Emacs support for Forth

Description	Keystroke	Function	Note
Forth programming Language Support	Support for the Forth programming language is minimal: you can activate the forth-mode package by setting the **pel-use-forth** user option. • Files with the .f, .fs, .fth and .4th are recognized as Forth source files and will automatically activate forth-mode if the package has been activated via that user-option. • Generic programming language features like template text insertion handle Forth comment style. See ∑ **Inserting Text** . • 📦 Forth support is provided by **forth-mode** external package automatically downloaded and installed by PEL when the **pel-use-forth** user option is **t**. • This mode supports Emacs ∑ **Speedbar** : it shows Forth variables and words.		
Open this PDF file. See also: ∑ **Help/Info**	`<f11> SPC f <f1>` `<f12> <f1>`	(**pel-help-pdf** &optional OPEN-WEB-PAGE)	Open the local copy of the **PEL - Forth** PDF file unless a command prefix (like `C-u`) was used. In that case it opens the Github-hosted file instead.
∑ **Customize** PEL Forth support	`<f11> SPC f <f2>` `<f12> <f2>`	(**pel-customize-pel** &optional OTHER-WINDOW)	Customize PEL Forth support. • If OTHER-WINDOW is non-nil (use `C-u`), display in another window.
Forth Language Reference Access	The following commands connect to a web site to retrieve specification information about Forth words.		
Forth '94 word specification	`C-c C-d 1`	(**forth-spec-lookup-1994** NAME)	View the documentation on NAME from the ANS'94 Forth Standard • Prompts for Forth word. Supports completion. • Connects to **http://lars.nocrew.org/dpans/dpans.htm**, a draft of ANSI Forth '94.
Forth 2012 word specification ⚠ 🚧	`C-c C-d 2`	(**forth-spec-lookup-2012** NAME)	View the documentation on NAME from the Forth 2012 Standard. • Attempts to access http://www.forth200x.org/documents/html/alpha.html ⚠ which, at the time of this writing (early 2021) does not exits. There are other files on this web site that contain information about Forth 2012 such as **http://www.forth200x.org/documents/forth-2012.pdf**. 🚧
Navigation inside Forth Code See also: ∑ **Navigation**	Basic navigation commands are available: both standard Emacs navigation and extra commands provided by PEL, as listed below. • This mode supports Emacs ∑ **Speedbar** : it shows Forth variables and words.		
Forward to start of next word definition	`<f6> <down>`	(**pel-beginning-of-next-defun** &optional SILENT DONT-PUSH_MARK)	Move forward to the beginning of the next word definition. • Beeps if does not find beginning of next function unless SILENT is non-nil. • If the beginning of next function is found, push the start location to the mark ring unless DONT-PUSH_MARK is non-nil. • Move back to previous position with `M-`` . 🚧 this should but does not work in Forth. ☛Shift marking is available.
Backward to end of previous word definition	`<f6> <left>`	(**pel-end-of-previous-defun** &optional SILENT DONT-PUSH_MARK)	Move backwards to the end of the previous word definition. • Beeps if does not find end of previous function unless SILENT is non-nil. • If the end of previous function is found, push the start location to the mark ring unless DONT-PUSH_MARK is non-nil. • Move back to previous position with `M-`` . 🚧 this should but does not work in Forth. ☛Shift marking is available.
Backward to beginning of function definition	• `C-M-a` • `C-M-<home>` • `<f6> p` • `<f6> <up>` • `C-[ C-a` • `Esc C-a`	(**beginning-of-defun** &optional ARG)	Move backward to the beginning of a word. • With ARG, do it that many times. Negative ARG means move forward to the ARGth following beginning of word. ☛Shift marking is available in graphics mode, not in terminal mode (for `C-M-a` and `C-M-<home>`). However `<f6> p` handles Shift-marking fine in terminal mode.
Forward to end of function and class definition	• `C-M-e` • `C-M-<end>` • `<f6> <right>` • `C-[ C-e` • `Esc C-e`	(**end-of-defun** &optional ARG)	Move forward to next end of word. With argument, do it that many times. Negative argument -N means move back to Nth preceding end of word ☛Shift marking is available in graphics mode, not in terminal mode (both keys).
Marking Forth Words			
Mark current Forth word See also: ∑ **Marking**	`C-M-h`	(**mark-defun** &optional ALLOW-EXTEND)	Put mark at end of this word definition, point at beginning. • The Foth word marked is the one that contains point or follows point. • With positive ARG, mark this and that many next words; with negative ARG, change the direction of marking. • If the mark is active, it marks the next or previous word(s) after the one(s) already marked.
Forth Evaluation	When a Forth interpreter is available, the following commands use it to provide interactive evaluation within Emacs. • The first time a command requiring a Forth executable is require it prompts for one then uses it.		
Open a Forth shell	`<f11> x f`	(**run-forth**)	Start an interactive forth session. • Prompt for a Forth executable. • gforth is a good free implementation. • On macOS, you can install it with `brew install gforth` in a terminal shell. • ⚠ Notice that it is integrated with the Home-brew Emacs installation and it will upgrade your Homebre-based Emacs unless its pinned (in which case Homebrew won't install gforth). 📦 Requires the **forth-mode** external package PEL installs and activates when the **pel-use-forth** user option is **t**. It also requires a Forth interpreter (which must be installed separately)
Evaluate Forth Expression	`C-c C-e`	(**forth-eval-last-expression**)	Evaluate Forth expression at point.
Kill Forth process	`C-c C-k`	(**forth-kill** &optional BUFFER)	Kill Forth process associated with current buffer.
Load Forth File	`C-c C-l`	(**forth-load-file** FILE)	Load specified file in the Forth interpreter.
Evaluate region of Forth code	`C-c C-r`	(**forth-eval-region** START END)	Evaluate marked region of Forth code.
SEE code of current word	`C-c C-s`	(**forth-see** WORD)	Execute the Forth **SEE** command on the current word, accessing the code of that word. • Uses the word at point , showing the result inside the *see* buffer.
Opens the Forth process output buffer	`C-c C-z`	(**forth-switch-to-output-buffer**)	Opens the Forth process output buffer
Evaluate Forth expression.	`C-c :`	(**forth-eval** STRING)	Prompts for a Forth expression. On RET uses the Forth interpreter to evaluate it and display the result in the minibuffer.
Evaluate the current Forth word.	`C-M-x`	(**forth-eval-defun**)	Evaluate the current word.
Evaluate current Forth expression	`C-x M-e`	(**forth-eval-last-expression-display-output**)	Evaluate current Forth expression
Indenting Forth Code			
Indent expression	`C-M-q`	(**prog-indent-sexp** &optional DEFUN)	Indent the expression after point. When interactively called with prefix, indent the enclosing defun instead.

Description	Keystroke	Function	Note
Commenting Forth Code			
Comment/uncomment See also: **∑ Comments**	**M-;**	(**comment-dwim** ARG)	Comment line or region. If line/region is already commented, uncomment it. • Forth comments are quite flexible. This command uses uses the **** word at the beginning of a line and **( )** after now-whitespace. • With PEL, use the **<f11> ; ?** command to get a full list of the variables used to control Forth comments.

Forth— References

Document	Notes
Forth Programming Language	Forth is a stack-based programming language designed Designed by **Charles H. Moore**
The Forth Programming Language - Wikipedia	
Forth Books @ forth.com	Links to several good Forth Books, including **Starting Forth** the original 1981 Forth book by Leo Brodie.
forth-standard.org	Get the latest information about Forth on this web site.
ANSI Forth '94 Draft Specification	
Forth 200x Extension Proposals	
Forth Implementations	
GForth @ Wikipedia	GNU Forth, a free implementation
GForth @ GNU	
SwiftForth	A commercial implementation.