

---

**380.50****Evaluating Nutrition Education Materials****Overview**

---

**Introduction** Selecting appropriate and useful nutrition education materials is an important priority of the WIC Program. Evaluation helps use limited budget and time wisely, ensure accurate nutrition information, and increases the effectiveness of nutrition education activities.

---

**The four-step process** Evaluating materials is just one step in the process. The four-step process listed below is recommended to ensure that selected materials meet the needs of the target population.

<b>Step</b>	<b>Action</b>
1	Assess the needs of your target audience.
2	Evaluate the nutrition education material.
3	Pretest the materials with the target audience.
4	Use the materials effectively.

---

**Resources for evaluating materials** The Iowa EFNEP and WIC Programs developed two evaluation forms and several supporting documents. These materials describe the four-step process listed above and provide information about additional resources.

---

**Policy** All nutrition education materials used in the Iowa WIC Program must be evaluated using these forms.

---

**State and contract agency responsibilities** The state and contract agency WIC offices will be responsible for:

- Sharing results of any evaluations with contract agencies,
- Making recommendations for or against the use of specific materials, and
- Filing completed evaluation forms for reference.

Note: Contract agency personnel can request a second opinion from the state WIC office.

---

*Continued on next page*

## Overview, Continued

---

### Resources for developing and evaluating client education materials

Plain & Simple is a health literacy project for Iowa that promotes using plain language in messages to create and promote health literacy. The Plain & Simple web pages on the Iowa Department of Public Health website at [http://www.idph.state.ia.us/health\\_literacy/default.asp](http://www.idph.state.ia.us/health_literacy/default.asp) provides information and access to resources for public health workers and partners to develop and evaluate client education materials and improve written messages about health issues for Iowans. Examples of information and resources available on the website include the following:

- Plain language guides,
  - Readability calculators and formulas,
  - Pictograms and graphics
  - Searchable web-based medical dictionaries and encyclopedias,
  - Education tools, and
  - Tools for organizations
- 

### Special note: Product bias

All materials must be free from product bias (i.e., product brand names in the text or illustrations). Specific examples follow:

- Breastfeeding education materials cannot have formula names in the text or illustrations.
- All materials provided to pregnant and breastfeeding women, regardless of the topic, must be free of formula names or pictures.

#### Exception

Product names or pictures are acceptable in materials providing recipes for WIC-approved foods because these foods are approved on a brand name basis.

---

### In this policy

This policy contains the following topics.

Topic	See Page
Readability Formulas	3
Fry Graph Reading Level Index	4
Fry Graph	5
SMOG Readability Formula	6

---

### Guides and forms

Policies 380.50a and 380.50b contain the following guides and forms:

- Guide to Evaluating Written Nutrition Education Materials (SP 119),
  - Written Nutrition Education Materials Review Form (SP 120),
  - Guide to Evaluating Audiovisual Nutrition Education Programs (SP 121),
  - Audiovisual Nutrition Education Program Review Form (SP 122), and
  - Bibliography for Guides to Evaluating Nutrition Education Materials (SP 129).
-

## Readability Formulas

---

**Introduction**

A readability formula is a mathematically obtained rating of the grade reading level of written materials. Components such as vocabulary, sentence structure and word density influence readability. In general, as sentences become shorter and less complex and words become simpler (i.e., two syllables or less), the reading level of the material goes down.

---

**Limitations**

Readability formulas are quick and useful tools. However, the tests do not take into consideration the reader's interest and prior knowledge about a subject. In addition, these formulas cannot measure the conceptual difficulty or complexity that results from presentation and organization of subject matter.

---

**Most frequently used formulas**

The two most frequently used readability formulas for manual calculation of reading level are:

- Fry Graph Reading Level Index, and
- SMOG Readability Formula.

The Plain and Simple web pages at [http://www.idph.state.ia.us/health\\_literacy/readability.asp](http://www.idph.state.ia.us/health_literacy/readability.asp) also provide access to information about several readability formulas and links to directions for how to set up Microsoft® Word to test readability for several of the formulas.

---

## Fry Graph Reading Level Index

---

### Introduction

The Fry Graph method is based on three 100-word passages. If the materials being reviewed are shorter, the SMOG Readability Formula is more appropriate.

---

### Using the Fry Graph

Follow these steps to use the Fry Graph. See page 6 for a copy of the graph.

Step	Action
1	Select a total of three 100-word passages, one each from the beginning, middle and end of the material.  <u>Note:</u> Skip all proper nouns.
2	Count the total number of sentences in each 100-word passage, estimating to the nearest tenth of a sentence.*
3	Average the total number of sentences for the three passages.
4	Count the total number of syllables in each 100-word passage, counting a syllable for each vowel sound.*
5	Average the total number of syllables for the three passages.
6	Plot the following on the Fry Graph: <ul style="list-style-type: none"> <li>• The average number of sentences per 100 words, and</li> <li>• The average number of syllables per 100 words.</li> </ul>
7	Read the plot point for the approximate grade level.  <u>Note:</u> The plot point will fall between perpendicular lines marking approximate grade levels.

\*If there is great variability in sentence length or syllable count for the three passages, randomly select several more passages and average them in before plotting.

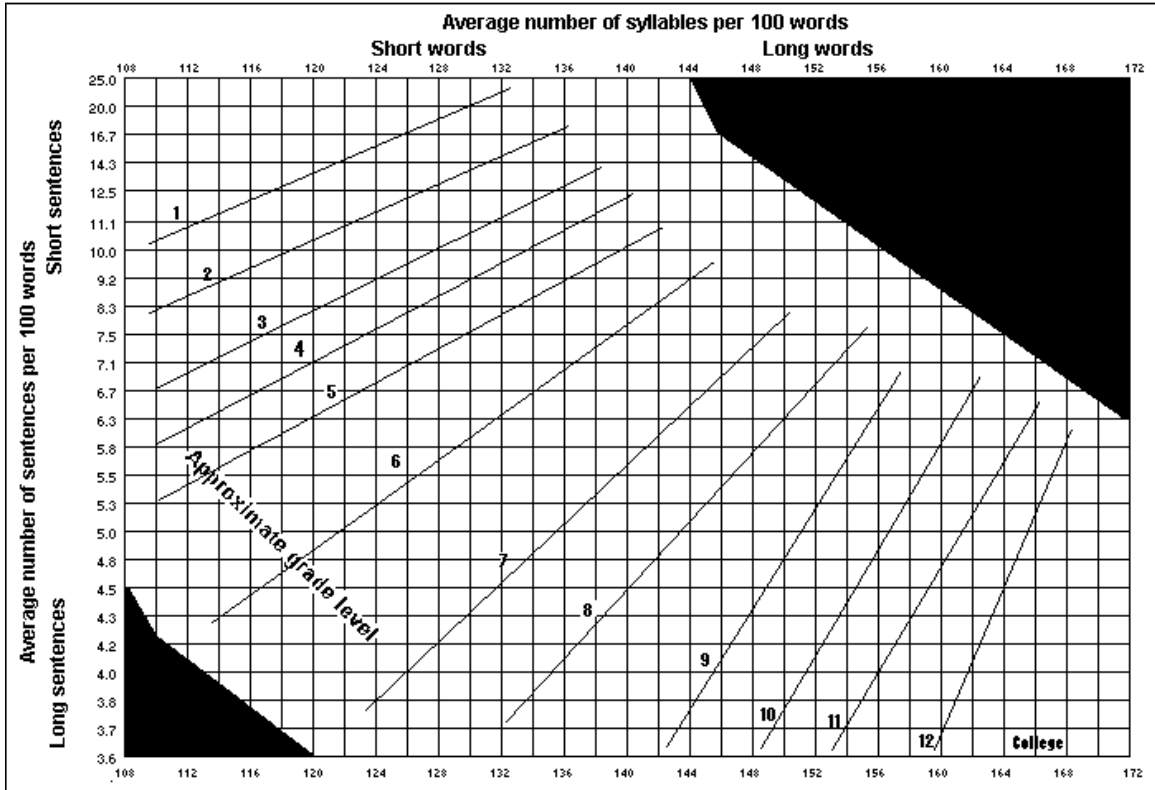
---

### References

- USDA, Food and Nutrition Service: Guidelines: *Writing for Adults With Limited Reading Skills*. February, 1988.
  - Table developed by Harold C. McGraw, Office of Educational Research, Baltimore County Schools, Towson, MD.
-

# Fry Graph

EDWARD FRY'S READABILITY GRAPH



Fry, Edward. *Elementary Reading Instruction*, 1977. McGraw-Hill Companies. The electronic copy of Fry's Readability Graph is from Kathy Schrock's Guide for Educators at <http://school.discovery.com/schrockguide/fry/fry2.html>

## SMOG Readability Formula

---

**Introduction** The SMOG formula is useful for short materials.

---

**Tips for using the formula** When using the SMOG Formula:

- Consider long sentences with a semi-colon as two sentences.
- Count hyphenated words as one word.
- Count numbers written out as text if they are polysyllabic.
- Count numbers written in numeric form if they are polysyllabic when pronounced.
- Count proper nouns if they are polysyllabic.
- Read abbreviations as though unabbreviated. If they are polysyllabic, count the syllables.

---

**Using the formula** Follow these steps to use the SMOG Formula.

<b>Step</b>	<b>Action</b>
1	Count off ten consecutive sentences near the beginning, in the middle, and near the end of the material.  <u>Note:</u> If the text has less than 30 sentences, use as many as are provided.
2	Count the number of words containing three or more syllables, including repetitions of the same words.
3	Look up the approximate grade level on the SMOG Conversion Table on the next page.

---

*Continued on next page*

## SMOG Readability Formula, Continued

---

### Conversion table

Use the table below to look up the approximate grade level.

Total Polysyllabic Word Count	Approximate Grade Level
0-2	4
3-6	5
7-12	6
13-20	7
21-30	8
31-42	9
43-55	10
57-72	11
73-90	12
91-110	13
111-132	14
133-156	15
157-182	16
183-210	17
211-240	18

---

### References

- McLaughlin, G. Harry. SMOG Grading: A New Readability Formula. *Journal of Reading*, Vol. 12, No. 8 (May 1969), p. 639-46.
  - USDA, Food and Nutrition Service: *Guidelines: Writing for Adults With Limited Reading Skills*. February, 1988.
-

This page intentionally left blank.