

teachingtools — Environments and tools for teaching materials *

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Released ?

1 Implementation

```
1 <*package>
2 <@@=teachingtools>
```

1.1 Preliminaries

The usual preliminaries apply.

```
3 \ProvidesExplPackage {teachingtools} {2017/11/25} {v0.2}
4   {Environments and tools for teaching materials}
```

This package depends on recent versions of the l3kernel. Versions from TeXLive 2016 or newer should be fine.

```
5 \@ifpackagelater { expl3 } { 2015/11/15 }
6   { }
7   {
8     \PackageError { teachingtools } { Support~package~expl3~too~old }
9     {
10      You~need~to~update~your~installation~of~the~bundles~'l3kernel'~and~
11      'l3packages'.\MessageBreak
12      Loading~teachingtools~will~abort!
13    }
14    \tex_endinput:D
15  }
```

Now load the support packages. `chngcntr` is required to modify counters while they're in use, and `enumitem` provides convenience macros for modifying lists.

```
16 \RequirePackage{ l3keys2e , chngcntr , enumitem }
```

The package `cleveref` does some clever things with reference handling, but it needs a reference format defined for each type of thing we might choose to reference.

*This file describes ?, last revised ?.

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1.2 Messages and error handling

All of the error and warning messages are defined here in one place to simplify things.

```

17 \msg_new:nnnn { teachingtools } { unknown-option }
18   { Unknown~option~'#1'. }
19   {
20     The~option~'#1'~is~not~known~by~teachingtools:~
21     perhaps~it~is~spelled~incorrectly.
22   }

```

Some general-purpose functions for throwing errors are defined next.

```

\__teachingtools_error:nxx
\__teachingtools_error:nx
\__teachingtools_error:n
\l__teachingtools_error_bool
23 \cs_new_protected:Npn \__teachingtools_error:nxx #1#2#3 {
24   \bool_set_true:N \l__teachingtools_error_bool
25   \msg_error:nnxx { teachingtools } {#1} {#2} {#3}
26 }
27 \cs_new_protected:Npn \__teachingtools_error:nx #1#2 {
28   \__teachingtools_error:nxx {#1} {#2} { }
29 }
30 \cs_new_protected:Npn \__teachingtools_error:n #1 {
31   \__teachingtools_error:nxx {#1} { } { }
32 }
33 \bool_new:N \l__teachingtools_error_bool

```

(End definition for __teachingtools_error:nxx and others.)

\l__teachingtools_key_tl Unknown options should raise an teachingtools-specific error message.

```

34 \tl_new:N \l__teachingtools_key_tl
35 \keys_define:nn { teachingtools } {
36   unknown .code:n = {
37     \msg_error:nnx { teachingtools } { unknown-option }
38     { \exp_not:V \l_keys_key_tl }
39   }
40 }
41 \AtBeginDocument {
42   \keys_define:nn { teachingtools } {
43     unknown .code:n = {
44       \msg_error:nnx { teachingtools } { unknown-option }
45       { \exp_not:V \l_keys_key_tl }
46     }
47   }
48 }

```

(End definition for \l__teachingtools_key_tl.)

1.3 Printing routines

Some general-purpose printing routines are provided here to ensure that text can be printed with the necessary configuration.

_teachingtools_print_question: This function prints the question title, with or without numbering as required.

```

49 \cs_new:Nn \__teachingtools_print_question: {
50   \__teachingtools_generate_question_label_format:
51   \str_clear_new:N \l__teachingtools_question_str
52   \str_put_left:Nn \l__teachingtools_question_str { Question }

```

```

53 \bool_if:NT \l__teachingtools_numbered_question_bool {
54   \refstepcounter{question}
55   \str_put_right:Nn \l__teachingtools_question_str { ~ }
56   \__teachingtools_print_question_label:
57   \str_put_right:Nx \l__teachingtools_question_str { \l__teachingtools_question_label_str }
58 }
59 \str_put_right:Nx \l__teachingtools_question_str { \l__teachingtools_suffix_character_str }
60
61 % \tl_show:N { \g__teachingtools_question_label_format_tl }
62
63
64 \par \skip_vertical:N \l__teachingtools_questionbefore_skip
65 \group_begin:
66 \bfseries \l__teachingtools_question_str \par\nopagebreak
67 \group_end:
68 }

```

(End definition for __teachingtools_print_question:.)

__teachingtools_print_question_label: This function prints out the question label.

```

69 \cs_new:Nn \__teachingtools_print_question_label: {
70   \str_clear_new:N \l__teachingtools_question_label_str
71   \bool_if:NT \l__teachingtools_question_prefix_bool {
72     \str_put_right:Nx \l__teachingtools_question_label_str { \l__teachingtools_question_prefix_str }
73     \str_put_right:Nx \l__teachingtools_question_label_str { \l__teachingtools_prefix_separator }
74   }
75   \str_put_right:Nx \l__teachingtools_question_label_str { \l__teachingtools_question_label_str }
76 }

```

(End definition for __teachingtools_print_question_label:.)

__teachingtools_generate_question_label_format: This function generates the label format for use in references.

```

77 \tl_new:N \g__teachingtools_question_label_format_tl
78 \cs_new:Nn \__teachingtools_generate_question_label_format: {
79   \tl_gclear:N \g__teachingtools_question_label_format_tl
80   \bool_if:NT \l__teachingtools_question_prefix_bool {
81     \tl_gput_right:NV \g__teachingtools_question_label_format_tl { \l__teachingtools_question_prefix_str }
82     \tl_gput_right:NV \g__teachingtools_question_label_format_tl { \l__teachingtools_prefix_separator }
83   }
84   \tl_gput_right:NV \g__teachingtools_question_label_format_tl { \l__teachingtools_question_label_str }
85 }

```

(End definition for __teachingtools_generate_question_label_format:.)

__teachingtools_print_example: This function prints the example environment numbering string.

```

86 \cs_new:Nn \__teachingtools_print_example: {
87   \bool_if:NT \l__teachingtools_numbered_example_bool {
88     \refstepcounter{example}
89     \str_put_left:Nn \l_tmpa_str { ~ }
90     \bool_if:NT \l__teachingtools_example_prefix_bool {
91       \str_put_right:Nx \l_tmpa_str { \l__teachingtools_example_prefix_tl }
92       \str_put_right:Nx \l_tmpa_str { \l__teachingtools_prefix_separator_str }
93     }
94     \str_put_right:Nx \l_tmpa_str { \l__teachingtools_example_label_tl }
95   }

```

```

96 \str_put_right:Nx \l_tmpa_str { \l__teachingtools_suffix_character_str }
97 \par \skip_vertical:N \l__teachingtools_examplebefore_skip
98 \group_begin:
99 \bfseries Example\l_tmpa_str \par\nopagebreak
100 \group_end:
101 }

```

(End definition for `__teachingtools_print_example:.`)

1.4 Resetting counters

`\l__teachingtools_reset_question_tl` The **reset** option provides a means for environment numbering to be reset at different sectioning “levels”. By default, question numbering is reset at the “section” level, and `\l__teachingtools_reset_example_tl` example numbering is not reset. `\l__teachingtools_reset_all_tl`

```

102 \newcounter{question}
103 \keys_define:nn { teachingtools / question } {
104   reset .default:n = section,
105   reset .choices:nn = {
106     part, chapter, section, subsection, subsubsection, paragraph, subparagraph
107   }
108   {
109     \counterwithin*{question}{ \tl_to_str:N \l_keys_choice_tl }
110   },
111   reset / none .code:n = {
112     \counterwithout*{question}{section}
113   },
114 }

115 \newcounter{example}
116 \keys_define:nn { teachingtools / example } {
117   reset .default:n = none,
118   reset .choices:nn = {
119     part, chapter, section, subsection, subsubsection, paragraph, subparagraph
120   }
121   {
122     \counterwithin*{example}{ \tl_to_str:N \l_keys_choice_tl }
123   },
124   reset / none .code:n = {
125     \counterwithout*{example}{section}
126   },
127 }

128 \keys_define:nn { teachingtools } {
129   reset .choice:,
130   reset / part .meta:n = {
131     question / reset = part,
132     example / reset = part
133   },
134   reset / chapter .meta:n = {
135     question / reset = chapter,
136     example / reset = chapter
137   },
138   reset / section .meta:n = {
139     question / reset = section,
140     example / reset = section

```

```

141 },
142 reset / subsection .meta:n = {
143     question / reset = subsection,
144     example / reset = subsection
145 },
146 reset / subsubsection .meta:n = {
147     question / reset = subsubsection,
148     example / reset = subsubsection
149 },
150 reset / paragraph .meta:n = {
151     question / reset = paragraph,
152     example / reset = paragraph
153 },
154 reset / subparagraph .meta:n = {
155     question / reset = subparagraph,
156     example / reset = subparagraph
157 },
158 reset / none .meta:n = {
159     question / reset = none,
160     example / reset = none
161 },
162 reset / false .meta:n = {
163     question / reset,
164     example / reset
165 },
166 reset .default:n = false,
167 reset .initial:n = false,
168 }

```

(End definition for \l__teachingtools_reset_question_tl, \l__teachingtools_reset_example_tl, and \l__teachingtools_reset_all_tl.)

\l__teachingtools_numbered_question_bool This local variable is used to toggle between numbered and unnumbered questions.

```

\l__teachingtools_numbered_example_bool
169 \bool_new:N \l__teachingtools_numbered_question_bool
170 \bool_new:N \l__teachingtools_numbered_example_bool

```

(End definition for \l__teachingtools_numbered_question_bool and \l__teachingtools_numbered_example_bool.)

\l__teachingtools_question_number_int The environment counters can be set to specific values using the **number** option. This is only really useful when passed as an optional argument to an environment instance; note that normal counter incrementing still applies for subsequent instances. The number input must be decremented by one as the

```

171 \keys_define:nn { teachingtools } {
172     question / number .code:n = {
173         \int_set_eq:NN \l_tmpa_int #1
174         \int_decr:N \l_tmpa_int
175         \setcounter{question}{ \int_use:N \l_tmpa_int }
176     },
177     example / number .code:n = {
178         \int_set_eq:NN \l_tmpa_int #1
179         \int_decr:N \l_tmpa_int
180         \setcounter{example}{ \int_use:N \l_tmpa_int }
181     },
182 }

```

(End definition for `\l__teachingtools_question_number_int` and `\l__teachingtools_example_number_int`.)

1.5 Formatting counters and labels

The label style of both environments can be set to any of the predefined counter styles: arabic, alphabetic, uppercase alphabetic, Roman numerals, uppercase Roman numerals, and footnote symbols. The latter style is provided but not recommended for use, and may be deprecated in a future version as it is of limited practical use.

The following features are planned but not yet implemented:

- **suffix:** The character to append after the counter
- formatting of environment? No idea how to do that

Each environment can have an optional prefix to precede the number with that of the specified sectioning level. Note that this implies resetting of the environment counter at the specified level, unless overridden by the `question / reset`, `example / reset`, or `reset` options. The default is none.

`\l__teachingtools_prefix_separator_tl` The **prefix-separator** is a character used to separate the environment numbering prefix from its number, if the prefix exists.

```

183 \str_new:N \l__teachingtools_prefix_separator_str
184 \keys_define:nn { teachingtools } {
185   prefix-separator .choice:,
186   prefix-separator / dash .code:n = {
187     \str_set:Nn \l__teachingtools_prefix_separator_str { - }
188   },
189   prefix-separator / dot .code:n = {
190     \str_set:Nn \l__teachingtools_prefix_separator_str { . }
191   },
192   prefix-separator / colon .code:n = {
193     \str_set:Nx \l__teachingtools_prefix_separator_str { \c_colon_str }
194   },
195   prefix-separator / none .code:n = {
196     \str_gclear:N \l__teachingtools_prefix_separator_str
197   },
198   prefix-separator .default:n = none,
199   prefix-separator .initial:n = none,
200 }
```

(End definition for `\l__teachingtools_prefix_separator_tl`.)

`\l__teachingtools_question_prefix_tl` The **question / prefix** sets the prefix for the `question` environment.
`\l__teachingtools_question_prefix_bool`

```

201 \tl_new:N \l__teachingtools_question_prefix_tl
202 \bool_new:N \l__teachingtools_question_prefix_bool
203 \keys_define:nn { teachingtools / question } {
204   prefix .choice:,
205   prefix / part .code:n = {
206     \tl_set:Nn \l__teachingtools_question_prefix_tl { \thepart }
207   }
208   \keys_set:nn { teachingtools } {
209     question / reset = part,
210     prefix-separator = dash,
211   }
212 }
```

```

211 \bool_set_true:N \l__teachingtools_question_prefix_bool
212 },
213 prefix / chapter .code:n = {
214 \tl_set:Nn \l__teachingtools_question_prefix_tl { \thechapter }
215 \keys_set:nn { teachingtools } {
216 question / reset = chapter,
217 prefix-separator = dash,
218 }
219 \bool_set_true:N \l__teachingtools_question_prefix_bool
220 },
221 prefix / section .code:n = {
222 \tl_set:Nn \l__teachingtools_question_prefix_tl { \thesection }
223 \keys_set:nn { teachingtools } {
224 question / reset = section,
225 prefix-separator = dash,
226 }
227 \bool_set_true:N \l__teachingtools_question_prefix_bool
228 },
229 prefix / subsection .code:n = {
230 \tl_set:Nn \l__teachingtools_question_prefix_tl { \thesubsection }
231 \keys_set:nn { teachingtools } {
232 question / reset = subsection,
233 prefix-separator = dash,
234 }
235 \bool_set_true:N \l__teachingtools_question_prefix_bool
236 },
237 prefix / subsubsection .code:n = {
238 \tl_set:Nn \l__teachingtools_question_prefix_tl { \thesubsubsection }
239 \keys_set:nn { teachingtools } {
240 question / reset = subsubsection,
241 prefix-separator = dash,
242 }
243 \bool_set_true:N \l__teachingtools_question_prefix_bool
244 },
245 prefix / paragraph .code:n = {
246 \tl_set:Nn \l__teachingtools_question_prefix_tl { \theparagraph }
247 \keys_set:nn { teachingtools } {
248 question / reset = paragraph,
249 prefix-separator = dash,
250 }
251 \bool_set_true:N \l__teachingtools_question_prefix_bool
252 },
253 prefix / subparagraph .code:n = {
254 \tl_set:Nn \l__teachingtools_question_prefix_tl { \thesubparagraph }
255 \keys_set:nn { teachingtools } {
256 question / reset = subparagraph,
257 prefix-separator = dash,
258 }
259 \bool_set_true:N \l__teachingtools_question_prefix_bool
260 },
261 prefix / none .code:n = {
262 \tl_gclear:N \l__teachingtools_question_prefix_tl
263 },
264 prefix .default:n = none,

```

```

265   prefix .initial:n = none,
266 }

```

(End definition for \l__teachingtools_question_prefix_tl and \l__teachingtools_question_prefix_bool.)

\l__teachingtools_example_prefix_tl
\l__teachingtools_example_prefix_bool

The prefix sets the prefix for the example environment.

```

267 \tl_new:N \l__teachingtools_example_prefix_tl
268 \bool_new:N \l__teachingtools_example_prefix_bool
269 \keys_define:nn { teachingtools / example } {
270   prefix .choice:,
271   prefix / part .code:n = {
272     \tl_set:Nn \l__teachingtools_example_prefix_tl { \thepart }
273     \bool_set_true:N \l__teachingtools_example_prefix_bool
274     \keys_set:nn { teachingtools } {
275       example / reset = part,
276       prefix-separator = dash,
277     }
278   },
279   prefix / chapter .code:n = {
280     \tl_set:Nn \l__teachingtools_example_prefix_tl { \thechapter }
281     \bool_set_true:N \l__teachingtools_example_prefix_bool
282     \keys_set:nn { teachingtools } {
283       example / reset = chapter,
284       prefix-separator = dash,
285     }
286   },
287   prefix / section .code:n = {
288     \tl_set:Nn \l__teachingtools_example_prefix_tl { \thesection }
289     \bool_set_true:N \l__teachingtools_example_prefix_bool
290     \keys_set:nn { teachingtools } {
291       example / reset = section,
292       prefix-separator = dash,
293     }
294   },
295   prefix / subsection .code:n = {
296     \tl_set:Nn \l__teachingtools_example_prefix_tl { \thesubsection }
297     \bool_set_true:N \l__teachingtools_example_prefix_bool
298     \keys_set:nn { teachingtools } {
299       example / reset = subsection,
300       prefix-separator = dash,
301     }
302   },
303   prefix / subsubsection .code:n = {
304     \tl_set:Nn \l__teachingtools_example_prefix_tl { \thesubsubsection }
305     \bool_set_true:N \l__teachingtools_example_prefix_bool
306     \keys_set:nn { teachingtools } {
307       example / reset = subsubsection,
308       prefix-separator = dash,
309     }
310   },
311   prefix / paragraph .code:n = {
312     \tl_set:Nn \l__teachingtools_example_prefix_tl { \theparagraph }
313     \bool_set_true:N \l__teachingtools_example_prefix_bool

```



```

314 \keys_set:nn { teachingtools } {
315     example / reset = paragraph,
316     prefix-separator = dash,
317 }
318 },
319 prefix / subparagraph .code:n = {
320     \tl_set:Nn \l__teachingtools_example_prefix_tl { \thesubparagraph }
321     \bool_set_true:N \l__teachingtools_example_prefix_bool
322     \keys_set:nn { teachingtools } {
323         example / reset = subparagraph,
324         prefix-separator = dash,
325     }
326 },
327 prefix / none .code:n = {
328     \tl_gclear:N \l__teachingtools_example_prefix_tl
329     \bool_set_false:N \l__teachingtools_example_prefix_bool
330 },
331 prefix .default:n = none,
332 prefix .initial:n = none,
333 }

```

(End definition for `\l__teachingtools_example_prefix_tl` and `\l__teachingtools_example_prefix_bool`.)

`\l__teachingtools_question_label_tl` The label on the question environment can be set using this key. The default is Arabic numerals, and the options `alph` and `roman` are aliases for `lower-alph` and `lower-roman`.

```

334 \tl_new:N \l__teachingtools_question_label_tl
335 \keys_define:nn { teachingtools / question } {
336     label .choice:,
337     label / arabic .code:n = {
338         \tl_set:Nn \l__teachingtools_question_label_tl { \arabic{question} }
339     },
340     label / alph .code:n = {
341         \tl_set:Nn \l__teachingtools_question_label_tl { \int_to_alph:n { \value{question} } }
342     },
343     label / lower-alph .code:n = {
344         \tl_set:Nn \l__teachingtools_question_label_tl { \int_to_alph:n { \value{question} } }
345     },
346     label / upper-alph .code:n = {
347         \tl_set:Nn \l__teachingtools_question_label_tl { \int_to_Alph:n { \value{question} } }
348     },
349     label / roman .code:n = {
350         \tl_set:Nn \l__teachingtools_question_label_tl { \roman{question} }
351     },
352     label / lower-roman .code:n = {
353         \tl_set:Nn \l__teachingtools_question_label_tl { \roman{question} }
354     },
355     label / upper-roman .code:n = {
356         \tl_set:Nn \l__teachingtools_question_label_tl { \Roman{question} }
357     },
358     label / footnote-symbol .code:n = {
359         \tl_set:Nn \l__teachingtools_question_label_tl { \fnsymbol{question} }
360     },
361     label .default:n = arabic,

```

```

362   label .initial:n = arabic,
363 }

```

(End definition for \l__teachingtools_question_label_tl.)

\l__teachingtools_example_label_tl The label on the example environment can be set using this key. The default is uppercase Latin characters; note that this presently implies a limit of 26 examples unless changed to a different label style.

```

364 \tl_new:N \l__teachingtools_example_label_tl
365 \keys_define:nn { teachingtools / example } {
366   label .choice:,
367   label / arabic .code:n = {
368     \tl_set:Nn \l__teachingtools_example_label_tl { \arabic{example} }
369   },
370   label / alph .code:n = {
371     \tl_set:Nn \l__teachingtools_example_label_tl { \int_to_alph:n { \value{example} } }
372   },
373   label / lower-alph .code:n = {
374     \tl_set:Nn \l__teachingtools_example_label_tl { \int_to_alph:n { \value{example} } }
375   },
376   label / upper-alph .code:n = {
377     \tl_set:Nn \l__teachingtools_example_label_tl { \int_to_Alph:n { \value{example} } }
378   },
379   label / roman .code:n = {
380     \tl_set:Nn \l__teachingtools_example_label_tl { \roman{example} }
381   },
382   label / lower-roman .code:n = {
383     \tl_set:Nn \l__teachingtools_example_label_tl { \roman{example} }
384   },
385   label / upper-roman .code:n = {
386     \tl_set:Nn \l__teachingtools_example_label_tl { \Roman{example} }
387   },
388   label / footnote-symbol .code:n = {
389     \tl_set:Nn \l__teachingtools_example_label_tl { \fnsymbol{example} }
390   },
391   label .default:n = upper-alph,
392   label .initial:n = upper-alph,
393 }

```

(End definition for \l__teachingtools_example_label_tl.)

\l__teachingtools_suffix_character_str The suffix-character is a character appended after the environment number.

```

394 \str_new:N \l__teachingtools_suffix_character_str
395 \keys_define:nn { teachingtools } {
396   suffix-character .choice:,
397   suffix-character / dot .code:n = {
398     \str_set:Nn \l__teachingtools_suffix_character_str { . }
399   },
400   suffix-character / colon .code:n = {
401     \str_set:Nx \l__teachingtools_suffix_character_str { \c_colon_str }
402   },
403   suffix-character / bracket .code:n = {
404     \str_set:Nx \l__teachingtools_suffix_character_str { ) }
405   },

```

```

406   suffix-character / none .code:n = {
407     \str_gclear:N \l__teachingtools_suffix_character_str
408   },
409   suffix-character .default:n = dot,
410   suffix-character .initial:n = dot,
411 }

```

(End definition for \l__teachingtools_suffix_character_str.)

1.6 Dimensions and lengths

A number of dimensions and lengths are used internally to define spacing around each environment. Each environment has its own skip length, initially set to the value of that for the question environment.

```

412 \skip_new:N \l__teachingtools_questionbefore_skip
413 \skip_new:N \l__teachingtools_questionafter_skip
414 \skip_new:N \l__teachingtools_answerbefore_skip
415 \skip_new:N \l__teachingtools_answerafter_skip
416 \skip_new:N \l__teachingtools_examplebefore_skip
417 \skip_new:N \l__teachingtools_exampleafter_skip
418 \skip_new:N \l__teachingtools_noticebefore_skip
419 \skip_new:N \l__teachingtools_noticeafter_skip
420
421 \skip_set:Nn \l__teachingtools_questionbefore_skip { 1.0ex plus -1ex minus -0.25ex }
422 \skip_set:Nn \l__teachingtools_questionafter_skip { 1ex plus 0.25ex }
423
424 \skip_set_eq:NN \l__teachingtools_answerbefore_skip \l__teachingtools_questionbefore_skip
425 \skip_set_eq:NN \l__teachingtools_examplebefore_skip \l__teachingtools_questionbefore_skip
426 \skip_set_eq:NN \l__teachingtools_noticebefore_skip \l__teachingtools_questionbefore_skip
427
428 \skip_set_eq:NN \l__teachingtools_answerafter_skip \l__teachingtools_questionafter_skip
429 \skip_set_eq:NN \l__teachingtools_exampleafter_skip \l__teachingtools_questionafter_skip
430 \skip_set_eq:NN \l__teachingtools_noticeafter_skip \l__teachingtools_questionafter_skip

```

1.7 Environments

This package defines a number of environments for teaching materials.

question The \question environment is used to create a list of questions. The starred version is unnumbered and does not increment the question counter.

```

431 \NewDocumentEnvironment { question } { s O { } } {
432   \IfBooleanTF #1
433   { \bool_set_false:N \l__teachingtools_numbered_question_bool }
434   { \bool_set_true:N \l__teachingtools_numbered_question_bool }
435
436   \keys_set:nn { teachingtools / question } {#2}
437   \__teachingtools_print_question:
438
439   \itshape
440 }
441 { \par \skip_vertical:N \l__teachingtools_questionafter_skip }
442 \cs_new:cpn {question*} {\question*}
443 \cs_new_eq:cN {endquestion*} \endquestion

```

answer The `\answer` environment is used to format the answer.

```

444 \NewDocumentEnvironment { answer } { s } {
445   \par\vspace\l__teachingtools_answerbefore_skip
446   \setcounter{equation}{0}
447   { \bfseries Solution:\par\nopagebreak }
448 }
449 {\par\vspace\l__teachingtools_answerafter_skip}
450 \cs_new:cpn {answer*} {\example*}
451 \cs_new_eq:cN {endanswer*} \endexample

```

example The `\example` environment is used to create a list of examples. The starred version is unnumbered and does not increment the example counter.

```

452 \NewDocumentEnvironment { example } { s 0 { } } {
453   \group_begin:
454   \IfBooleanTF #1
455     { \bool_set_false:N \l__teachingtools_numbered_example_bool }
456     { \bool_set_true:N \l__teachingtools_numbered_example_bool }
457
458   \keys_set:nn { teachingtools / example } {#2}
459   \__teachingtools_print_example:
460 }
461 {\group_end: \par\vspace\l__teachingtools_exampleafter_skip}
462 \cs_new:cpn {example*} {\example*}
463 \cs_new_eq:cN {endexample*} \endexample

```

1.8 Document macros

The user document macros are all collected together here for ease.

\ttsetup The `set-up` macro simply moves to the correct path and executes whatever has been passed.

```

464 \NewDocumentCommand \ttsetup { m } {
465   \keys_set:nn { teachingtools } {#1}
466 }

```

(End definition for \ttsetup. This function is documented on page ??.)

1.9 Loading configuration

Apply the settings given at load time, and generate the initial label formats.

```

467 \ProcessKeysOptions { teachingtools }
468 \__teachingtools_generate_question_label_format:
469 \renewcommand\thequestion{ \g__teachingtools_question_label_format_tl }
470 \end{package}

```

Change History

v0.1

General: First public testing release . . . 1

v0.2

General: Added support for

| | | | |
|--|---|---|---|
| environment numbering prefixes . . | 1 | and the 26 instance limitation on alphabetically-numbered environments no longer applies. . . | 1 |
| v0.3a | | | |
| General: Question and example numbers can be set via options, | | | |

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