

# FLEx Lexicon Activity

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## 1 Create a project

- For this activity we will create lexicon entries in FLEx based on an existing dictionary in a language of your choice. First, locate the dictionary that you plan to use. For simplicity's sake, pick a language that is written with a Latin script. Even so, you might need to use a special keyboard or online character generating tool (<https://copychar.cc/>) for text input of some characters.
- Open FLEx and select “Create a New Project”
- If a FLEx project is already open, you can also choose File > New FieldWorks Project...
- Name the project after the language of your chosen dictionary.

## 2 Set up writing systems

- *Vernacular language writing system* means the script and spelling system to be used for the language data that you enter. Click “Define New” and search for the language by name or ISO-639 code.
- If you can't find the language, you can hit the link labelled “Can't find your language?” to choose “Unlisted Language”.
- *Analysis language writing system* means the language and writing system that will be used by the researcher for notes, translations, etc. You can choose “English” for now.
- You can add to or change your choices by going to Options > Configure > Set up writing systems... It's possible to use more than one vernacular writing system and/or analysis writing system depending on your needs.

## 3 Add lexical entries

- Your main task for this exercise is to add 10 lexical entries in FLEx based on existing dictionary entries. Take care with the following points:
  - Each entry should minimally include the lexeme form, and one sense with an English gloss and grammatical info (part of speech).
  - Try to include entries of different grammatical categories (some nouns, some verbs, some function words or affixes).
  - Remember that a gloss is ideally a one-word translation equivalent or abbreviation for a grammatical function. In contrast, a definition is a longer, more detailed explanation of the meaning of a word. When available, use definitions in addition to glosses.

- Include one or more entries where a single word has multiple senses. In English, for example, the word *bank* can mean ‘the land on the side of a stream’ or ‘a place to deposit money.’
- For each entry, try to include as much of the information in your original dictionary entry as possible. You’ll need to consider which field in FLEx makes sense to hold that type of information. Is it a type of note? An example sentence? Etymological info? An indication that the form belongs to a particular dialect? Do your best to be consistent.
- As you work, note areas of potential problems to bring up with the group in discussion.
- When you are done, click in the leftmost pane to switch to Dictionary view. Look over your entries here to see if you’ve made any mistakes or omissions.

## 4 Sorting and Searching Entries

- Now that you have at least ten entries, try sorting and searching entries in Lexicon Edit View.
- First, in the Entries Panel, click the small box with a spreadsheet symbol in the upper right of the panel to configure which columns to display. Add columns for all the fields that you entered info into. Rearrange and resize the columns to occur in an arrangement that you find helpful.
- Practice sorting by fields by clicking on the column headers. Sort in ascending and descending order.
- Next, try filtering your items by clicking the drop down menu under a column header. There are several options in the menu, what does each one do and when might you use it? How can you remove the filter?
- Try to apply one filter that results in 4 or more of your entries being displayed, and another that yields 3 or fewer entries displayed. You can get fancy and use a regular expression with the Filter for... option. See <https://www.regular-expressions.info/quickstart.html> if needed.
- Use Edit > Find lexical entry to search for a word in one or more of the definitions that you entered. Did FLEx find it? When might you use the Filter function and when would you use Find?

## 5 Challenge activities

### 1. Add pronunciation information

- You’ve decided you want to include pronunciation of words in IPA in addition to orthographic spelling. To do so, you will need to add a vernacular writing system which is a variant designated for IPA.
- Find the menu option allows you to configure your new writing system info and add it.
- Next, in the lexicon entry panel, find the (hidden) pronunciation field and make it always visible.
- Next, configure the pronunciation field to use the IPA writing system.
- Then, add IPA pronunciations for your existing entries (if you are not sure of the pronunciation, check for notes in the preface or appendix to your dictionary, or just guess).
- How would you add a sound file with the pronunciation of the word? Try it.

### 2. Add an analysis writing system

- You are working with teammates who speak the national language of the country where the language is used, or another lingua franca. Add an analysis language to accommodate them.
- Configure FLEx to show the new analysis language in key fields of the lexicon entries.
- Add glosses in the new analysis language for three of your entries. Return to Dictionary view to see how this information is displayed.

### 3. Working with complex forms

- You want to show the relationship between a simple form of a stem and a related word that is inflected or derived. An English example would be the pair of words *describe*, *description*.
- Find a pair of words in your dictionary that are related to one another in this way.
- Create an entry for the simple form.
- Create an entry for the related word, specifying a complex form type.
- In the entry for the simple form, add the related word as a complex form.
- Switch to the Dictionary view of the Lexicon.
- Using Tools > Configure > Dictionary try displaying the dictionary as “lexeme-based”, “root-based” and “hybrid” to see different ways that complex forms can be treated.
- Try playing with the format of your dictionary entry using the configuration options.

### 4. Digraphs and sorting

- Does your language use digraphs or special characters? Try to set the sort order so that they are treated appropriately. For example, in a language that uses the digraph <ng> for velar nasal, you might want words which begin with <ng> to be listed after all the others words which begin with <n> rather than between <ne> and <ni>.
- In Lexicon Edit view, Go to Tools > Configure > Set up Writing Systems..., then select your main vernacular writing system and hit Modify.
- You can change the options in the Sorting Tab of this window.
- Open the help section using the menu item Help > Language Explorer
- Search for “digraph” and open the topic “Collation in Fieldworks”.
- Using the information that you find, try to set the sort order in your lexicon to match that used in the existing dictionary. If your language doesn’t have any digraphs or special characters, you can make one up.
- Go back to the Lexicon Edit view and make sure the sorting works as desired. You may need to add a few entries that contain the characters in question to be able to test this.

### 5. Filter with regular expression

- In Lexicon Edit view, filter for all the entries that have /a/ as the first vowel.
- What aspects of the language structure or writing system might influence how you need to write the search pattern to yield accurate results?

## 6 Going forward

- FLEx is a powerful tool, but there is a bit of a learning curve. As you develop your own project, it’s normal to get stuck from time-to-time.
  - The included help file is fairly good and I always start by searching there for an answer to my issue. Help > Language Explorer...
  - There is an active Google Groups for FLEx users: <https://groups.google.com/forum/#!forum/flex-list>. I often find the answer to my problem by searching the archive and reading related threads, but you can also join and ask your question if you don’t see it in the archive.
  - If you have technical problems, the FLEx developers really will respond if you send an error message using Help > Report a problem or the automated error message generator that pops up when the program crashes.