

NIMAS 1.1

Textbook Exemplar

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Dedication

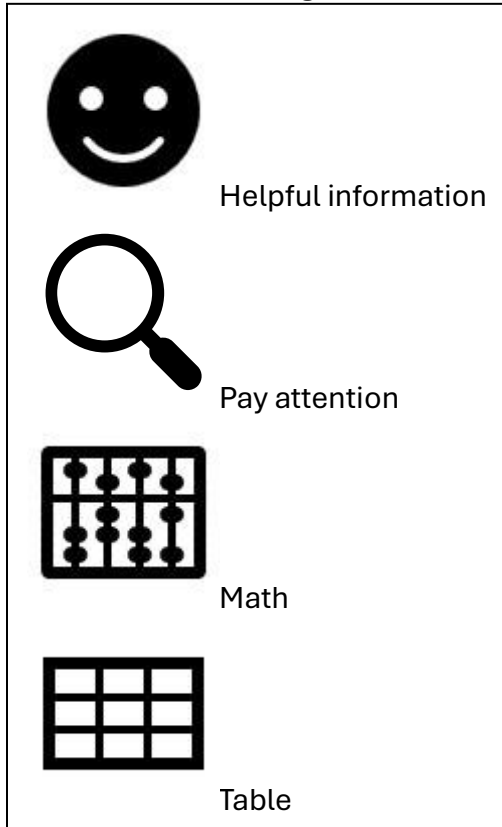
To those working in the field of accessibility.

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Preface

Icons are with headings in BF




☺ While working through this book, please refer to *The Rules of UEB*, the Nemeth Braille Code, and additional BANA guidelines. Additional information can be found in the **References** section.

Chapter 1


Headings

Headings have a hierarchy. A cell-7 heading would not occur before a cell-5 heading. This structure provides ease of navigation through a document. Sometimes, a decision must be made regarding headings that are in the margin or appear off to the side of text.

 Be aware of paragraph headings that are oftentimes emphasized in print.

Centered Heading

Centered headings > are also referred to as Heading 1, or H1.

 Pay attention to blank lines with centered headings in alphabetical divisions in an alphabetic reference.

Cell-5

Cell-5 headings are also referred to as Heading 2, or H2.

Cell-7

Cell-7 headings are also referred to as Heading 3, or H3.

Tables



Refer to *Braille Formats* for the correct transcriber's note regarding any table format changes and regarding the use of box lines.



Table

COMIC	ARTIST
CALVIN AND HOBBS	Bill Waterson
PEANUTS	Charles M. Schulz
BLONDIE	Chic Young
GARFIELD	Jim Davis



Unrelated columns

After a playing a game of Settler of Catan, we suspected the dice were not rolling randomly. To check if we needed a new set of dice, we tracked the rolls during the next game.

Settlers of Catan Dice Rolls

8	3	11	6	9	4
12	7	5	10	2	8
6	11	3	9	7	4
10	5	12	2	8	6
9	3	11	7	4	10

Note: Totals of dice rolls during a game of Settlers of Catan.

 Vertical division

Number of Panel Attendees at the Convention over 5 Years

	2005	2010	2015	2020	2025
Writing	96	105	120	137	142
Signing	72	86	80	102	123
Characters	42	67	55	78	91
World Building	102	118	127	143	155

 Interchanged columns and rows

President's Ages at Start of Presidency

President	George Washington	John Adams	Thomas Jefferson	James Madison	James Monroe	John Quincy Adams
Age	57	61	57	57	58	57

Listed, Linear, Stairstep

Comic	Artist	Date first published	Date last published
Calvin and Hobbes	Bill Waterson	1985	1995
Peanuts	Charles M. Schulz	1950	2000
Blondie	Chic Young	1930	still ongoing
Garfield	Jim Davis	1978	still ongoing

Sequentially Numbered Table



Refer to *Braille Formats* for repeating the table number on subsequent pages when transcribing a sequentially numbered table.



Watch out for a possible translation error in the abbreviation US.

Table 2.1
List of State Capitals in the US

State	Capital
Alabama	Montgomery
Alaska	Juneau
Arizona	Phoenix
Arkansas	Little Rock
California	Sacramento
Colorado	Denver
Connecticut	Hartford
Delaware	Dover
Florida	Tallahassee
Georgia	Atlanta
Hawaii	Honolulu
Idaho	Boise
Illinois	Springfield
Indiana	Indianapolis
Iowa	Des Moines
Kansas	Topeka
Kentucky	Frankfort
Louisiana	Baton Rouge
Maine	Augusta

Maryland	Annapolis
Massachusetts	Boston
Michigan	Lansing
Minnesota	Saint Paul
Mississippi	Jackson
Missouri	Jefferson City
Montana	Helena
Nebraska	Lincoln
Nevada	Carson City
New Hampshire	Concord
New Jersey	Trenton
New Mexico	Santa Fe
New York	Albany
North Carolina	Raleigh
North Dakota	Bismarck
Ohio	Columbus
Oklahoma	Oklahoma City
Oregon	Salem
Pennsylvania	Harrisburg
Rhode Island	Providence
South Carolina	Columbia
South Dakota	Pierre
Tennessee	Nashville
Texas	Austin
Utah	Salt Lake City
Vermont	Montpelier
Virginia	Richmond
Washington	Olympia
West Virginia	Charleston
Wisconsin	Madison
Wyoming	Cheyenne

Source: "list of state capitals in the United States" www.britannica.com/topic/list-of-state-capitals-in-the-United-States-2119210

Typeforms

The designation of *italics*, **bold**, underlining, and *script* are identified in the *Rules of UEB*. Other typeforms will need to be transcriber-defined. There are 5 additional typeforms that can be represented with transcriber-defined indicators. If others are encountered, the transcriber must make a determination on how best to handle the typeforms. Also note, once a typeform is used in a volume that same typeform representation must remain with that typeform for the entire book. For example, if in volume 1 the first transcriber-defined typeform used represents yellow highlighting, then the first transcriber-defined typeform cannot represent any other typeform throughout the entire book.

What to watch out for

Be aware of the placement of a typeform terminator.

Make any corrections in the following examples.

The italic terminator should occur after the period.

Also, typeforms should be nested appropriately. Make any corrections in the following example.

"The *bold terminator should occur after the period and before the closing quotation mark.*"

This text is contained in a sidebar. Sidebars contain information supplementary to the main text and/or narrative flow and is often boxed and printed apart from the main text block on a page. Determining the most appropriate location in braille to put a sidebar can sometimes be a conundrum. Helpfully, in NIMAS files, sidebars are within the text at the most appropriate location deemed as such by the publisher.

Practice using transcriber-defined typeforms on the following text. Ensure terminators are used correctly.

This word is highlighted yellow in print.

This sentence is printed red.

This word is printed blue and this statement is printed green.

Illustrative Material

Production notes in a NIMAS file describe a print image. Captions are associated with a print image and appear in the text. Both may be included in NIMAS files, depending on tagging.

image with caption



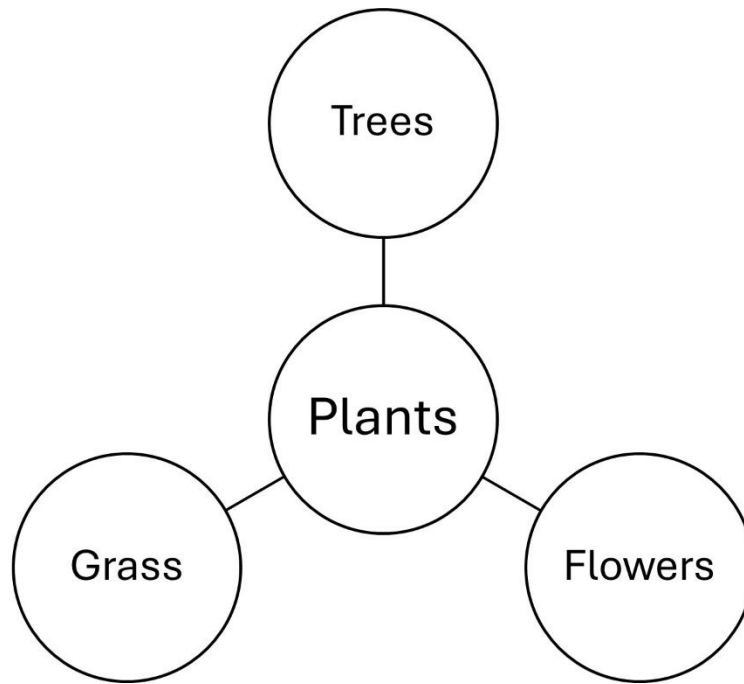
Margolies, John, photographer. *Rich's mini golf, clock, Wyoming, Pennsylvania*. Pennsylvania Wyoming United States, 1984. Photograph. www.loc.gov/item/2017708372/.

image with production note/TN



Source: Detroit Publishing Co., Publisher, Jackson, William Henry, photographer. "Aztec Calendar Stone." Mexico City Mexico, None. [Between 1880 and 1897] Photograph. www.loc.gov/item/2016797237/.

Tactile Graphic



Lists

Simple list

- 1) 1 cup sugar
- 2) 2 cups flour
- 3) 1 cup milk
- 4) 2 eggs
- 5) 1 stick butter
- 6) 1 tsp. vanilla
- 7) 1 tsp. salt

Numbered list

Food--don't waste it.

1. buy it with thought
2. cook it with care
3. use less wheat & meat
4. buy local foods
5. serve just enough
6. use what is left

Source: Food--don't waste it. World War I poster by Frederic Cooper, 1917. Prints & Photographs Division, www.loc.gov/resource/cph.3g09739

Nested list

Things in my refrigerator.

- milk
- orange juice
- crisper drawer
 - cheese
 - containers of yogurt
 - random sauce packets from restaurants
 - ketchup
 - honey mustard
 - soy sauce
 - taco sauce
- leftovers
- last night's meatloaf
- Tuesday's chili

Exercise Material

Underscores

Write-on Lines

Sometimes there will be excessive underscores for write-on lines. Using the find and Replace feature with wildcards in Word can be extremely helpful to replace the numerous underscores to only a single underscore.

Write a 5 sentence paragraph.

Spelling

Read the surrounding text for the possibility more than 1 underscore is needed, such as a spelling word with each underscore representing a missing letters to fill in.

Fill in the missing letters in the following words.

a _le
b _ana _a
or _ge
str _be _y

Spelling list referred to by box color

Refer to the spelling list in the blue box.

their
there
they're

In the following poem, fill in the missing word.

Roses are red,
Violet are _,
Sugar is sweet,
and so are _!

1. What word fits best in the blank?

O Romeo, Romeo, wherefore art thou Romeo?
Deny thy _ and refuse thy name,
Or, if thou wilt not, be but sworn my love,
And I'll no longer be a Capulet.

- a. mother
- b. father
- c. brother
- d. sister

Grammar & Pronunciation

Analogy

Granny Smith : apples :: Navel : oranges

Diacritics and Stress marks

Sometimes, stress marks are apostrophes with emphasis.

(ar' ə mat' ik)
(in-līne skāt ing)
\ 'a-prə/- ,kāt\

Source: Braille Formats Principles of Print-to-Braille Transcription, 2016,
www.brailleauthority.org/formats/2016manual-web/section20.html

house snake /'haʊs ,sneɪk/ HOWSS snayk

Source: OED www.oed.com/dictionary/house-snake_n

Poetry, Line Numbers, Notes, and Cartoons

A Jelly-Fish

Marianne Moore
1887 – 1972

Visible, invisible,
A fluctuating charm,
An amber-colored amethyst¹
Inhabits it; your arm
Approaches, and
It opens and
It closes;
You have meant
To catch it,
And it shrivels;
You abandon
Your intent—
It opens, and it
Closes and you
Reach for it—
The blue
Surrounding it
Grows cloudy, and
It floats away
From you.

Source: poets.org/poem/jelly-fish

¹ amethyst can turn yellow,

O Captain! My Captain!

Walt Whitman

1819 – 1892

O Captain! my Captain! our fearful trip is done,
The ship has weather'd every rack, the prize we sought is won,

The port is near, the bells I hear, the people all *exulting*,
While follow eyes the steady keel, the vessel grim and daring;

But O heart! heart! heart!

O the bleeding drops of red,

Where on the deck my Captain lies,

Fallen cold and dead.

O Captain! my Captain! rise up and hear the bells;
Rise up- for you the flag is flung- for you the bugle trills,
For you bouquets and ribbon'd wreaths- for you the shores
a-crowding,

For you they call, the swaying mass, their eager faces
turning;

Here Captain! dear father!

This arm beneath your head!

It is some dream that on the deck,

You've fallen cold and dead.

My Captain does not answer, his lips are pale and still,
My father does not feel my arm, he has no pulse nor will,
The ship is anchor'd safe and sound, its voyage closed and
done,

From fearful trip the victor ship comes in with object won;

Exult² O shores, and ring O bells!

But I with mournful tread,

Walk the deck my Captain lies,

Fallen cold and dead.

Source: poets.org/poem/o-captain-my-captain

² exult: rejoice, elation

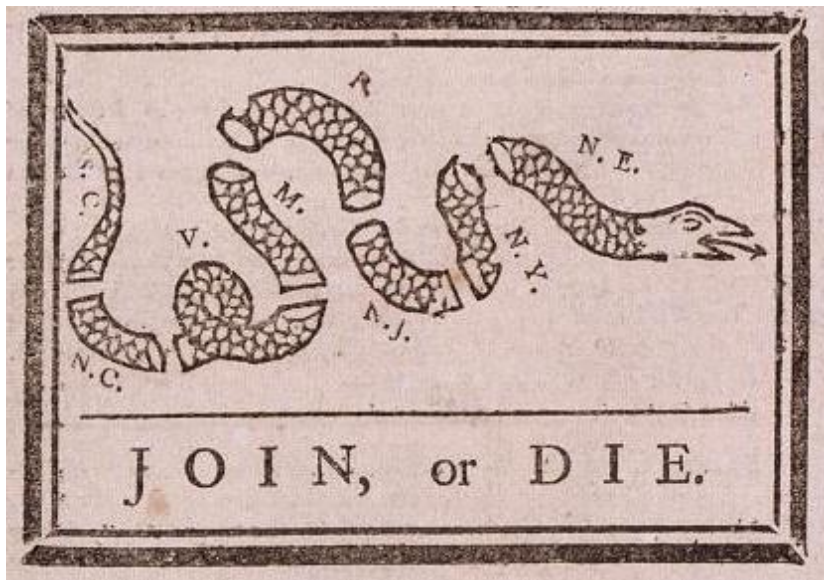
Because I could not stop for Death —

by Emily Dickinson

- 1 Because I could not stop for Death –
- 2 He kindly stopped for me –
- 3 The Carriage held but just Ourselves –
- 4 And Immortality.
- 5 We slowly drove – He knew no haste
- 6 And I had put away
- 7 My labor and my leisure too,
- 8 For His Civility –
- 9 We passed the School, where Children strove
- 10 At Recess – in the Ring –
- 11 We passed the Fields of Gazing Grain –
- 12 We passed the Setting Sun –
- 13 Or rather – He passed Us –
- 14 The Dews drew quivering and Chill –
- 15 For only Gossamer, my Gown –
- 16 My Tippet – only Tulle –
- 17 We paused before a House that seemed
- 18 A Swelling of the Ground –
- 19 The Roof was scarcely visible –
- 20 The Cornice – in the Ground –
- 21 Since then – 'tis Centuries – and yet
- 22 Feels shorter than the Day
- 23 I first surmised the Horses' Heads
- 24 Were toward Eternity –

Source: www.litcharts.com/poetry/emily-dickinson/because-i-could-not-stop-for-death

Cartoons



Source: Franklin, Benjamin. Join or Die. United States, 1754. [May 9] Photograph.
<http://www.loc.gov/item/2002695523/>.



Source: SI DOBBINS: He'll Try to Find "Mr. Farragut" After This. "Seaman si : the adventures of a Blue Jacket on the high seas of fun and trouble." by Pearce, Perce, artist.
archive.org/details/seamansiadventur00pear/page/6/mode/2up

Foreign Language

Fue luego a ver su rocín, y, aunque tenía más cuartos que un real y más tachas que el caballo de Gonela, que *tantum pellis et ossa fuit*, le pareció que ni el Bucéfalo de Alejandro ni Babieca el del Cid con él se igualaban. Cuatro días se le pasaron en imaginar qué nombre le pondría; porque, según se decía él a sí mismo, no era razón que caballo de caballero tan famoso, y tan bueno él por sí, estuviese sin nombre conocido; y así, procuraba acomodársele de manera que declarase quién había sido, antes que fuese de caballero andante, y lo que era entonces; pues estaba muy puesto en razón que, mudando su señor estado, mudase él también el nombre, y le cobrase famoso y de estruendo, como convenía a la nueva orden y al nuevo ejercicio que ya profesaba. Y así, después de muchos nombres que formó, borró y quitó, añadió, deshizo y tornó a hacer en su memoria e imaginación, al fin le vino a llamar Rocinante: nombre, a su parecer, alto, sonoro y significativo de lo que había sido cuando fue rocín, antes de lo que ahora era, que era antes y primero de todos los rocines del mundo.

Puesto nombre, y tan a su gusto, a su caballo, quiso ponérsele a sí mismo, y en este pensamiento duró otros ocho días, y al cabo se vino a llamar don Quijote; de donde —como queda dicho— tomaron ocasión los autores desta tan verdadera historia que, sin duda, se debía de llamar Quijada, y no Quesada, como otros quisieron decir. Pero, acordándose que el valeroso Amadís no sólo se había contentado con llamarse Amadís a secas, sino que añadió el nombre de su reino y patria, por Hepila famosa, y se llamó Amadís de Gaula, así quiso, como buen caballero, añadir al suyo el nombre de la suya y llamarse don Quijote de la Mancha, con que, a su parecer, declaraba muy al vivo su linaje y patria, y la honraba con tomar el sobrenombre della.

Cervantes Saavedra, Miguel de, Don Quijote,

<https://gutenberg.org/cache/epub/2000/pg2000.txt>

Chapter 2 Math

Fractions

Pay attention to mixed numbers as the appropriate Nemeth indicators may not translate.

$$\frac{1}{3} \quad 1/3 \quad 1/3$$

$$4\frac{3}{8} \quad 43/8$$

$$x\frac{3}{8} \quad x3/8$$

$$x^{\frac{1}{2}} \quad x^{1/2} \quad x^{1/2}$$

$$\frac{a+b}{c+d} \quad a+b/c+d \quad a+b/c+d$$

$$\text{rate} = \frac{\text{distance}}{\text{time}}$$

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Binomial coefficients will be formatted as fractions in the NIMAS file. A binomial coefficient transcribed in Nemeth as a fraction is incorrect. For example, $\left(\frac{n}{k}\right)$

Complex fractions

$$\frac{\frac{3}{8}}{5}$$

$$\frac{1}{2}$$

$$2\frac{2}{3}$$

$$\frac{2/3}{3/2}$$

$$\underline{\frac{2}{3}}$$

$$3/2$$

$$\frac{1}{2} / \frac{3}{4}$$

Hypercomplex fractions

$$1\frac{1}{4}$$

$$\frac{1\frac{3}{5}}{5}$$

$$\frac{\frac{(1-x)\frac{d}{dx}(2x)-2x\frac{d}{dx}(1-x)}{(1-x)^2}}{1+\left(\frac{2x}{1-x}\right)^2}$$

Superscripts and Subscripts

$$x^2$$

$$x_{-2}$$

$$x_{11}$$

$$n^{x^y}$$

$$n_{x_y}$$

$$x^y a^n$$

$$^x n$$

$$12_7$$

$$\left(CO_3\right)_2$$

$$x_a^n$$

$$a_m^n$$

$$x_{i,j}$$

$$a^2+b^2=c^2$$

Radicals

$$\sqrt{2}$$

$$\sqrt{\frac{x}{y}}$$

$$3\sqrt{a}$$

$$\sqrt{x}^3$$

$$\sqrt[3]{2}$$

$$m+n\sqrt{p+q}$$

Matrix

Q Watch the enlarged signs of grouping are correctly translated.

$$\begin{vmatrix} 1 & 2 \\ -3 & -4 \end{vmatrix}$$

Modified expressions

$$\overline{AB}$$

$$\lim_{x \rightarrow \infty} f(x)$$

$$\overline{x}$$

$$3.\overline{54}$$

$$\underline{x}$$

$$\underline{965},132$$

$$\sum_{i=1}^n \frac{1}{2^n} = 1$$

Spatial arrangement

$$\begin{array}{r} 3 \quad 6 \quad 15 \\ + 4 \quad - 4 \quad - 9 \\ \hline \end{array}$$

Exercise Material

Directions: Solve the equations.

1. $2 + 3 = \underline{\quad}$
2. $15 - 7 = \underline{\quad}$
3. $3 \times 8 = \underline{\quad}$
4. $100 \div 10 = \underline{\quad}$

Fill in the blanks with <, >, or =.

1. $2 + 3 \underline{\quad} 5$
2. $15 - 7 \underline{\quad} 10$
3. $3 \times 8 \underline{\quad} 20$
4. $100 \div 10 \underline{\quad} 10$

Choose the correct answer.

- 1) $2 \ell + 3 \ell = ? \ell$
 - a. 6ℓ
 - b. 1ℓ
 - c. 5ℓ
 - d. 8ℓ



What to watch out for

Sometimes text that is math/technical will not be tagged. For example:

- 1) monetary amounts \$1.32, 55¢
- 2) percentages 10%
- 3) enclosed lists (1, 3), $\{\infty, 0\}$, $(\infty, 0]$
- 4) fractions $\frac{1}{2}$
- 5) decimals 1.2
- 6) Greek letters α , β , θ , π
- 7) Dot operator \cdot may be the interpunct character \cdot
- 8) Abbreviations separated from the quantity to which they apply 1000 mL

Calculator keystrokes

Calculator keystrokes may be images and, therefore, the text may be omitted. For example,

Press

ENTER

 to get the result.

Table in Nemeth

Planet	Distance from Sun (million km)
Mercury	57.9
Venus	108.2
Earth	149.6
Mars	227.9
Jupiter	778.5
Saturn	1434
Uranus	2871
Neptune	4495

Reference Section

Where to learn more

APH aph.org

- 9) NIMAC nimac.us
- 10) NIMAC resources for Accessible Media Producers
nimac.us/accessible-media-producers
- 11) TGIL imagelibrary.aph.org
- 12) Free Training Courses for Braille Transcribers Working with NIMAS Files
nimac.us/free-training-courses-for-braille-transcribers-working-with-nimas-files
- 13) Braille Refreshers www.aph.org/resources/braille-refreshers
- 14) APH Access Academy and APH Hive
www.aph.org/educational-resources/outreach/training

Translation Software

- 1) DBT, NimPro, and SWIFT duxburysystems.com
- 2) DuxNews and DuxUser Discussion Group
www.duxburysystems.com/discussion.asp?groups=Duxbury%20DBT
- 3) Braille2000 www.braille2000.com
- 4) Braille Blaster www.aph.org/product/brailleblaster

UEB

- 1) UEB code book iceb.org/ueb.html
- 2) IPA Braille iceb.org/publications/ipabraille
- 3) UEBOnline Accessible Braille training uebonline.org

BANA

- 1) Current codebooks and guidelines are found at Braille Authority of North America
www.brailleauthority.org: Braille Formats, Crafts and Hobbies, Early Learning Materials, Languages Other Than English, Nemeth Code, Graphing Calculator Guidelines (UEB), Music Braille, and Tactile Graphics.

NFB

- 1) Learn more about braille certification course at National Federation of the Blind
nfb.org/programs-services/braille-certification

Tactile Graphics

- 1) CorelDraw www.coreldraw.com
- 2) Tactile Macros for CorelDraw www.prcvi.org/resources/resources-for-braille-transcribers/transcription-webinars/creating-tactile-graphics-using-coreldraw-with-macros
- 3) Duxbury Systems QuickTac www.duxburysystems.com/quicktac.asp

- 4) ON EDITING GRAPHICS FOR THE BLIND: A manual with examples, and for the interested layman a pictorial overview by Marco Schuffelen
www.heardutchhere.net/grbl/grbl0.html

Additional Organizations

NBA National Braille Association www.nationalbraille.org

OCALI Ohio Center for Autism and Low Incidence ataem.org

CTEBVI California Transcribers and Educators for the Blind and Visually Impaired
www.ctebvi.org

Glossary of Abbreviations

A

APH American Printing House

B

BANA Braille Authority of North America

BRF Braille Ready File

C

CTEBVI California Transcribers and Educators for the Blind and Visually Impaired

D

DBT Duxbury Braille Translator

I

ICEB International Council on English Braille

IPA International Phonetic Alphabet

J

JPG Image file format

N

NBA National Braille Association

NFB National Federation of the Blind

NIMAC National Instructional Materials Access Center

NIMAS National Instructional Materials Accessibility Standard

O

OCALI Ohio Center for Autism and Low Incidence

OPF Open Packaging Format, an XML-based metadata file

P

PDF Portable Document Format, in a NIMAS file is only the required copyright cover page and not the entire book

PNG Portable Network Graphics

S

SVG Scalable Vector Graphic

U

UEB Unified English Braille

X

XML eXtensible Markup Language

Z

ZIP Archive format that combines many files into one compressed container

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