



APH Transcriber Training Using NIMAS Files & Duxbury/NimPro Session 5: Additional Features

Objectives:

- Describe editing features for nested lists (e.g. Glossary, Index).
- Describe features in NIMAS generated files for Sidebars, Footnotes, Line Numbered Text, and MathML



Glossary and Index Features



Glossary and Index Wizards

- The Glossary and Index wizards also apply font changes to headings.
- The next slide provides a quick reference chart for Duxbury wizards.



Scope of Duxbury Wizard Effects

Wizard	List Items	Paragraphs	Headings
Table of Contents	X	-	X
List	X	-	-
Exercise	X	X	-
Glossary	X	-	X
Index	X	-	X



Scope of Wizard Edits

- Note: The entire page, set of pages, or section of the document that you selected in the Navigation panel is subject to the changes that you specify when you run your wizard.



Scope of Wizard Edits (continued)

- That means other normal "body text" paragraphs that are not directions for exercises can get restyled as "Directions" erroneously.



Scope of Wizard Edits (cont.)

- If this should happen to you, you can use the single-key style edit functions to change them back.



Glossary



Glossary Formatting in NimPro (continued)

- Select Rear Matter
- Select Glossary

The screenshot shows the NimPro interface with a document structure on the left and a chemistry glossary page on the right. The document structure includes:

- Front Matter
- Body Matter
- Rear Matter
 - Answers to Even-Numbered Problems
 - Appendix 1
 - Appendix 2
 - Appendix 3
 - Glossary
 - Index

Annotations: A box labeled "1st" with an arrow points to the "Rear Matter" folder. A box labeled "2nd" with an arrow points to the "Glossary" folder.

The glossary page content is:

Chemistry
Raymond Chang
Jason Overby

Below the text is a periodic table of elements. The table is color-coded by groups: 1-2 (green), 3-10 (blue), 11-18 (purple), and 19-10 (orange). A legend indicates "Atomic number" and "Atomic mass".

At the bottom of the page, there is a "Caption" label and a paragraph of text:

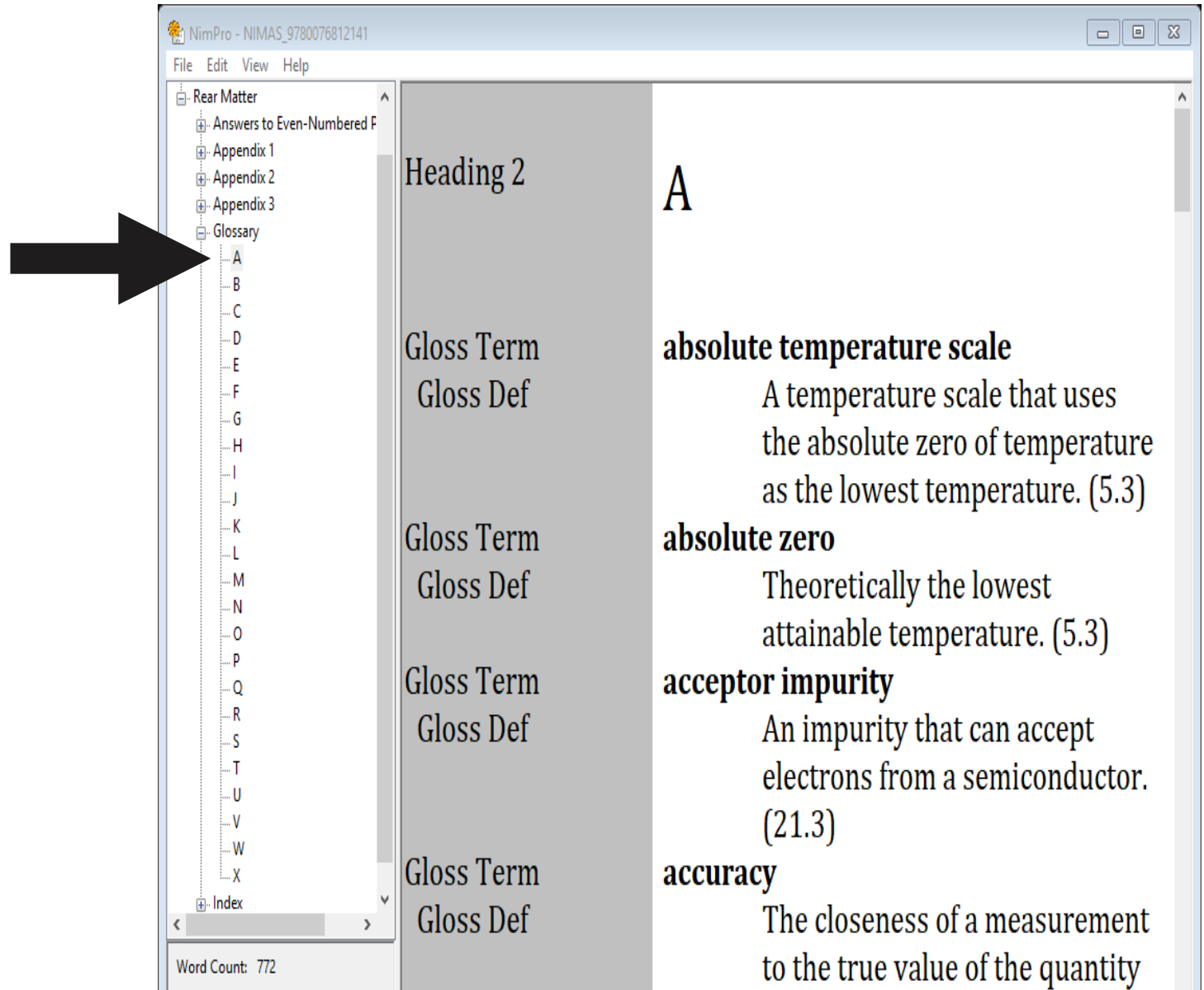
The 1–18 group designation has been recommended by the International Union of Pure and Applied Chemistry (IUPAC) but is not yet in wide use. In

At the bottom of the screenshot, the status bar shows: Word Count: 10,563; Characters: 66,837.



Glossary Formatting in NimPro (cont.)

- Select subheading “A”
- Glossary will appear at
“A”



NimPro - NIMAS_9780076812141

File Edit View Help

Rear Matter

- Answers to Even-Numbered F
- Appendix 1
- Appendix 2
- Appendix 3
- Glossary
 - A
 - B
 - C
 - D
 - E
 - F
 - G
 - H
 - I
 - J
 - K
 - L
 - M
 - N
 - O
 - P
 - Q
 - R
 - S
 - T
 - U
 - V
 - W
 - X
- Index

Heading 2

A

absolute temperature scale
A temperature scale that uses the absolute zero of temperature as the lowest temperature. (5.3)

absolute zero
Theoretically the lowest attainable temperature. (5.3)

acceptor impurity
An impurity that can accept electrons from a semiconductor. (21.3)

accuracy
The closeness of a measurement to the true value of the quantity

Word Count: 772

NimPro Glossary Wizard

- Select Edit
- Select Glossary Wizard



NimPro - 9780076812141NIMAS

File Edit View Help

- Table of Contents Wizard...
- Heading Wizard...
- Exercise Wizard...
- List Wizard...
- Picture Wizard...
- Glossary Wizard...**
- Index Wizard...
- Edit Styles
- Edit Text
- Page Nr Reference...

Page 2

A

absolute temperature scale
A temperature scale th

absolute zero
Theoretically the lowe

acceptor impurity
An impurity that can a

accuracy
The closeness of a me:

acid
A substance that yield:

acid ionization constant (K_a)
The equilibrium const

actinide series
Elements that have inc

activated complex
The species temporari

activation energy (E_a)
The minimum amount

activity series
A summary of the resu

actual yield
The amount of produc

addition reaction

Glossary Wizard Options

- Glossary Wizard has three selections:
 - Style Cleanup

A screenshot of the 'Glossary Wizard' dialog box. The dialog has a title bar with 'Glossary Wizard' and a close button. It contains three sections for text cleanup options. The first section is 'Style Cleanup' with a checkbox for 'Change Heading Styles to Centered'. The second section is 'Strong (Bold) Text Cleanup' with three radio buttons: 'Map Bold to Italic', 'Remove Bold Attribute', and 'Leave Bold as Bold' (which is selected). The third section is 'Emphasized (Italic) Text Cleanup' with three radio buttons: 'Map Italic to Bold', 'Remove Italic Attribute', and 'Leave Italic as Italic' (which is selected). At the bottom are 'OK' and 'Cancel' buttons.

Glossary Wizard

Transform Selected Section

Style Cleanup

Change Heading Styles to Centered

Strong (Bold) Text Cleanup

Map Bold to Italic

Remove Bold Attribute

Leave Bold as Bold

Emphasized (Italic) Text Cleanup

Map Italic to Bold

Remove Italic Attribute

Leave Italic as Italic

OK Cancel

Glossary Wizard Options (continued)

- Glossary Wizard has three selections:
 - Strong (Bold) Text Cleanup



Glossary Wizard

Transform Selected Section

Style Cleanup

Change Heading Styles to Centered

Strong (Bold) Text Cleanup

Map Bold to Italic

Remove Bold Attribute

Leave Bold as Bold

Emphasized (Italic) Text Cleanup

Map Italic to Bold

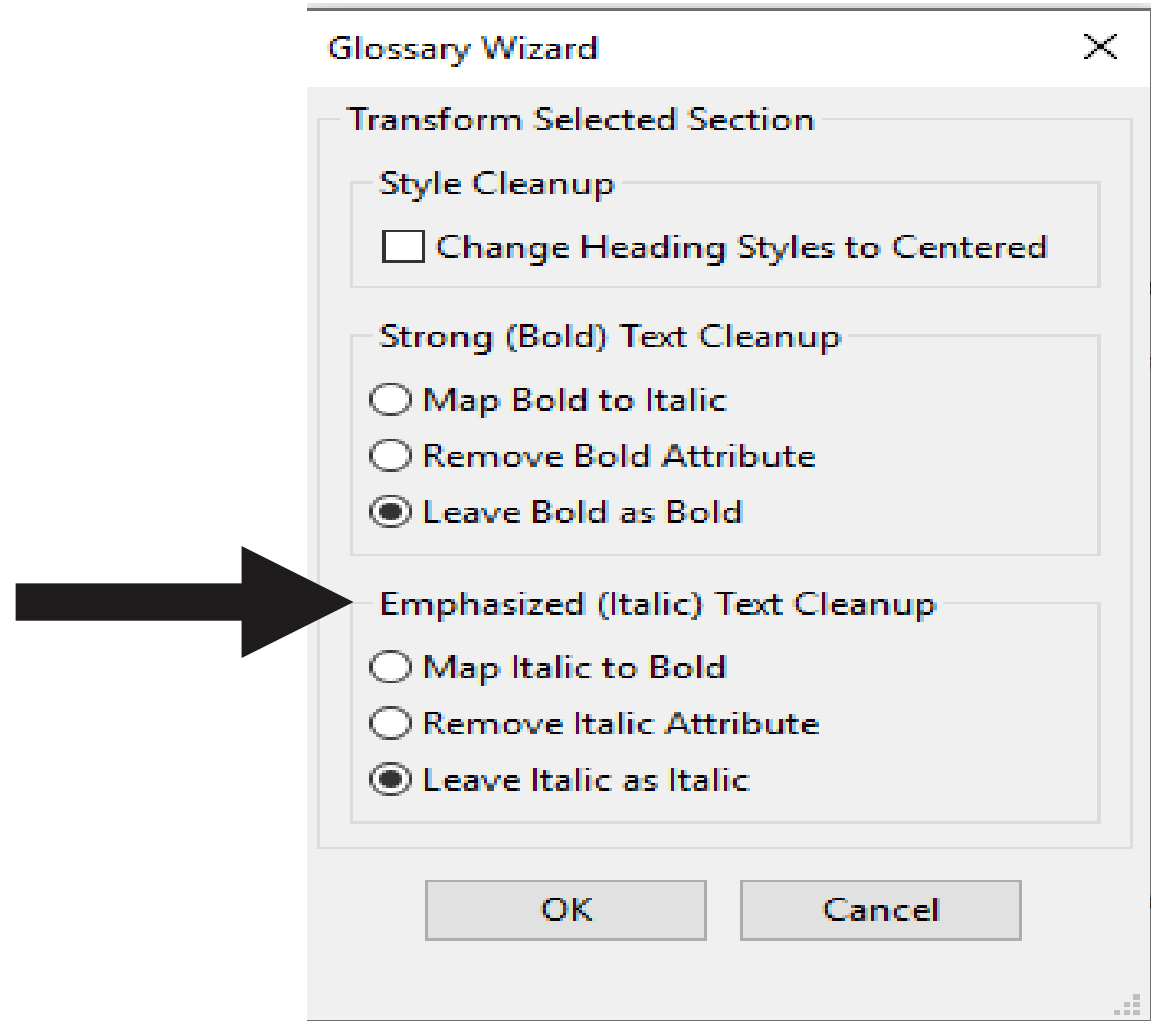
Remove Italic Attribute

Leave Italic as Italic

OK Cancel

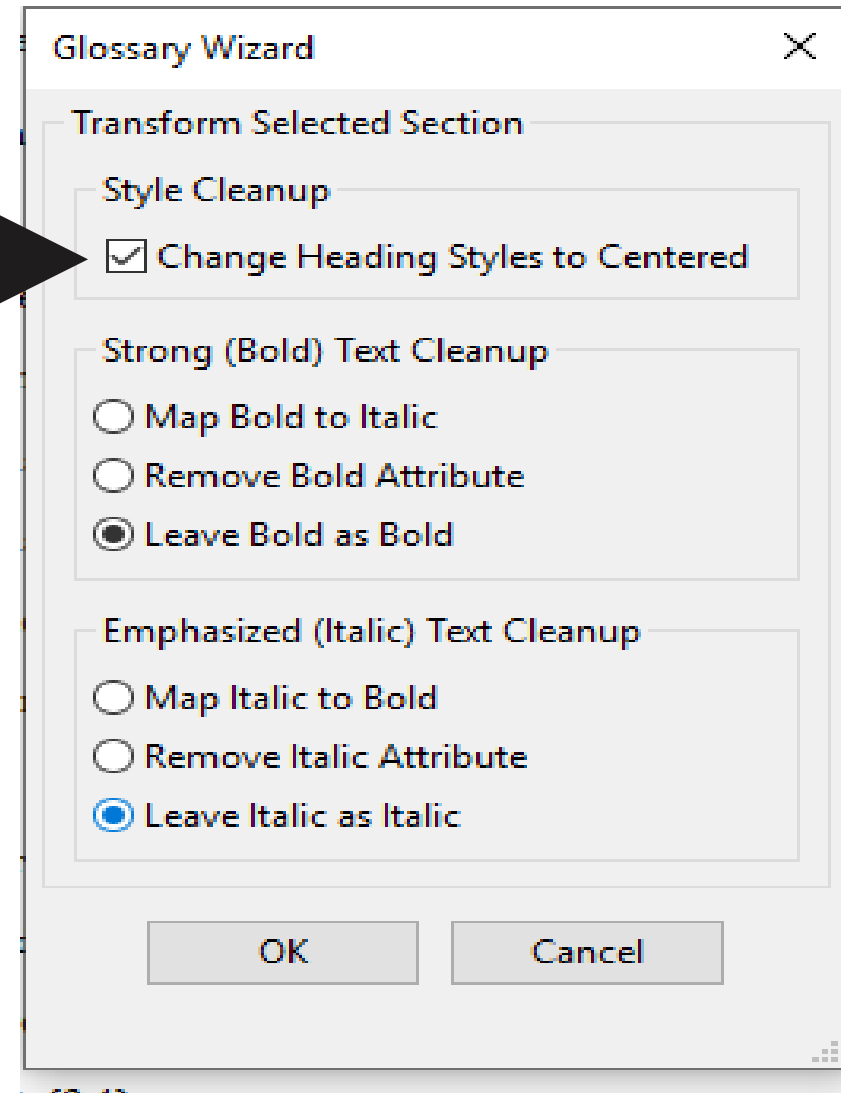
Glossary Wizard Options (cont.)

- Glossary Wizard has three selections:
 - Emphasized (Italic) Text Cleanup



Style Cleanup

- Under Style Cleanup section
 - Select Change Heading Styles to Centered



Style Cleanup (cont.)

- This will Center the
Alphabetic Reference
Letter “A.”

Centered (2)



Gloss Term

absolute temperature scale

Gloss Def

A temperature scale that uses the absolute zero of temperature as the lowest temperature. (5.3)

Gloss Term

absolute zero

Gloss Def

Theoretically the lowest attainable temperature. (5.3)

Gloss Term

acceptor impurity

Gloss Def

An impurity that can accept electrons from a semiconductor. (21.3)

Gloss Term

accuracy

Gloss Def

The closeness of a measurement to the true value of the quantity that is measured. (1.6)

Gloss Term

acid

Gloss Def

A substance that yields hydrogen ions (H^+) when dissolved in water. (2.7)

Gloss Term

acid ionization constant (K_a)

Gloss Def

The equilibrium constant for the acid ionization. (15.5)

Gloss Term

actinide series

Gloss Def

Elements that have incompletely filled $5f$ subshells or readily give rise to cations that have incompletely filled $5f$ subshells. (7.9)

Gloss Term

activated complex

Gloss Def

The species temporarily formed by the reactant molecules as a result of the collision before they form the product. (13.4)

Gloss Term

activation energy (E_a)

Gloss Def

The minimum amount of energy required to initiate a chemical reaction. (13.4)

Gloss Term

activity series

Gloss Def

A summary of the results of many possible displacement reactions. (4.4)

Gloss Term

actual yield



Strong (Bold) Text Cleanup (cont.)

- All Glossary Terms now have the Bold removed.

Heading 2	A
Gloss Term	absolute temperature scale
Gloss Def	A temperature scale that uses the absolute
Gloss Term	absolute zero
Gloss Def	Theoretically the lowest attainable temper
Gloss Term	acceptor impurity
Gloss Def	An impurity that can accept electrons from
Gloss Term	accuracy
Gloss Def	The closeness of a measurement to the tru
Gloss Term	acid
Gloss Def	A substance that yields hydrogen ions (H^+)
Gloss Term	acid ionization constant (K_a)
Gloss Def	The equilibrium constant for the acid ioniz
Gloss Term	actinide series
Gloss Def	Elements that have incompletely filled 5f
Gloss Term	activated complex
Gloss Def	The species temporarily formed by the rea
Gloss Term	activation energy (E_a)
Gloss Def	The minimum amount of energy required t
Gloss Term	activity series
Gloss Def	A summary of the results of many possible
Gloss Term	actual yield
Gloss Def	The amount of product actually obtained in
Gloss Term	addition reaction
Gloss Def	A reaction in which one molecule adds to a



Exporting Glossary to Duxbury

- Next, export the file to Duxbury.



Centered (1)

A

absolute temperature scale
A temperature scale that uses the absolute zero of temperature as the lowest temperature. (5.3)

absolute zero
Theoretically the lowest attainable temperature. (5.3)

acceptor impurity
An impurity that can accept electrons from a semiconductor. (21.3)

accuracy
The closeness of a measurement to the true value of the quantity that is measured. (1.6)

acid

Word Count: 772
Characters: 4,348
Page Estimate: 5
(Assuming literary content)



Exporting Glossary to Duxbury (continued)

- Save as DBT file.

NimPro - 9780076812141NIMAS

File Edit View Help

Export Selected Sections

This PC > Braille Accomplishments (W:) > PowerPoint >

Organize New folder

Name	Date modified	Type
Videos		
Local Disk (C:)		
DVD RW Drive (D:)		
Braille (\\10.170.193.3) (F:)		
Braille Accomplishments (W:)		
Braille Resources		
FORMATS CLASS		
In Progress		
PowerPoint		
NimasPres2	5/31/2022 10:57 AM	File folder
NimPro	5/19/2022 9:33 AM	File folder
ColumnarTable	5/31/2022 10:30 AM	DBT Print Docume...
FrontMatterExample1	5/31/2022 9:40 AM	DBT Print Docume...
NimasExample	5/24/2022 10:24 AM	DBT Print Docume...
NimproExample	5/25/2022 11:24 AM	DBT Print Docume...
TableExampleNimPro	5/31/2022 10:08 AM	DBT Print Docume...
WideTable	5/31/2022 10:20 AM	DBT Print Docume...

File name: GlossaryNimPro

Save as type: DBT File (*.dpx)

DBT File (*.dpx)

Rich Text Format (*.rtf)

Word 97-2003 Document (*.doc)

Word Document (*.docx)

Save Cancel



Exporting Glossary to Duxbury (cont.)

- Confirm the BANA template.

Choose or Confirm Templates

To output this document

DBT Template: English (UEB) - BANA.dxt

For MS Word output, select both a Word template and a DBT template.

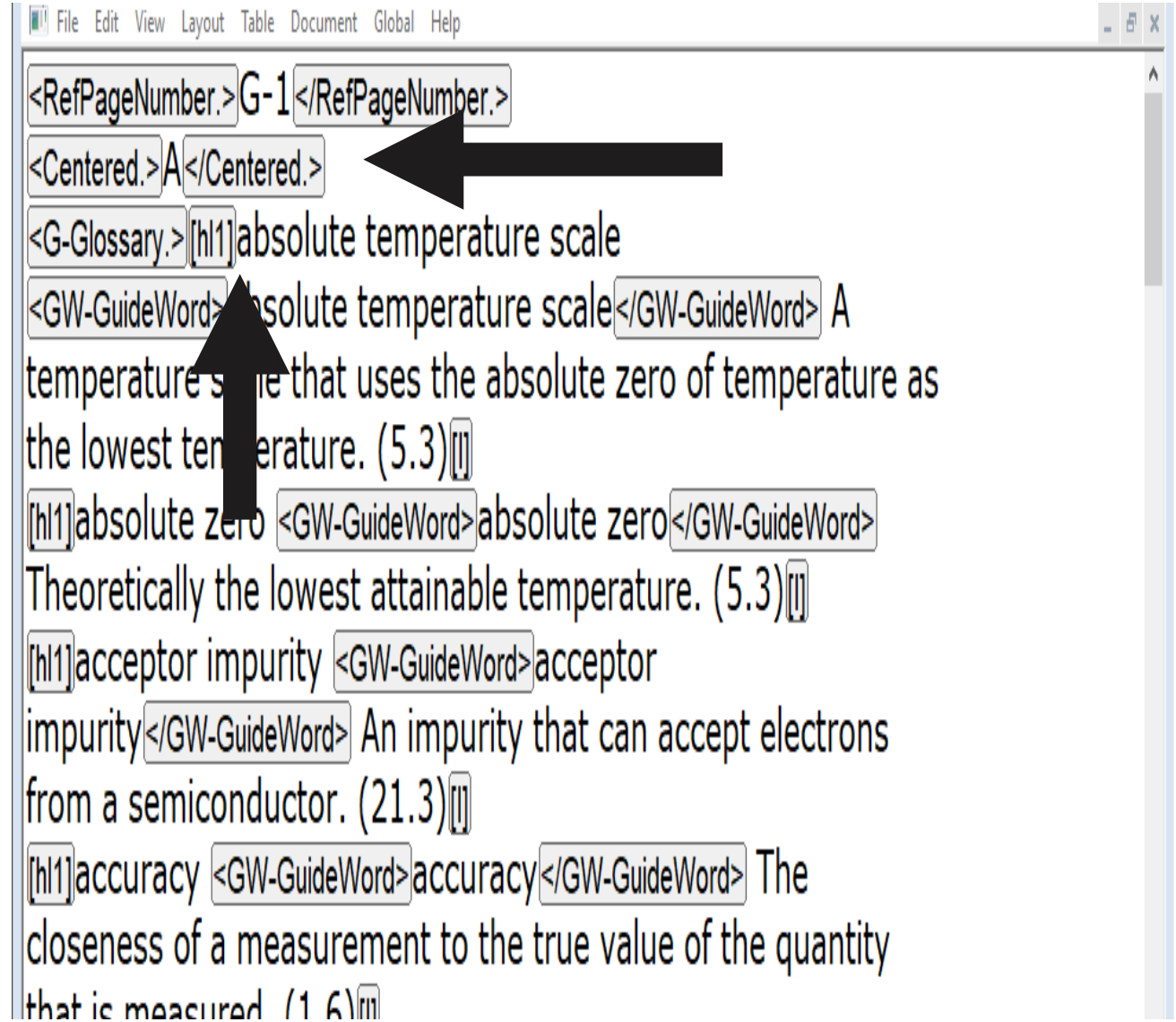
Word Template: BANA Braille 2017

OK Cancel

it yields hydrogen ions (H^+) when dissolved in water. (2.7)
nt (K_a)
n constant for the acid ionization. (15.5)
ave incom
hells. (7.9)
norarily f
4)
the results
product ac
high one m
reen unlike
compound containing the hydroxyl group —OH. (24.4)
th a carbonyl functional group and the general formula RCHO, where R is an H atom, an alkyl, or an aromatic group. (24.4)
ns
that do not contain the benzene group or the benzene ring. (24.1)

Exported Glossary

- Then, open in Duxbury.
- Notice: The Alphabetic Reference Letter “A”
- The bold typeform has been removed.



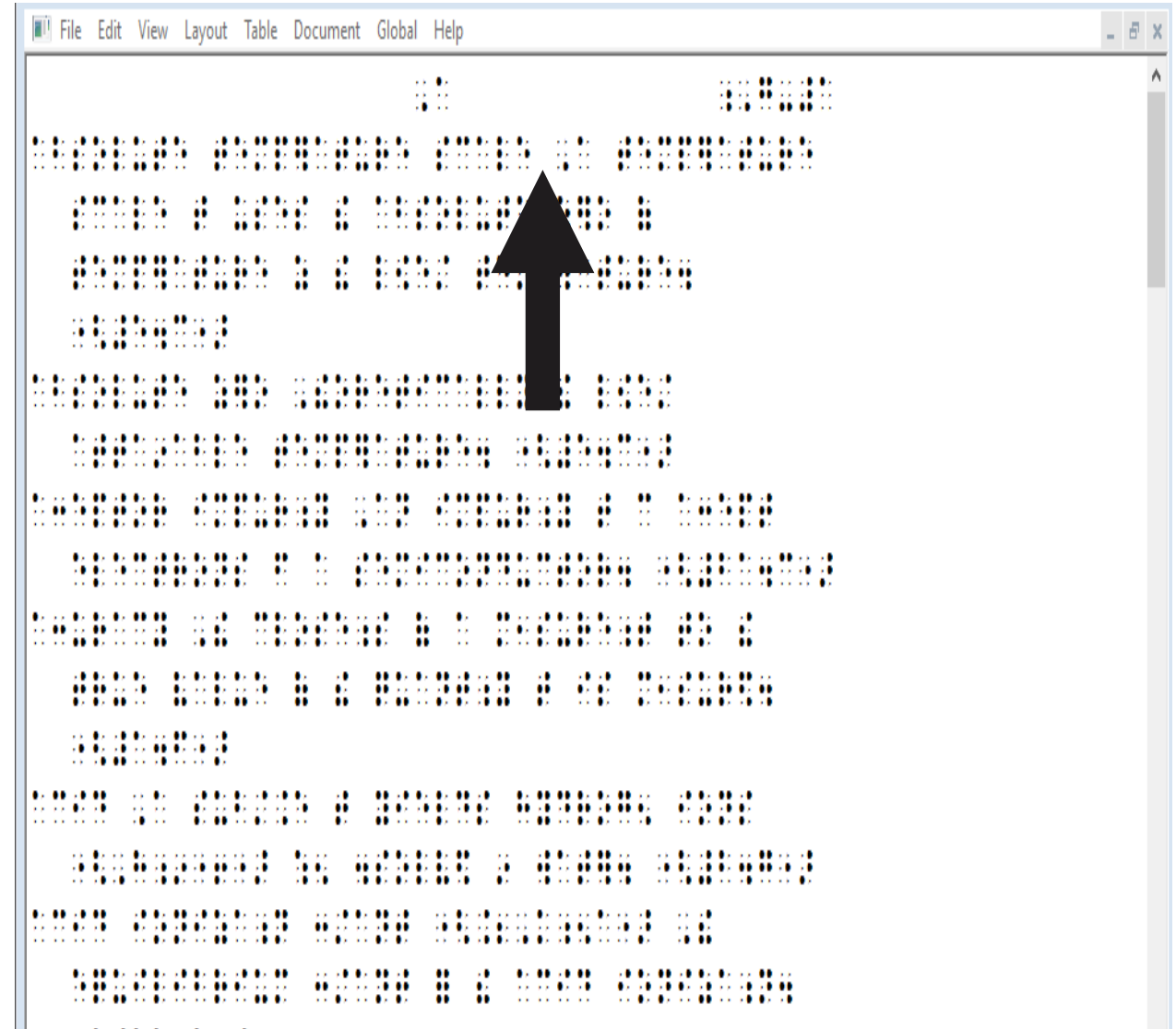
```
File Edit View Layout Table Document Global Help
<RefPageNumber.>G-1</RefPageNumber.>
<Centered.>A</Centered.>
<G-Glossary.>[h1]absolute temperature scale
<GW-GuideWord>absolute temperature scale</GW-GuideWord> A
temperature scale that uses the absolute zero of temperature as
the lowest temperature. (5.3)[]
[h1]absolute zero <GW-GuideWord>absolute zero</GW-GuideWord>
Theoretically the lowest attainable temperature. (5.3)[]
[h1]acceptor impurity <GW-GuideWord>acceptor
impurity</GW-GuideWord> An impurity that can accept electrons
from a semiconductor. (21.3)[]
[h1]accuracy <GW-GuideWord>accuracy</GW-GuideWord> The
closeness of a measurement to the true value of the quantity
that is measured. (1.6)[]
```

The screenshot shows a Duxbury software window with a menu bar (File, Edit, View, Layout, Table, Document, Global, Help) and a text area containing XML-formatted glossary entries. Two black arrows point to specific elements: one points to the <Centered.>A</Centered.> tag, and another points to the <GW-GuideWord> tag in the first entry.



Glossary Tagging Cleanup

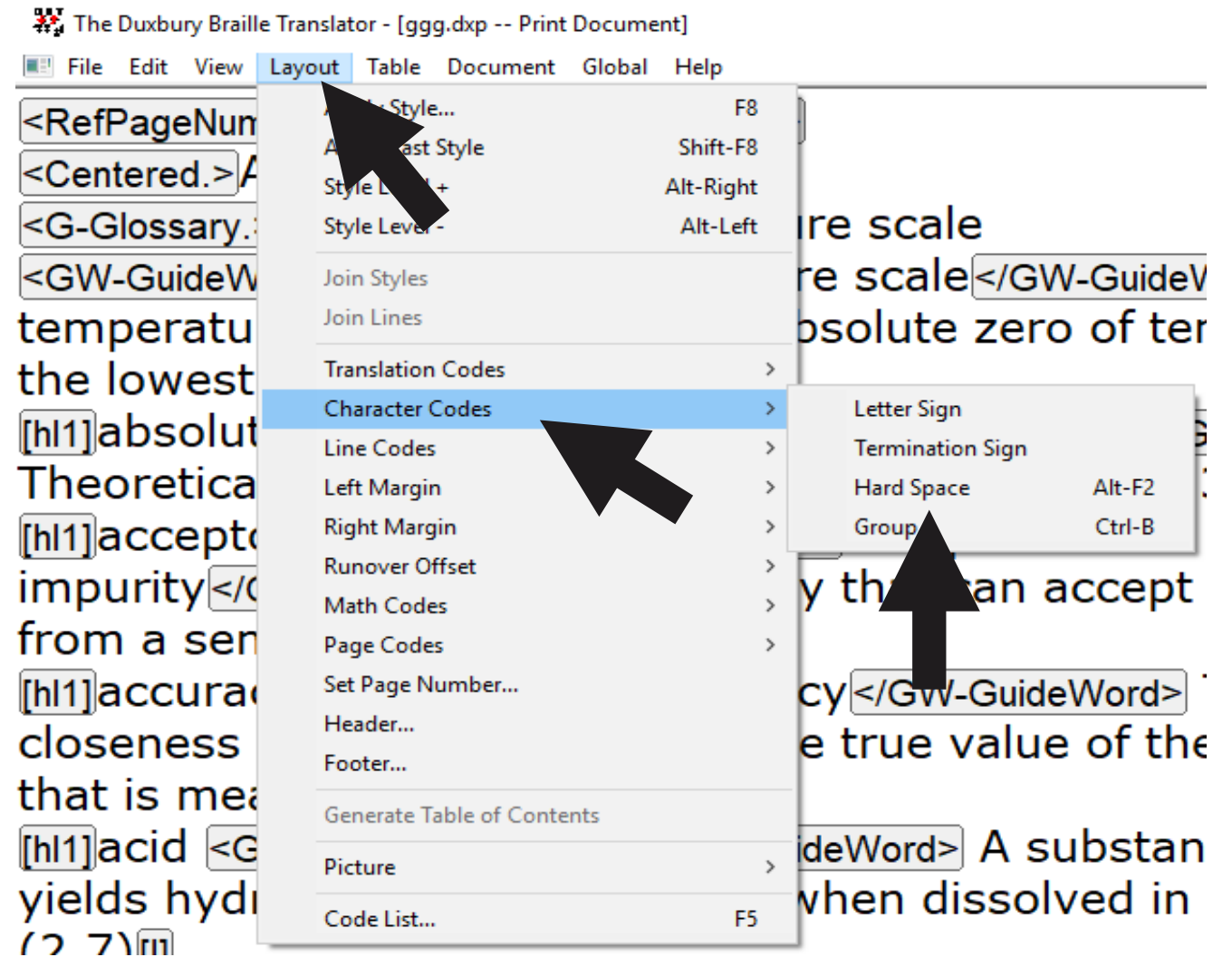
- “CTRL T” in Duxbury to Translate.
- As you can see, most of the formatting has been done for you, including guide words.
- Exception: according to Formats 21.2.2, two blank cells are to be left between the entry words and the definition.
- The hard spaces will have to be added.



Adding Hard Spaces to Glossary

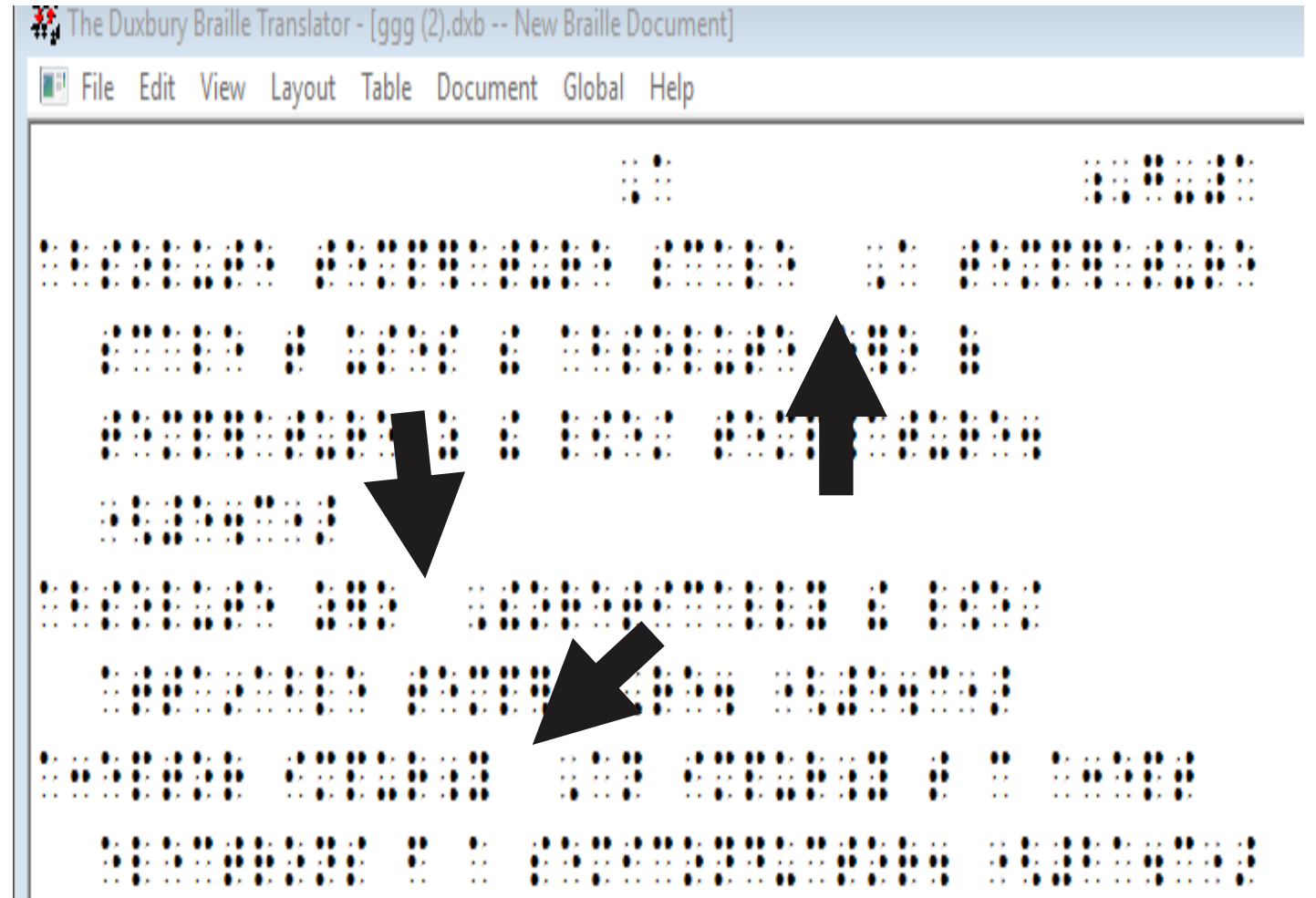
To add the hard spaces that are needed:

- Go to Layout, then to Character Codes, and then to Hard Space.
- This will allow you to enter the spaces you need.



Adding Hard Spaces to Glossary (cont)

After Translation: Hard Spaces have been successfully added.



A Final Thought

- Guide words have been added, as shown in the demo.
- Though NimPro will do most of the work for you, you will still need to go through and check all the format selections: Headings, Hard Spaces, etc.



Index



Index Heading

- One aspect of creating a properly formatted index in braille is changing the generic heading above the index into a centered "Index Heading."
 - The Index Wizard provides this option for you.



Index Style

- The Index Wizard changes items in the simple List style into the Index style.



NimPro Index Wizard Features

- It offers the option to fix auto-numbering problems and re-map bold and italic text.
- It also allows you the option to restyle the heading that precedes the index as an index heading (centered).



Using the NimPro Index Wizard

- Before you use the Index Wizard, you need to identify which section or pages of your document contain the index.



Using the NimPro Index Wizard (cont.)

- Select only that section or those pages in NimPro's navigation pane before you start the Index Wizard.
 - Note: If you choose the option to restyle the index heading, any subheadings in the index will receive the same treatment.



Index Formatting in NimPro (continued)

- Next, select Index
- Select the letter you choose to work in, e.g. “H”

NimPro - 9780076812141NIMAS
File Edit View Help

- + Front Matter
- + Body Matter
- Rear Matter **1st**
- + Answers to Even-Numbered Prot
- + Appendix 1
- + Appendix 2
- + Appendix 3
- + Glossary
- Index **2nd**
 - ... A
 - ... B
 - ... C
 - ... D
 - ... E
 - ... F
 - ... G
 - ... **H** **3rd**
 - ... I
 - ...

Heading 2

List 1
List 2
List 2
List 1
List 1
List 1
List 1
List 1
List 2
List 2
List 2
List 2
List 2



Using the Index Wizard

- Select Edit
- Choose Index Wizard

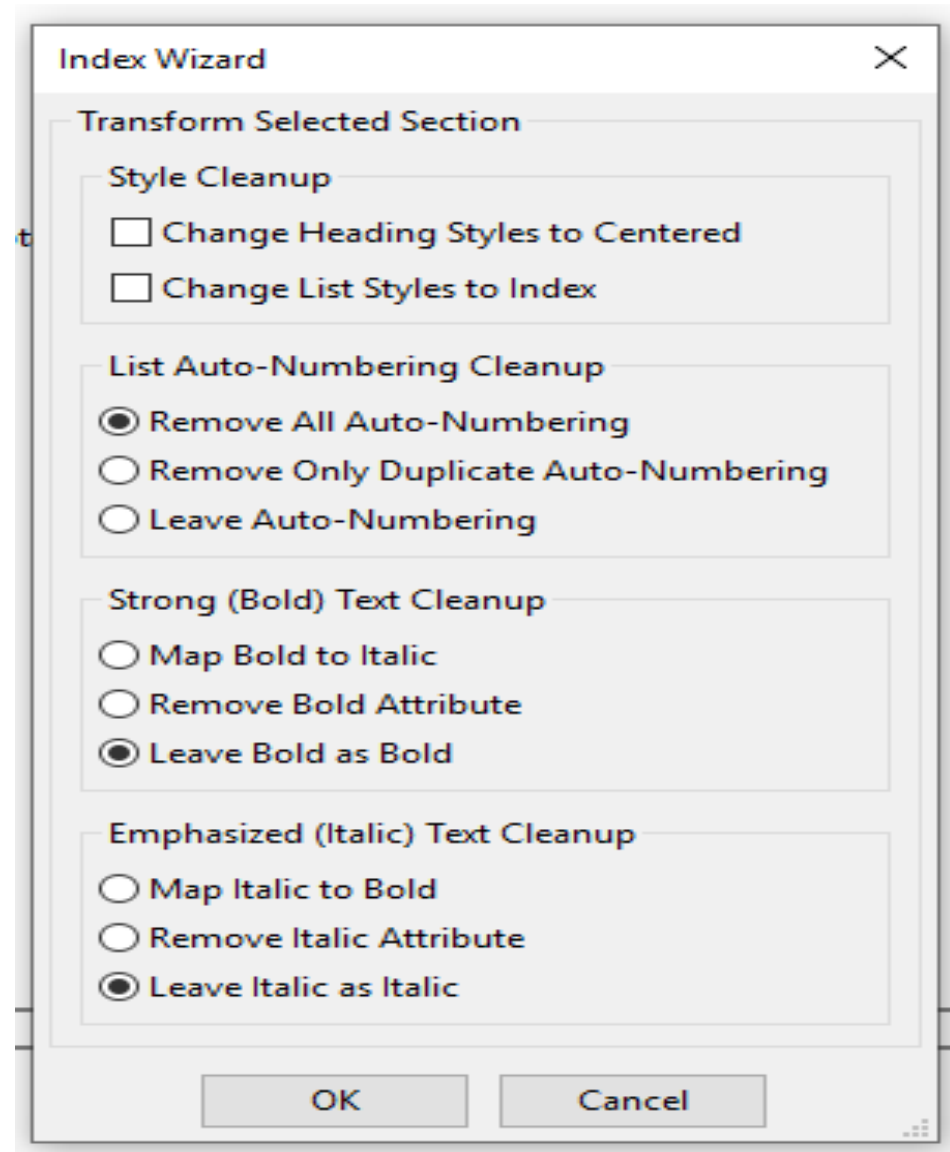
The screenshot shows the NimPro software interface. The 'Edit' menu is open, and the 'Index Wizard...' option is highlighted with a blue background. A black arrow points from the 'Index Wizard...' option to the right, towards the main text area. The main text area displays a list of chemical terms and their corresponding page numbers, such as 'H₂. See also Hydrogen molecular orbitals, 443-444' and 'Half-cell potential. See Standard reduction potential Half-cell reactions, 811'. The interface also shows a 'Table of Contents Wizard...' menu option, a 'Word Count: 880' status bar, and a Windows taskbar at the bottom.



Options in Index Wizard

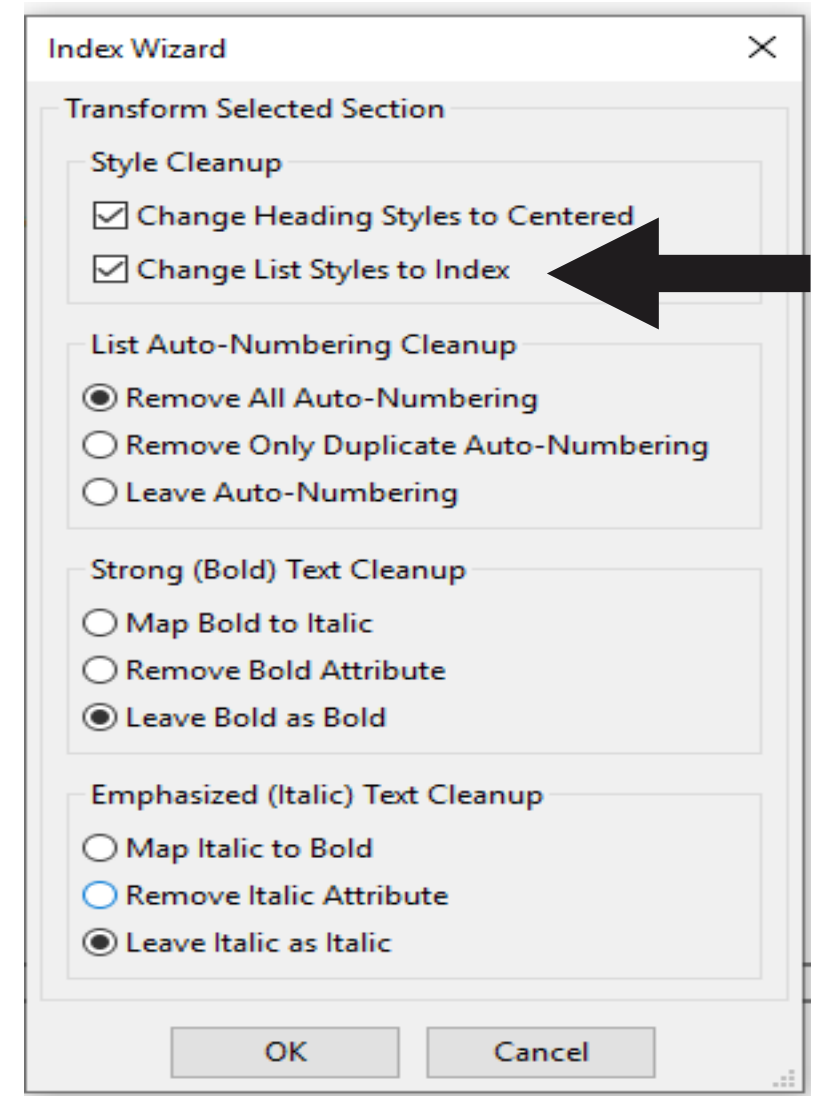


- Index Wizard allows:
 - Centered heading
 - List numbering
 - Bold
 - Italics



Index Style Cleanup

- Select “Change Heading Styles to Centered”
- Change List Style to Index



Index Style Cleanup (cont.)

Notice:

- “H” Centered
- List 1 changed to Index 1

Centered (2)



H

Index 1

H₂. See also Hydrogen



Index 2

molecular orbitals, [443-444](#)

Index 2

potential energy of, [427-428](#)

Index 1

Haber, Fritz, [371](#), [595](#)

Index 1

Haber process, [595](#), [646-647](#)

Index 1

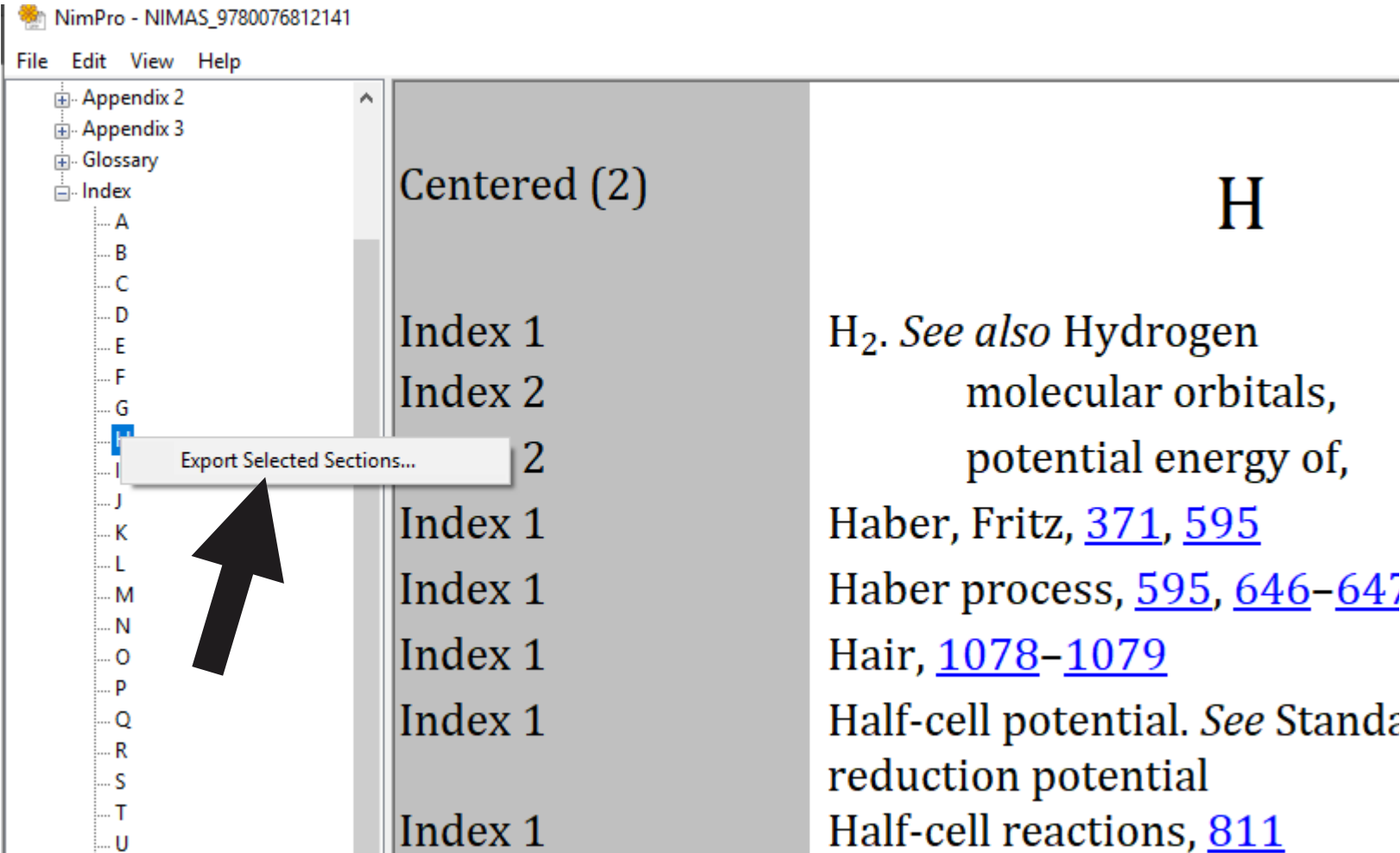
Hair, [1078-1079](#)



Export Index

From this point:

- Right click the H and then Export Selected Sections



NimPro - NIMAS_9780076812141

File Edit View Help

Appendix 2
Appendix 3
Glossary
Index

A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
T
U

Centered (2)

Index 1

Index 2

2

Index 1

Index 1

Index 1

Index 1

Index 1

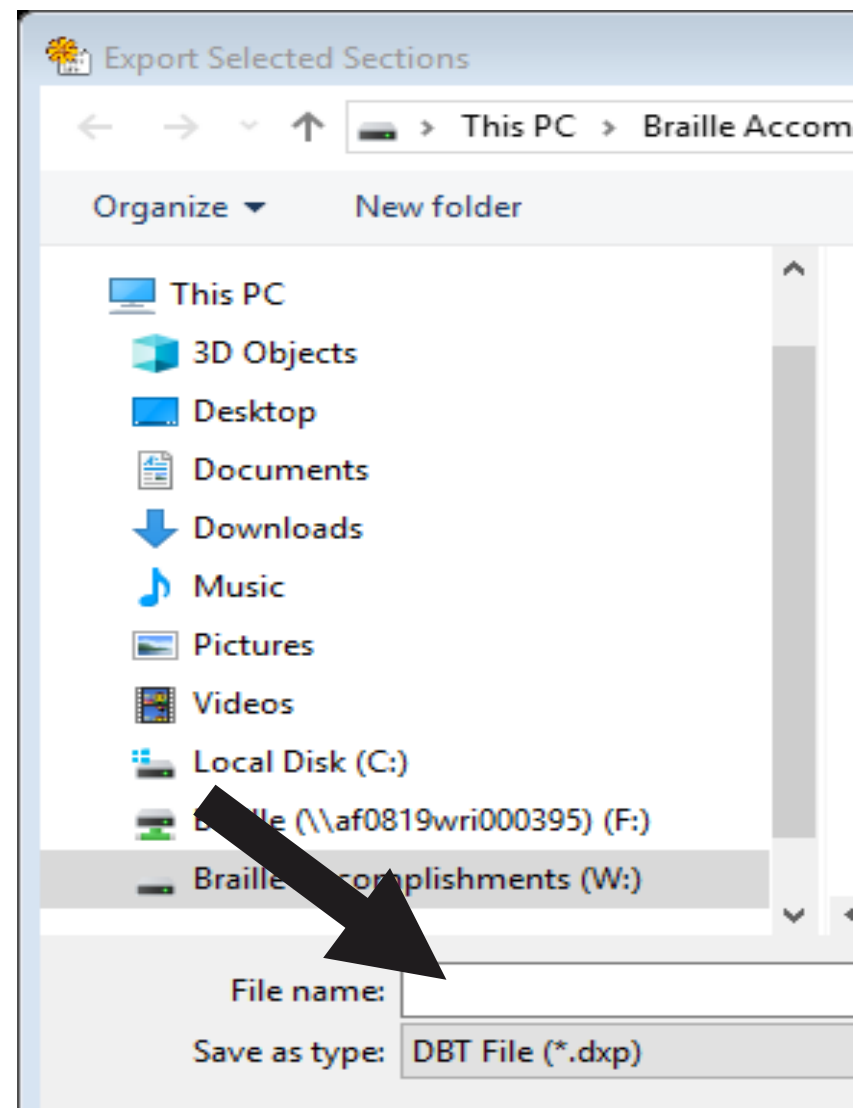
Index 1

H

H₂. *See also* Hydrogen
molecular orbitals,
potential energy of,
Haber, Fritz, [371](#), [595](#)
Haber process, [595](#), [646-647](#)
Hair, [1078-1079](#)
Half-cell potential. *See* Standard
reduction potential
Half-cell reactions, [811](#)

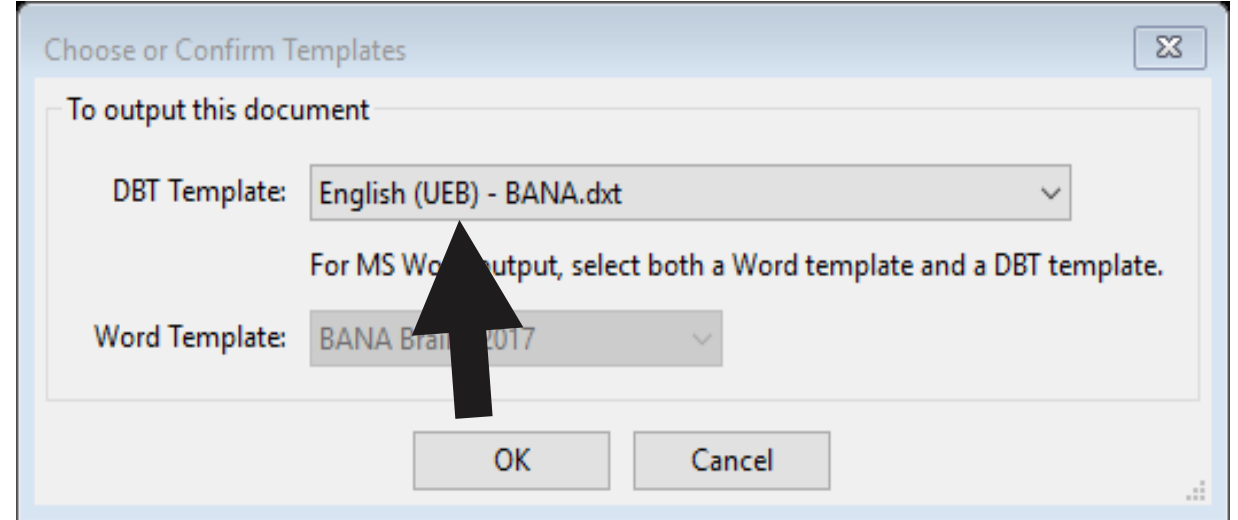
Export Index (continued)

- Save the file as a Duxbury file



Export Index (cont.)

- Select the UEB – BANA template.



Index Cleanup in Duxbury

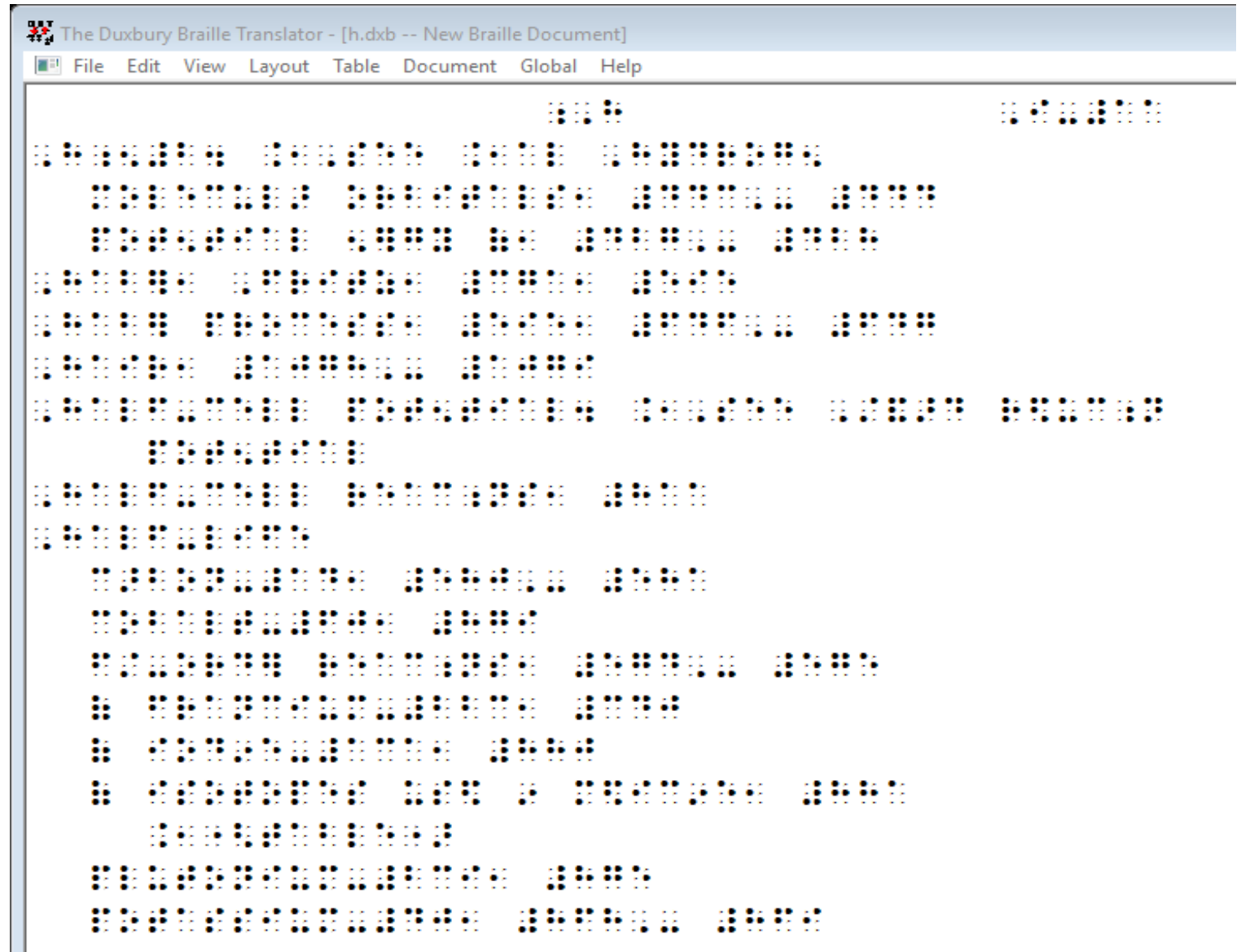
- Open your file in Duxbury.
- Your file should look similar to this example.
- Make any further code changes here, and then translate.

```
The Duxbury Braille Translator - [h.dxp -- Print Document]
File Edit View Layout Table Document Global Help
<RefPageNumber.>I-11</RefPageNumber.>
<Centered.>H</Centered.>
<l1-Index.>[hl1]H[bs]2[be]. <i-italic>See also</i-italic>
Hydrogen[|]
[hl2]molecular orbitals, 443- 444[|]
[hl2]potential energy of, 427- 428[|]
[hl1]Haber, Fritz, 371, 595[|]
[hl1]Haber process, 595, 646- 647[|]
[hl1]Hair, 1078- 1079[|]
[hl1]Half-cell potential. <i-italic>See</i-italic> Standard
reduction potential[|]
[hl1]Half-cell reactions, 811[|]
[hl1]Half-life[|]
[hl2]carbon-14, 580- 581[|]
[hl2]cobalt-60, 879[|]
[hl2]first-order reactions, 574- 575[|]
[hl2]of francium-223, 340[|]
[hl2]of iodine-131, 880[|]
[hl2]of isotopes used in medicine, 881
<i-italic>(table)</i-italic>[|]
Current Style: RefPageNumber.
```



Final Translation

- As you can see in this example, we have translated the file and all codes are intact.



Sidebars



Sidebars in NimPro

- Here we have opened NimPro to the section that is needed.
- Text in a Sidebar has a light gray background to cue the user that it is not part of the main text flow. See the examples on the next two slides.



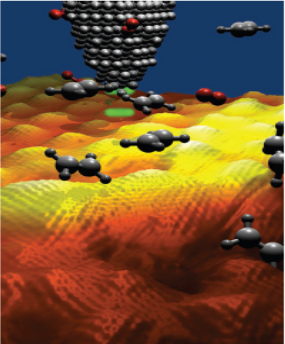
Sidebar Example

NimPro - 9780076812141NIMAS

File Edit View Help

Front Matter
Body Matter
CHAPTER 1: Chemistry The Study of Change
CHAPTER 2: Atoms, Molecules, and Mixtures
CHAPTER 3: Mass Relationships in Chemical Substances
CHAPTER 4: Reactions in Aqueous Solutions
CHAPTER 5: Gases
CHAPTER 6: Thermochemistry
CHAPTER 7: Quantum Theory and Atomic Structure
CHAPTER 8: Periodic Relationships in the Elements
CHAPTER 9: Chemical Bonding I
CHAPTER 10: Chemical Bonding II
CHAPTER 11: Intermolecular Forces and Properties
CHAPTER 12: Physical Properties of Matter
CHAPTER 13: Chemical Kinetics
CHAPTER 14: Chemical Equilibrium
CHAPTER 15: Acids and Bases
CHAPTER 16: Acid-Base Equilibria
CHAPTER 17: Entropy, Free Energy, and Equilibrium
CHAPTER 18: Electrochemistry
CHAPTER 19: Nuclear Chemistry
CHAPTER 20: Chemistry in the Atmosphere
CHAPTER 21: Metallurgy and the p-Block Elements
CHAPTER 22: Nonmetallic Elements and Compounds
CHAPTER 23: Transition Metals and Coordination Compounds
CHAPTER 24: Organic Chemistry
CHAPTER 25: Synthetic and Natural Polymers
Rear Matter

Heading 1
CHAPTER 1: Chemistry The Study of Change



Caption
A scanning tunneling microscope probes individual small molecules when they adsorb on graphene, a single-atom thin sheet of carbon atoms.

Byline
©Science Source

Sidebar
Heading (1)
AP CHAPTER OUTLINE

- 1.1 Chemistry: A Science for the Twenty-First Century
- 1.2 Introducing the AP Big Ideas
- 1.3 Introducing the AP Science Practices
- 1.4 Review: The Scientific Method
- 1.5 Review: Measurements
- 1.6 Review: Handling Numbers
- 1.7 Review: Dimensional Analysis in Problem Solving
- 1.8 Review: Problem Solving: Information, Assumptions, and Simplifications

Sidebar
Heading (1)
AP BIG IDEAS A LOOK AHEAD

1 2 3 4 5 6

Body Text
Chemistry surrounds us. It determines the myriad of interactions needed for our bodies to function. Its laws determine the function of the food we eat and the water we drink. It is in our daily routines. Consider the car or bus ride to school. As a result of chemical interactions, a vehicle starts when the ignition is turned on and accelerates when the gas pedal is depressed. A mini explosion occurs within each cylinder and that energy is transferred to turn the wheels of the car. The tires grip the road with a prescribed air pressure within. Exhaust fumes are cleaned up by the catalytic converter. Halogen headlights, an interaction of matter and energy, show

Word Count: 20,334
Characters: 110,565
Page Estimate: 111
(Assuming literary content)

10:27 AM
6/2/2022

Export to Duxbury

- Here we will Export the file to Duxbury to view and adjust if necessary.
- Save the file as a DBT file.

The screenshot shows the NimPro software window titled "NimPro - NIMAS_9780076812141". The interface includes a menu bar (File, Edit, View, Help) and a left-hand navigation pane. The "Body Matter" section is expanded, showing a list of chapters from "CHAPTER 1: Chemistry The Study of Change" to "CHAPTER 21: Metallurgy and Materials". A context menu is open over the "CHAPTER 1" entry, with the option "Export Selected Sections..." highlighted. A large black arrow points from this menu option towards the main document area. The main document area displays the title page of the book, featuring the chapter title "CHAPTER 1: Chemistry The Study of Change" in a large serif font. Below the title is a scanning tunneling microscope (STM) image showing a molecular structure on a surface. The page number "1" is visible at the top right of the document area. At the bottom of the software window, a status bar shows "Word Count: 20,334" and "Characters: 110,565".



Editing Sidebar in Duxbury

- Open the file.
- Here we can change any of the codes if needed, then we can translate the file to simbraille.

```
The Duxbury Braille Translator - [Sidebar.dxp -- Print Document]
File Edit View Layout Table Document Global Help
<RefPageNumber.>1</RefPageNumber.>
<H1-HeadingCentered.>CHAPTER 1: Chemistry The Study of
Change</H1-HeadingCentered.>
<C-Caption.>A scanning tunneling microscope probes individual
small molecules when they adsorb on graphene, a single-ator
sheet of carbon atoms.</C-Caption.>
<Attribution.>©Science Source</Attribution.>
<H1-HeadingCentered.>AP CHAPTER OUTLINE</H1-HeadingCentered.>
<L-List.>[hl1]<bold>1.1</bold> Chemistry: A Science for the
Twenty-First Century[|]
[hl1]<bold>1.2</bold> Introducing the AP Big Ideas[|]
[hl1]<bold>1.3</bold> Introducing the AP Science Practices[|]
[hl1]<bold>1.4</bold> Review: The Scientific Method[|]
[hl1]<bold>1.5</bold> Review: Measurements[|]
[hl1]<bold>1.6</bold> Review: Handling Numbers[|]
[hl1]<bold>1.7</bold> Review: Dimensional Analysis in Problem
Solving[|]
```



Editing Sidebar in Duxbury (cont.)

After translating we have our Sidebar complete with:

- Centered heading
- Correct list formatting
- Blank lines before and after

CHAPTER 1
Getting Started

CHAPTER 2
Getting Started

CHAPTER 3
Getting Started

CHAPTER 4
Getting Started

CHAPTER 5
Getting Started

CHAPTER 6
Getting Started

CHAPTER 7
Getting Started

CHAPTER 8
Getting Started

CHAPTER 9
Getting Started

CHAPTER 10
Getting Started

Reference Notes



Reference Notes in NimPro

- In the next slide you will see an example of Reference Notes.
- Blue text identifies footnote references.
- A footnote reference is a symbol such as a number, asterisk, or dagger † that appears (usually on a higher baseline) after a word or sentence.



Reference Note Symbols in NimPro

NimPro - 9780076812141NIMAS

File Edit View Help

+	Front Matter	meaning >	<h2>Microstates and Entropy</h2>
-	Body Matter	Body Text	Before we introduce the second law of thermodynamics, which relates entropy change (increase) to spontaneity, we consider a simple system of four molecules distributed between two equal compartments, as shown in Figure 17.2 . There is one way to have two molecules in each compartment and one in the right compartment, and six ways to have two molecules in each of the two compartments and each set of similar microstates is called a distribution. [†] As you can see, distribution D is the most probable and has one microstate and therefore there is only one way to achieve it. Based on this analysis, we conclude that the distribution in which the distribution can be achieved. As the number of molecules approaches macroscopic scale, it is clear that there are many, many more microstates than all other distributions.
+	CHAPTER 1: Chemistry The Study of Matter and Change	Body Text	[†] Actually there are still other possible ways to distribute the four molecules between the two compartments.
+	CHAPTER 2: Atoms, Molecules, and Ions		
+	CHAPTER 3: Mass Relationships in Chemical Compounds		
+	CHAPTER 4: Reactions in Aqueous Solutions		
+	CHAPTER 5: Gases		
+	CHAPTER 6: Thermochemistry		
+	CHAPTER 7: Quantum Theory and Atomic Structure		
+	CHAPTER 8: Periodic Relationships among the Elements		
+	CHAPTER 9: Chemical Bonding		



Reference Note Symbols in NimPro (cont.)

- Footnote references are displayed in a blue font to highlight them.

Not all NIMAS documents have footnote numbers displayed as superscript.



Examples of Reference Notes

Here we see the actual note that is indicated in text.

Front Matter

Body Matter

- CHAPTER 1: Chemistry The Study of Matter and Change
- CHAPTER 2: Atoms, Molecules, and Compounds
- CHAPTER 3: Mass Relationships in Chemicals
- CHAPTER 4: Reactions in Aqueous Solutions
- CHAPTER 5: Gases
- CHAPTER 6: Thermochemistry
- CHAPTER 7: Quantum Theory and Atomic Structure
- CHAPTER 8: Periodic Relationships in the Elements
- CHAPTER 9: Chemical Bonding I
- CHAPTER 10: Chemical Bonding II

Microstates and Entropy

Body Text

Before we introduce the second law of thermodynamics, which relates entropy change (increase) to spontaneous processes, it is useful to first provide a proper definition of entropy. To do so let us consider a simple system of four molecules distributed between two equal compartments, as shown in [Figure 17.2](#). There is only one way to arrange all the molecules in the left compartment and one in the right compartment and six ways to have two molecules in each of the two compartments. The eleven possible ways of distributing the molecules are called microscopic states or microstates and each set of similar microstates is called a distribution.† As you can see, distribution III is the most probable because there are six microstates or six ways to achieve it and distribution I is the least probable because it has one microstate and therefore there is only one way to achieve it. Based on this analysis, we conclude that the probability of occurrence of a particular distribution (state) depends on the number of ways (microstates) in which the distribution can be achieved. As the number of molecules approaches macroscopic scale, it is not difficult to see that they will be evenly distributed between the two compartments because this distribution has many, many more microstates than all other distributions.

Body Text

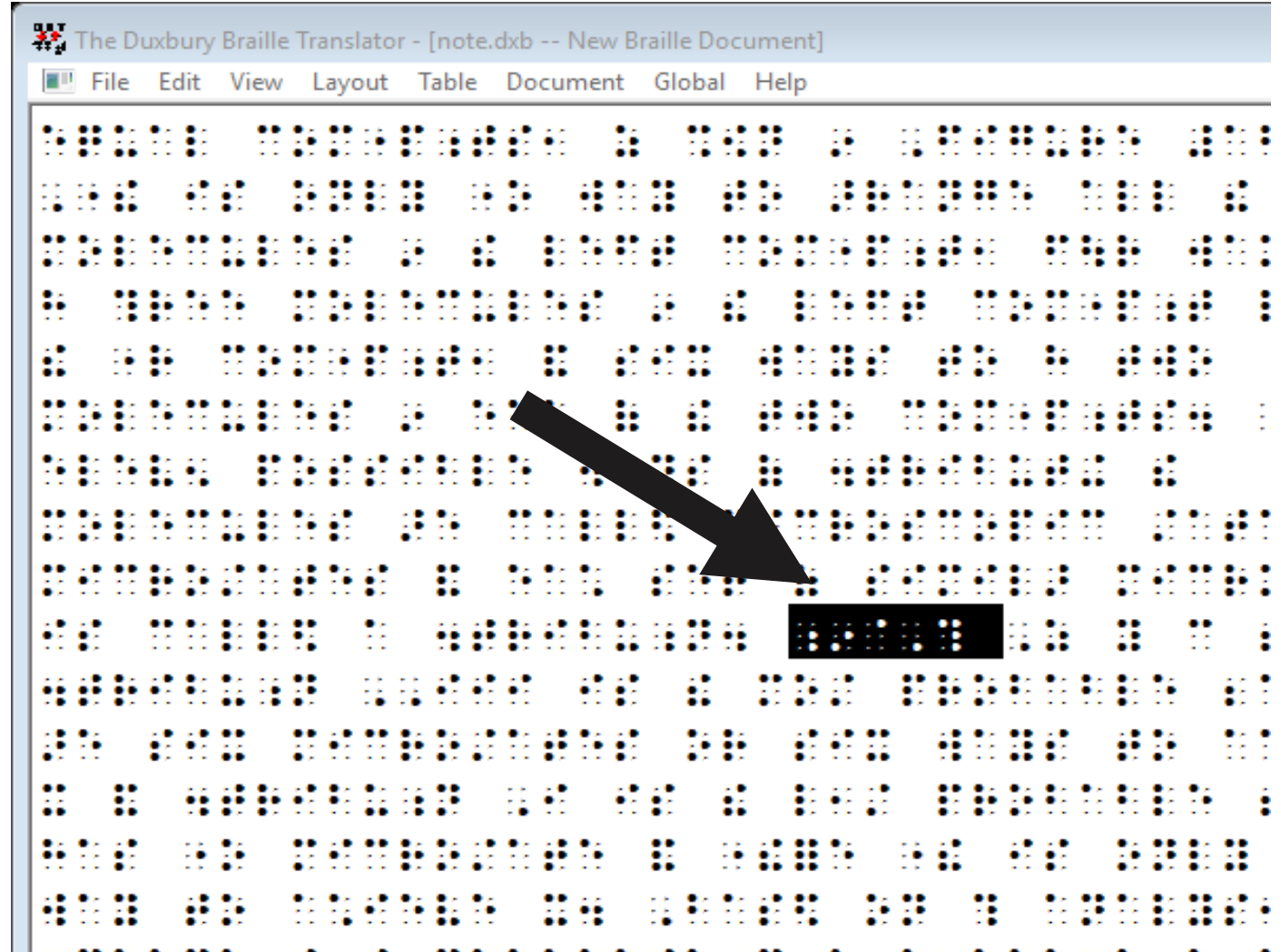
† Actually there are still other possible ways to distribute the four molecules between the two compartments. We can have all four molecules in the right compartment (one way) and three molecules in the right compartment and one molecule in the left compartment (four ways). However, the distributions shown in [Figure 17.2](#) are sufficient for our discussion.



Reference Note Symbol in Simbraille

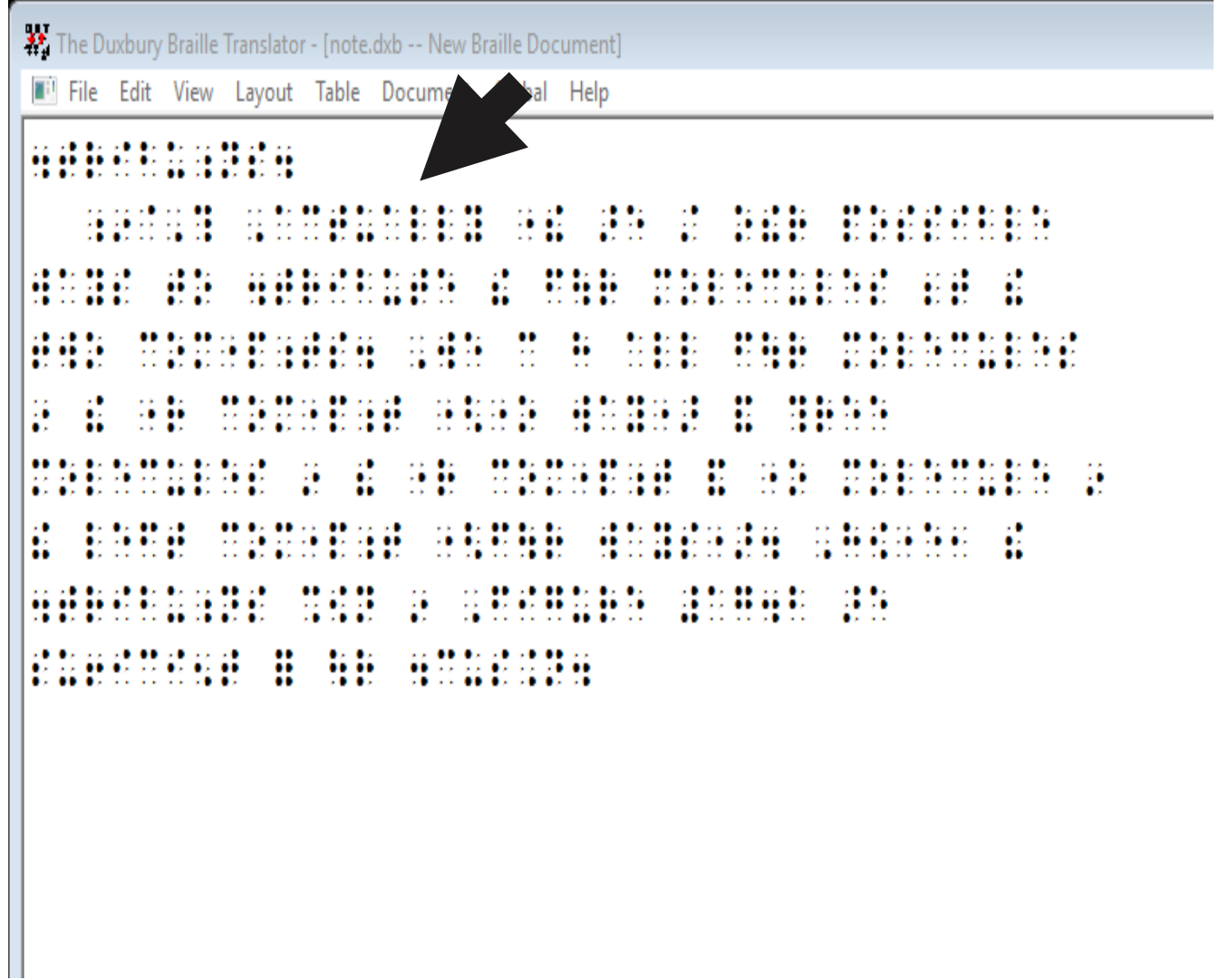
For this example the file has already been saved to Duxbury:

- Here you can see our dagger came over correctly in the translation.



Reference Notes (cont.)

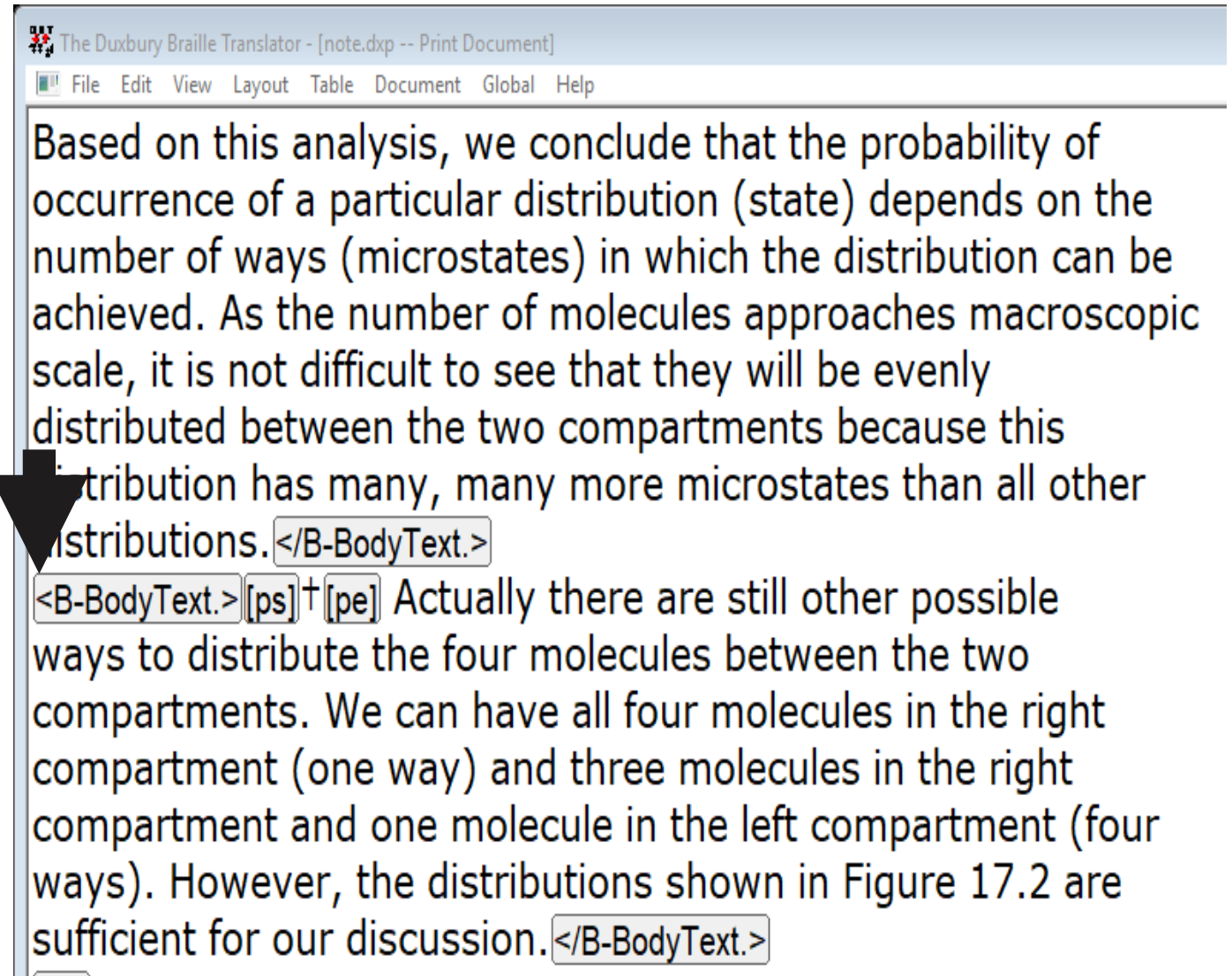
- However, our actual note has need for an adjustment.



Reformatting Reference Notes

In the print screen we will need to make code adjustments:

- First, you'll need to change the format for the note from Body Text to 1-3.
- To do this, put your cursor in front of Body Text and delete it.

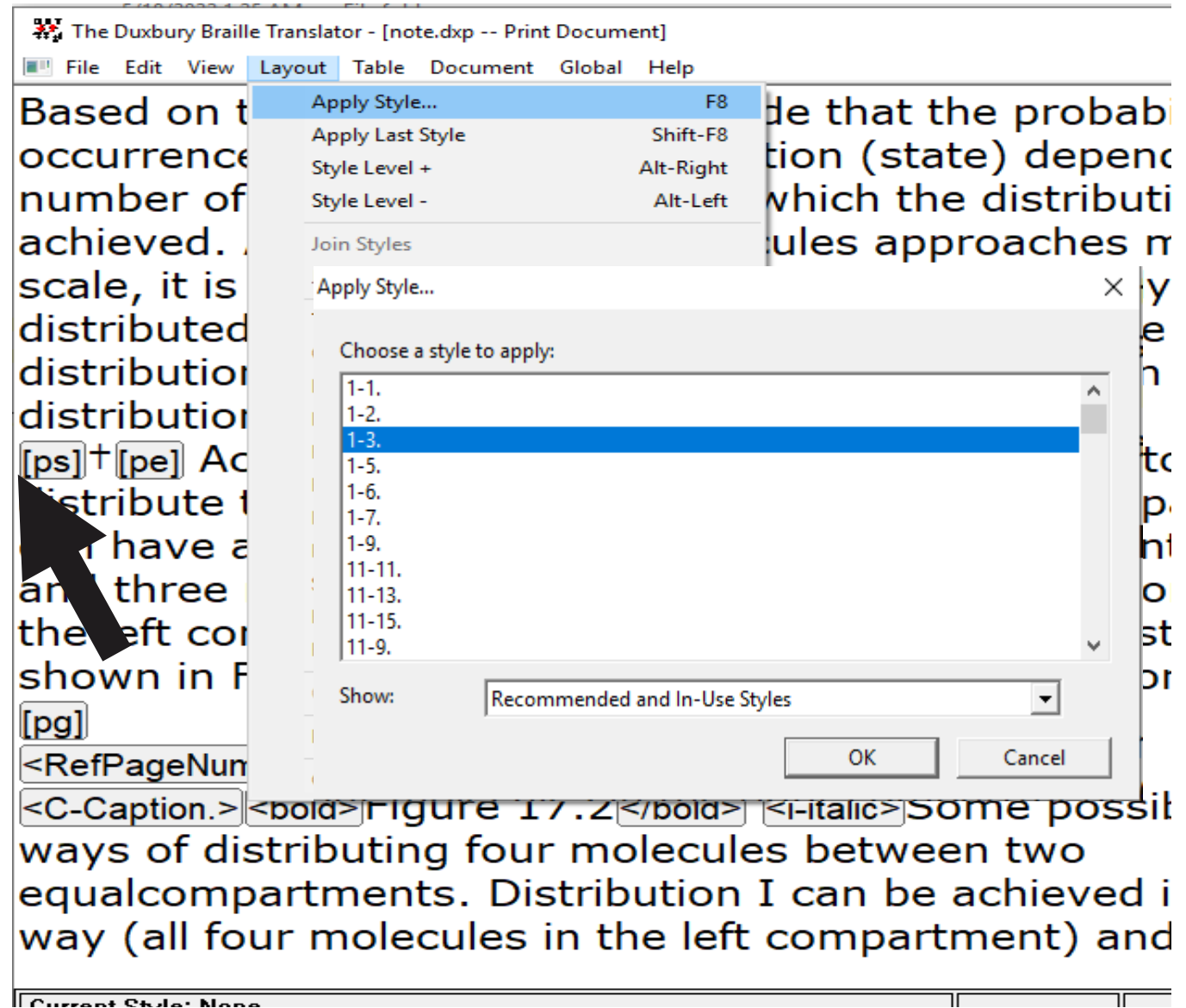


The screenshot shows the 'The Duxbury Braille Translator' window with a document titled '[note.dxp -- Print Document]'. The document contains the following text: 'Based on this analysis, we conclude that the probability of occurrence of a particular distribution (state) depends on the number of ways (microstates) in which the distribution can be achieved. As the number of molecules approaches macroscopic scale, it is not difficult to see that they will be evenly distributed between the two compartments because this distribution has many, many more microstates than all other distributions.' The text is followed by a paragraph: 'Actually there are still other possible ways to distribute the four molecules between the two compartments. We can have all four molecules in the right compartment (one way) and three molecules in the right compartment and one molecule in the left compartment (four ways). However, the distributions shown in Figure 17.2 are sufficient for our discussion.' Braille code annotations are visible: '</B-BodyText.>' at the end of the first paragraph, '<B-BodyText.>[ps]†[pe]' at the start of the second paragraph, and '</B-BodyText.>' at the end of the second paragraph. A black arrow points to the first '</B-BodyText.>' annotation.



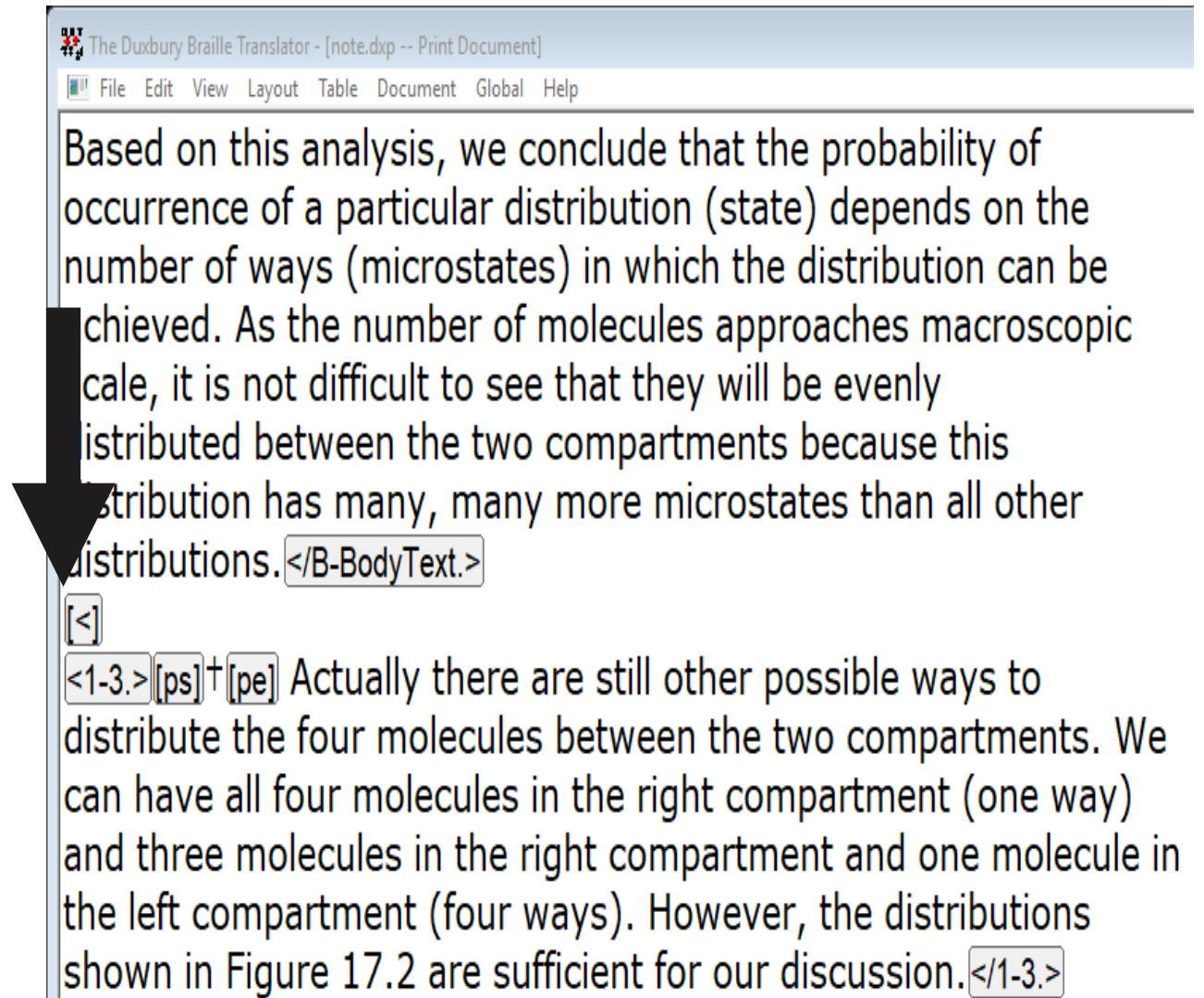
Reformatting Reference Notes (continued)

- Next, with your cursor in front of the dagger, go to Layout, then Apply Styles.
- You'll need to choose the 1-3 format.



Reformatting Reference Notes (cont.)

- Next, place your cursor in front of the 1-3 format code and hit enter on your keyboard. This will create a blank line.
- You'll then need to put your cursor in front of the blank line and click Layout.



The Duxbury Braille Translator - [note.dxp -- Print Document]

File Edit View Layout Table Document Global Help

Based on this analysis, we conclude that the probability of occurrence of a particular distribution (state) depends on the number of ways (microstates) in which the distribution can be achieved. As the number of molecules approaches macroscopic scale, it is not difficult to see that they will be evenly distributed between the two compartments because this distribution has many, many more microstates than all other distributions. </B-BodyText.>

[<]

<1-3.> [ps] † [pe] Actually there are still other possible ways to distribute the four molecules between the two compartments. We can have all four molecules in the right compartment (one way) and three molecules in the right compartment and one molecule in the left compartment (four ways). However, the distributions shown in Figure 17.2 are sufficient for our discussion. </1-3.>

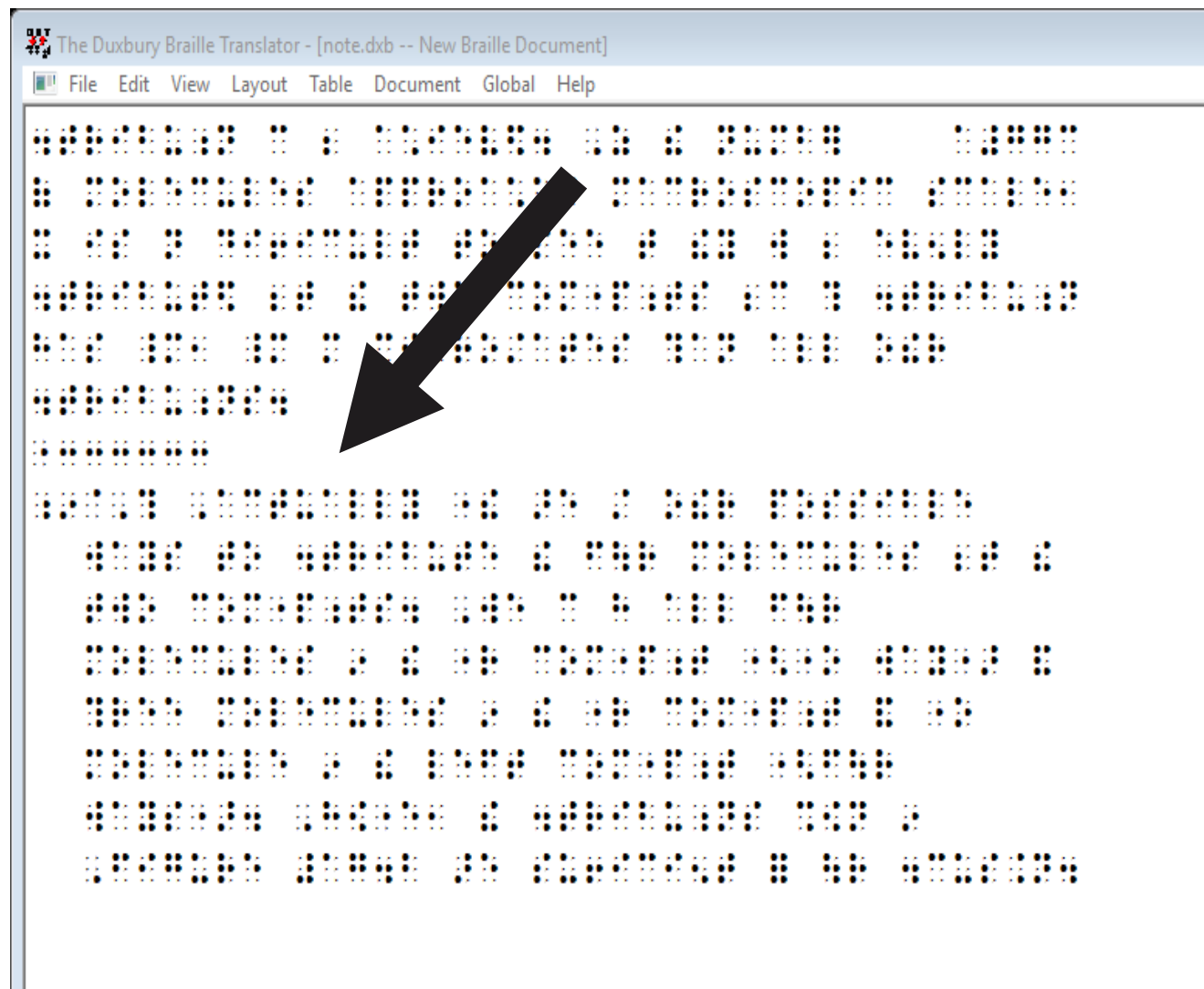
Applying Note Separation Line

- Go to the Apply Styles menu and select the Note Separation Line code.
- This will apply the line before the note.

The screenshot shows the 'The Duxbury Braille Translator' application window. The 'Layout' menu is open, and the 'Apply Style...' option is selected. A dialog box titled 'Apply Style...' is displayed in the foreground, showing a list of styles. The 'NoteSeparationLine.' style is highlighted. Below the list, the 'Show:' dropdown is set to 'Recommended and In-Use Styles'. The background text is partially obscured by the dialog box but includes phrases like 'Based on the occurrence number of achieved', 'de that the pro (state) de which the distr', and 'Some p ways of distributing four molecules between two equal compartments. Distribution I can be achie'.

Applying Note Separation Line (cont.)

- Translate the file to Braille. It should look similar to this example.



Line Number Text/Poetry



Line Numbers in Text

- Some literature textbooks place line numbers at intervals in the text.
- Line numbers in a text are displayed in red.



Tagging for Line Numbers

- (Technically, line numbers are put either inside a LINENUM tag or inside a SPAN tag that has the attribute class="linenum".)



MathML



What is MathML?

- Mathematical Markup Language (MathML) is
 - An application of XML for describing mathematical notation and capturing both its structure and content.
 - It is part of HTML5 and an ISO standard ... since 2015.

Source: Wikipedia



MathML Versions

- Each new version of MathML has adjustments to the elements used to describe mathematical expressions, the attributes allowed for those elements, and the rules for their use.
- MathML 2.0 and 3.0 are both in use today.
- NimPro adheres to MathML 3.0.
- **Downloading MathML as part of your NIMAS file is optional (will be demonstrated on Day 6).**



Types of MathML Markup

- MathML specifies two forms of "mark-up" for two distinct use cases:
 - "Content mark-up" describes mathematical expressions in a manner that allows the math to be evaluated by an automated process.
 - For our purpose (textbooks and related publications), the more important form of MathML is "presentation mark-up," which describes math in a manner that allows it to be laid out on a page.



NimPro and MathML

- NimPro reads MathML and translates the mathematics markup into elements of NimPro's own internal document structure.



NimPro and MathML (cont.)

- NimPro is able to do a reasonable representation on screen of the two-dimensional expressions typical in MathML.
- You can scan the math, traverse its elements with the keyboard arrow keys, and even do touch-up edits if required.



Q & A

