary

Gateway is a powerful core word page set complemented with rich pragmatic pages for use in recurring environments. Since 1998, Gateway has helped many individuals become competent communicators and achieve academic success. It has enabled competent communicator to efficiently and effectively meet their daily communication needs across environments. Success in using Gateway is highly correlated with how its user is supported in learning the contents of the page set and in having access to his or her device at all times.

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