

APPLYING FIRST LINE INDENTS

When you apply a first line indent to a paragraph, only the first line of the paragraph is indented. It is common to apply first line indents to the first paragraph of a new section or chapter in a

document or novel as this indicates the beginning of the section or chapter. First line indents are controlled by the position of the **first line indent** marker on the ruler.

Try This Yourself:

Open File

Before starting this exercise you **MUST** open the file *Formatting_1.docx...*



Click at the beginning of the paragraph after **Introduction**

Ensure the ruler is displayed by clicking on the **View** tab and selecting **Ruler** in the **Show** group. Note the position of the indent markers on the ruler. Currently they align with the left margin...



Press **Tab** to indent the first line

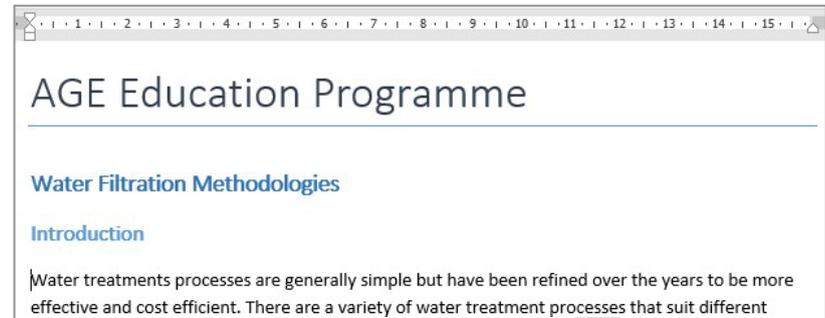
A smart tag will appear because Word has converted your tab to a first line indent, and the smart tag is giving you the option to change it back to a tab. You can click on the smart tag to view and select options. Let's reduce the indent using the first line indent marker on the ruler...



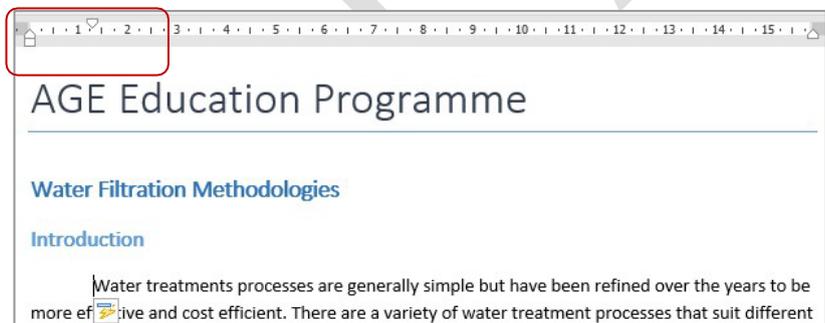
Click on and drag the **first line indent marker** on the ruler to **0.5 cm**, as shown



Release the mouse to position the marker, then save the document



1



2



3

For Your Reference...

To **create** a **first line indent**:

- Click at the beginning of the paragraph and press **Tab**, or
- Click and drag the first line indent marker on the ruler to the required position

Handy to Know...

- You can set a first line indent in the **Paragraph** dialog box. On the **Home** tab, click on the dialog box launcher for the **Paragraph** group. Click on the drop arrow for **Special in Indentation** and select **First line**. Adjust the distance in **By**, then click on **[OK]**.

APPLYING HANGING INDENTS

When you apply a hanging indent to a paragraph all lines in the paragraph will be indented except for the first line, which 'hangs out' from the rest. Hanging indents are typically used for bulleted

and numbered lists. Hanging indents can be applied to a paragraph by dragging the **hanging indent** marker on the ruler or via the **Paragraph** dialog box.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file *Formatting_2.docx...*

1 Scroll down and select the three paragraphs under **Coagulation**

Notice the position of the indent markers on the ruler...

2 Click on the **Home** tab, then click on the dialog box launcher in the **Paragraph** group to display the **Paragraph** dialog box

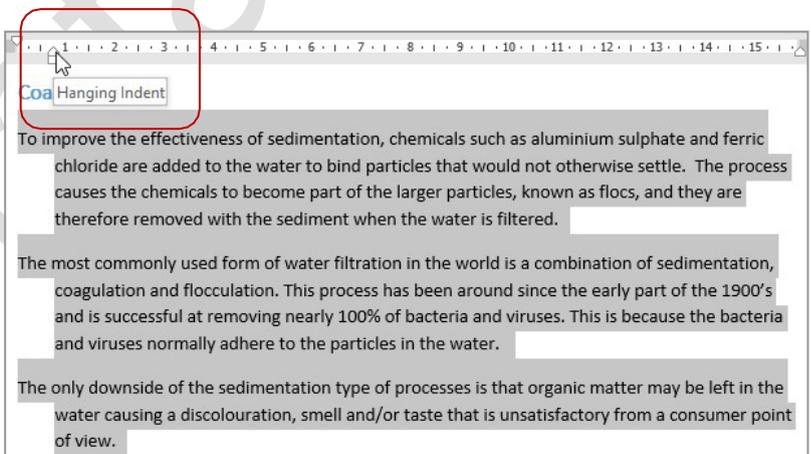
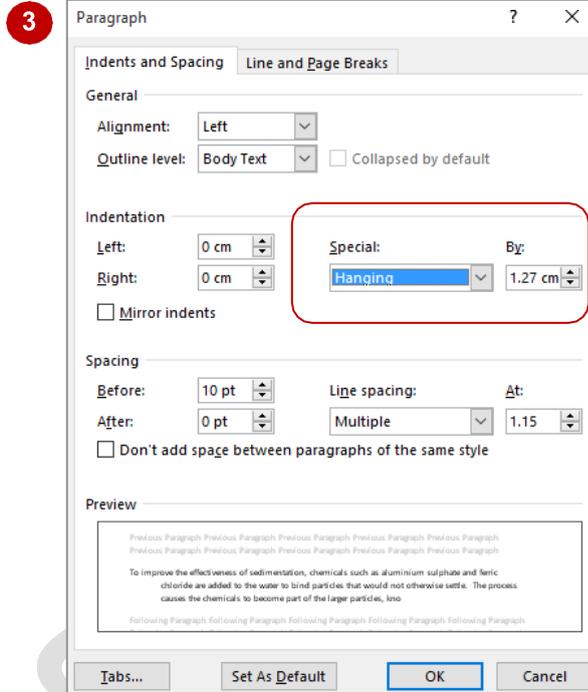
3 Click on the drop arrow for **Special** and select **Hanging**, then click on [OK]

The first line indent marker remains aligned with the left margin and the hanging and left indent marker is indented to the first tab stop at 1.27 cm.

Let's adjust the hanging indent on the ruler...

4 Click and drag the **hanging indent** marker on the ruler slightly to the left as shown

5 Release the mouse button when the hanging indent is set at **0.5 cm**, then click outside the text to see the result



4

For Your Reference...

To **apply** a **hanging indent**:

1. Click in the paragraph
2. Click on the **Home** tab, then click on the dialog box launcher in the **Paragraph** group
3. Click on the drop arrow for **Special** and select **Hanging** then click on [OK]

Handy to Know...

- Position the insertion point in the paragraph, then press **Ctrl** + **T** to apply a hanging indent.

APPLYING RIGHT INDENTS

When you apply a **right indent** to a paragraph, the paragraph is indented from the right margin. You might insert a right indent to make one paragraph stand out from the rest or to make

room to insert objects or pictures. You can apply a right indent by dragging the right indent marker on the ruler or by using the **Paragraph** dialog box.

Try This Yourself:

Same File

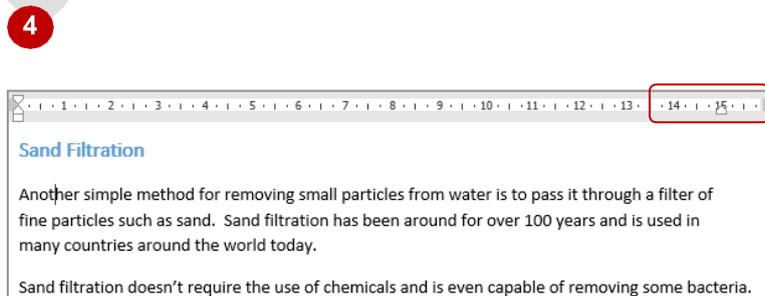
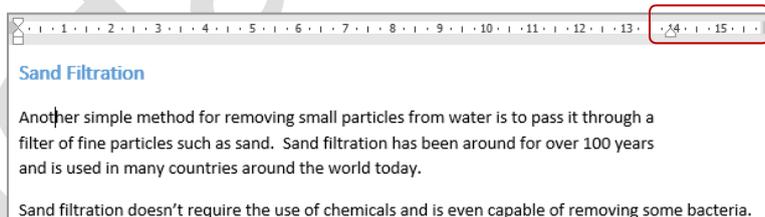
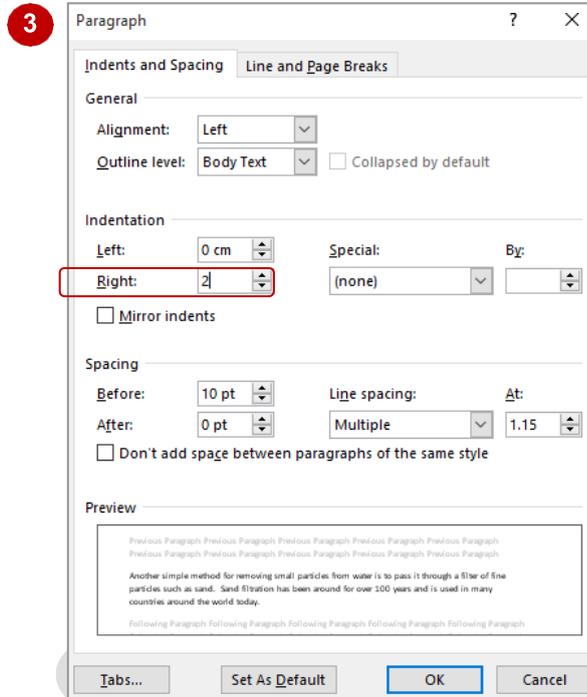
Continue using the previous file with this exercise, or open the file *Formatting_3.docx...*

- 1 Scroll down and click in the first paragraph below the **Sand Filtration** heading
- 2 Click on the **Home** tab, then click on the dialog box launcher for the **Paragraph** group to display the **Paragraph** dialog box
- 3 Select the value for **Right** in **Indentation** and type **2**
- 4 Click on **[OK]** to apply the changes

The paragraph will now be indented 2 cm from the right margin – in line with the right indent marker. You can also adjust the right indent using the mouse...

- 5 Drag the **right indent marker** on the ruler to **15 cm** then release the mouse
- 6 Press **Ctrl** + **Q** to reset the paragraph to its default indentation

The text will adjust to fit...



For Your Reference...

To **apply a right indent**:

1. Click in the paragraph
2. On the **Home** tab click on the dialog box launcher for the **Paragraph** group
3. Enter a value for **Right** in **Indentation**
4. Click on **[OK]**

Handy to Know...

- By applying both a right and left indent to a paragraph, you can make it stand out from the rest of the text, as it creates white space on both sides of the paragraph. If you also apply italics, the paragraph will take on the appearance of a quote or extract.

UNDERSTANDING PAGINATION

Pagination refers to how headings and paragraphs are organised on the page. When you establish the document's paper size and margins, Word will calculate how much text will fit

on a page. Once a page is filled, Word will force the text onto a new page. Word provides several pagination options to control how headings and paragraphs are arranged on a page.

Page Breaks

When text runs over onto the next page, Word inserts a **soft page break**. Soft page breaks cannot be seen in **Print Layout** view but if you want to see them, simply switch to **Draft** view.

You can insert your own page breaks using **Ctrl** + **Enter** at any point in a document and these are known as **hard page breaks**. Hard page breaks force text onto the next page. If you click on **Show/Hide** to display hidden characters, a hard page break appears like this:

Pagination Settings

Sometimes it is necessary to ensure that paragraphs stay together with headings or other paragraphs. For example, you wouldn't want a heading to appear at the bottom of a page and its text to be on the next page. It would be important that the heading and paragraph stay together. Also, having the first or last line of a paragraph split from the rest of the paragraph breaks standard editing conventions. Word has several pagination settings that can be applied to ensure correct paragraph layout. These settings can be found on the **Line and Page Breaks** tab in the **Paragraph** dialog box.

Widow/Orphan Control

A **widow** is the last line of a paragraph that appears on a new page all by itself. An **orphan** is the first line of a paragraph that appears at the bottom of a page all by itself. **Widow/Orphan control**, which is turned on by default, ensures that at least two lines of a paragraph appear on a page. In the case of a widow, the second last line of the paragraph will be moved to the next page to accompany the last line. In the case of an orphan, the first line will be moved to the new page so that it appears with the other lines of the paragraph.

Keep With Next

Sometimes it is important that two paragraphs or a heading and a paragraph appear on the same page. This can be ensured by clicking in the first paragraph or heading and applying **Keep with next**. If the second paragraph is forced onto a new page, either automatically by Word or by you, the first paragraph will also move to the next page. This is a good way of keeping a heading with the text that follows.

Keep Lines Together

You can ensure that all of the lines in a paragraph stay together, rather than being split by a page break, by applying **Keep lines together**.

Page Break Before

If you want a paragraph or heading to start at the top of a new page, you can apply **Page break before**. No matter where the preceding text is placed on a page, this paragraph will always start at the top of a page.

CONTROLLING WIDOWS AND ORPHANS

When the last line of a paragraph appears at the top of a new page it is called a **widow**. When the first line of a paragraph appears at the bottom of a page it is called an **orphan**. You can control

widows and orphans using the **Paragraph** dialog box. **Widow/Orphan control** is turned on by default, but here we will deactivate it to see what happens.

Try This Yourself:

Same
File

Continue using the previous file with this exercise, or open the file *Formatting_4.docx...*

1 Scroll down to and click in the paragraph spanning the bottom of page **1** and the top of page **2**

Notice the last two lines appear together at the top of the second page...

2 Click on the **Home** tab, then click on the dialog box launcher for the **Paragraph** group to display the **Paragraph** dialog box

3 Click on the **Line and Page Breaks** tab

Notice the **Widow/Orphan control** check box is ticked...

4 Click on **Widow/Orphan control** to remove the tick

5 Click on **[OK]**

The control will be removed and the third line of the paragraph will move to the previous page, leaving a widow on the next...

6 Click on **Undo** in the **Quick Access Toolbar** to restore the widow/orphan control

The introduction of high pressure water filters and back-flushing systems has greatly improved the results achieved by this filtration method. Even better effectiveness has been achieved by combining

coagulation and sand filtration systems. Coagulation enables the larger particles to be removed before the sand filter removes the remaining particles and bacteria.

Membrane Filtration

1

The introduction of high pressure water filters and back-flushing systems has greatly improved the results achieved by this filtration method. Even better effectiveness has been achieved by combining coagulation and sand filtration systems. Coagulation enables the larger particles to be removed

before the sand filter removes the remaining particles and bacteria.

Membrane Filtration

5

For Your Reference...

To **control widows** and **orphans**:

1. Click in the paragraph
2. On the **Home** tab, click on the dialog box launcher for the **Paragraph** group
3. Click on the **Line and Page Breaks** tab
4. Click on **Widow/Orphan control**, then click on **[OK]**

Handy to Know...

- **Widow/Orphan control** is either on or off. When it's on, the point at which a paragraph is split across pages will be adjusted if necessary to avoid widows and orphans. When it's off, paragraphs will be split across pages depending on how much of the paragraph can fit on a page.

KEEPING PARAGRAPHS TOGETHER

The **Keep with next** setting is used to keep related headings and paragraphs together by preventing page breaks being inserted between them. For instance **Keep with next** can be used

to prevent text from being separated from its heading and to keep all the items in a bulleted list on the same page.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file *Formatting_5.docx...*

1 Click at the start of the paragraph that begins **Sand filtration doesn't...** (near the bottom of page 1)

We'll link these two paragraphs so they both appear on the same page...

2 On the **Home** tab, click on the dialog box launcher for the **Paragraph** group to display the **Paragraph** dialog box

3 On the **Line and Page Breaks** tab, click on **Keep with next** until it appears with a tick, then click on **[OK]**

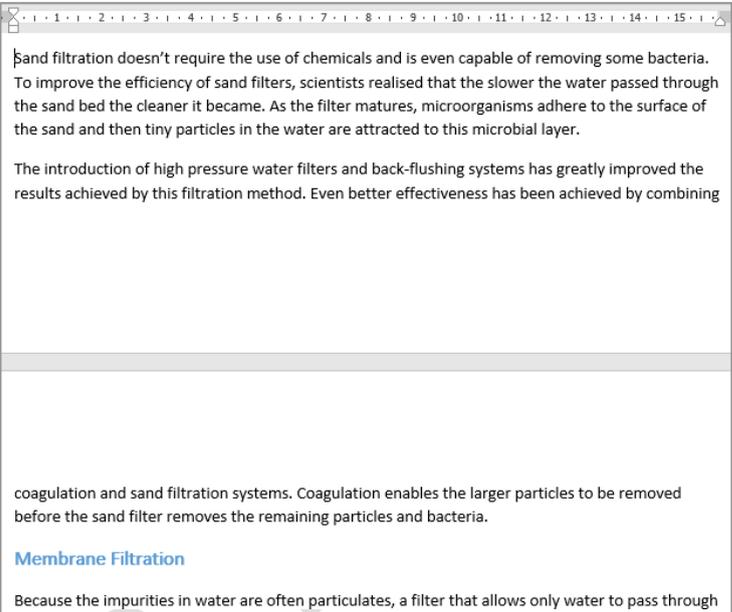
Nothing will happen until Word tries to put a page break between the paragraphs...

4 Press **[Enter]** four times to move the paragraph down towards the end of the page

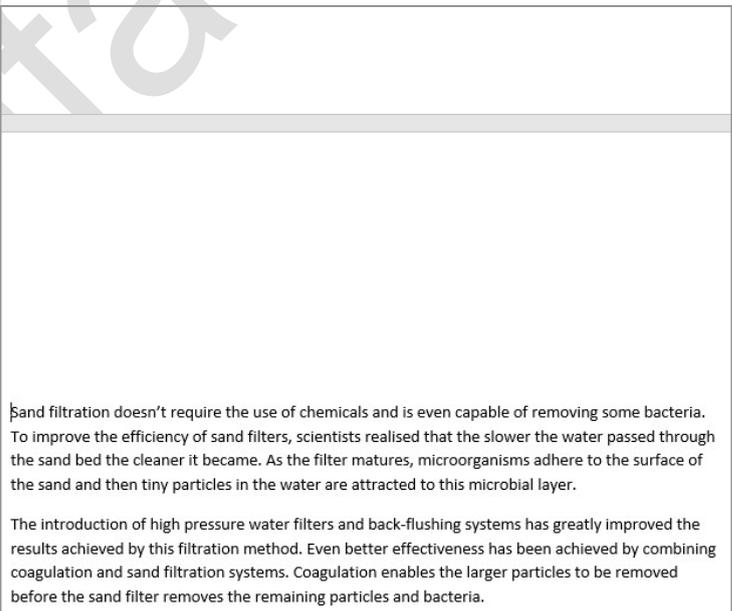
The entire paragraph will shift to the next page with the following one...

5 Click on **Undo** twice to restore the default pagination settings

1



4



For Your Reference...

To **keep paragraphs together**:

1. Click in the paragraph
2. On the **Home** tab click on the dialog box launcher for the **Paragraph** group
3. Click on the **Line and Page Breaks** tab
4. Click on **Keep with next**, then click on **[OK]**

Handy to Know...

- **Keep with next** is a bit like grouping paragraphs. Where one goes, the other follows. Note that **Keep with next** will not prevent the second paragraph from being split by a page break. It just ensures the second paragraph **starts** on the page on which the first one appears.

KEEPING LINES TOGETHER

To ensure that a paragraph is not split across two pages you can apply the **Keep lines together** setting. You may need to do this to ensure complete paragraphs sit on a page. The **Keep**

lines together setting is applied using the **Paragraph** dialog box.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file *Formatting_6.docx...*

- 1 Click in the paragraph at the bottom of page 1
- 2 On the **Home** tab, click on the dialog box launcher for the **Paragraph** group to display the **Paragraph** dialog box
- 3 On the **Line and Page Breaks** tab, click on **Keep lines together** so it appears with a tick
- 4 Click on [OK]
The paragraph will be moved to the second page so the lines are kept together...
- 5 Click on **Undo** to restore the default pagination settings

Sand filtration doesn't require the use of chemicals and is even capable of removing some bacteria. To improve the efficiency of sand filters, scientists realised that the slower the water passed through the sand bed the cleaner it became. As the filter matures, microorganisms adhere to the surface of the sand and then tiny particles in the water are attracted to this microbial layer.

The introduction of high pressure water filters and back-flushing systems has greatly improved the results achieved by this filtration method. Even better effectiveness has been achieved by combining

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Membrane Filtration

3

For Your Reference...

To **keep lines together**:

1. Click on the **Home** tab, click in the paragraph, then click on the dialog box launcher for the **Paragraph** group
2. Click on the **Line and Page Breaks** tab
3. Click on **Keep lines together**, then click on [OK]

Handy to Know...

- **Keep lines together** does not work if the paragraph appears in a table that is split across a page. Use **Keep with next** instead.

INSERTING A PAGE BREAK

When you apply the **Page break before** setting to a paragraph, the paragraph is forced to start on the next page. This is ideal when starting new sections or chapters and also for paragraphs,

images and the like that need to appear on a new page. The **Page break before** setting is applied via the **Paragraph** dialog box.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file *Formatting_7.docx...*

- 1 Click in the **Sand Filtration** heading
- 2 Click on the **Home** tab, then click on the dialog box launcher for the **Paragraph** group to display the **Paragraph** dialog box
- 3 On the **Line and Page Breaks** tab, click on **Page break before** until it appears with a tick
Notice that Keep with next and Keep lines together are selected by default for this heading style...
- 4 Click on **[OK]**
The heading and the following paragraphs will be forced onto the second page

1

The only downside of the sedimentation type of processes is that organic matter may be left in the water causing a discolouration, smell and/or taste that is unsatisfactory from a consumer point of view.

Sand Filtration

Another simple method for removing small particles from water is to pass it through a filter of fine particles such as sand. Sand filtration has been around for over 100 years and is used in many countries around the world today.

4

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For Your Reference...

To **insert a page break before a paragraph**:

1. Click in the paragraph
2. On the **Home** tab click on the dialog box launcher for the **Paragraph** group
3. Click on the **Line and Page Breaks** tab
4. Click on **Page break before** then click on **[OK]**

Handy to Know...

- One of the best things you can do with pagination settings such as **Page break before** and **Keep with next** is to incorporate them into styles so they are automatically applied with formatting.

APPLYING HYPHENATION TO TEXT

Hyphenation is used to break a word across two lines when it is too long to fit on the first line, by inserting a hyphen between the first and second half of the word. Hyphenation is turned off by

default, so text will wrap to the next line. But you may prefer to hyphenate words to make good use of available space, especially in narrow layouts such as columns.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file *Formatting_8.docx...*

- 1 Click on the **Layout** tab, then click on **Hyphenation** in the **Page Setup** group to display a list of options

Notice that it is currently set to *None*...

- 2 Select **Automatic**, then scan down the right-hand edge of the document and see how many words are hyphenated

There should be several.

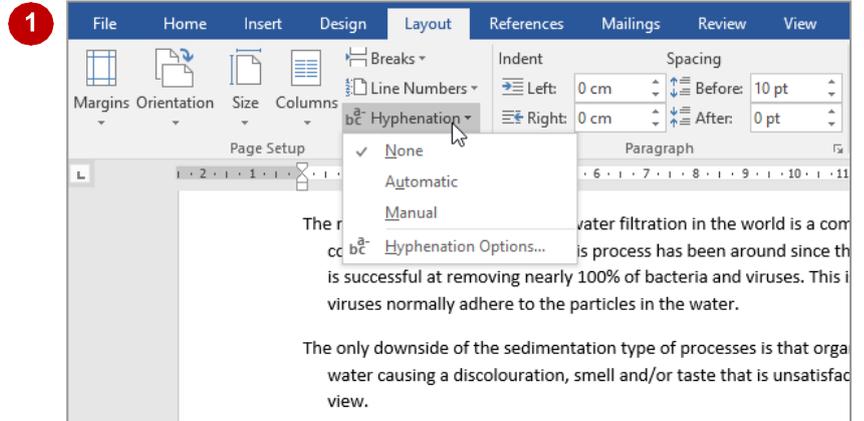
Manual hyphenation lets you decide which words you want hyphenated...

- 3 Repeat step 1 and 2 and select **None** in **Hyphenation** to turn it off again

Let's manually hyphenate the document...

- 4 Repeat steps 1 and 2 and select **Manual**

- 5 Click on **[Yes]** to step through the words and apply manual hyphens, then click on **[OK]**

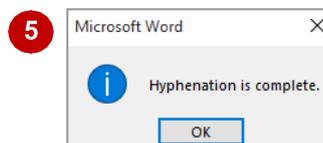
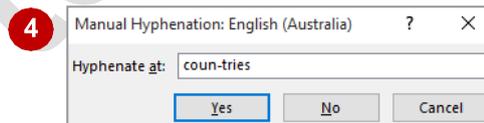


2 Sand Filtration

Another simple method for removing small particles from water is to pass it through a filter of fine particles such as sand. Sand filtration has been around for over 100 years and is used in many countries around the world today.

Sand filtration doesn't require the use of chemicals and is even capable of removing some bacteria. To improve the efficiency of sand filters, scientists realised that the slower the water passed through the sand bed the cleaner it became. As the filter matures, microorganisms adhere to the surface of the sand and then tiny particles in the water are attracted to this microbial layer.

The introduction of high pressure water filters and back-flushing systems has greatly improved the results achieved by this filtration method. Even better effectiveness has been achieved by combining coagulation and sand filtration systems. Coagulation enables the larger particles to be removed before the sand filter removes the remaining particles and bacteria.



For Your Reference...

To **apply hyphenation** to *text*:

1. Click on **Hyphenation**
2. Select **Automatic** or **Manual**

To **remove automatic hyphenation**:

- Click on **Hyphenation** and select **None**

Handy to Know...

- Manual hyphens can only be removed manually.
- You can change the hyphenation settings by clicking on **Hyphenation** and selecting **Hyphenation Options**.

HIDING TEXT

You can hide text in a document. This might be useful during the editing stage when you have additional information you may or may not want to use later, or if you need to distribute different

versions of a document. The only downside is that hidden text is not protected in any way unless you apply a password.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file *Formatting_9.docx*...

- 1 Select the **Sedimentation** heading
- 2 Click on the **Home** tab, then click on the dialog box launcher for the **Font** group to display the **Font** dialog box
- 3 Click on **Hidden** in **Effects**, until it appears with a tick, then click on **[OK]**
The text is now hidden. Let's redisplay it...
- 4 Press **Ctrl** + **A** to select all text
If you're not sure where the hidden text is, simply unhide all text within the document...
- 5 Click on the dialog box launcher for the **Font** group to display the **Font** dialog box
- 6 Click on **Hidden** in **Effects** twice – first to display the tick then to remove it – then click on **[OK]**
The text will reappear

Sedimentation

Sedimentation refers to the settling of solids in water so that they can be removed. This is a natural process that happens in lakes and slow moving rivers.

Coagulation

To improve the effectiveness of sedimentation, chemicals such as aluminium sulphate and ferric chloride are added to the water to bind particles that would not otherwise settle. The process causes the chemicals to become part of the larger particles, known as **flocs**, and they are therefore removed with the sediment when the water is filtered.

1

ditions, so it's important to understand the differences so that the right process can be selected for any given situation.

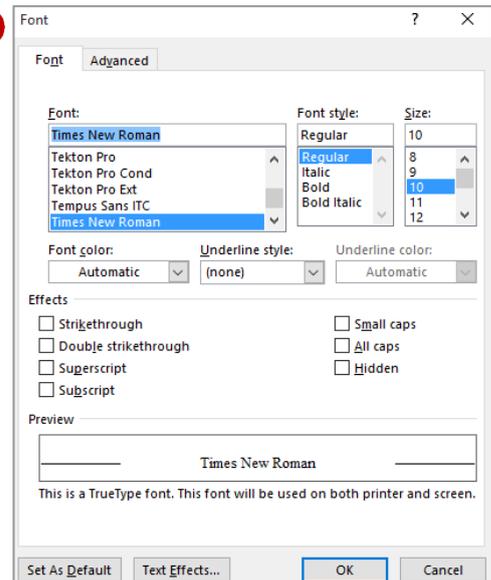
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3

5



For Your Reference...

To **hide text**:

1. Select the text, then on the **Home** tab click on the dialog box launcher for the **Font** group
2. Under **Effects** click on **Hidden** until it appears with a tick
3. Click on **[OK]**

Handy to Know...

- One way to tell if there is hidden text in a document is to select the entire document (**Ctrl** + **A**) and check the **Font** dialog box to see if the checkbox for **Hidden** is filled. The dot in the checkbox, rather than a tick, indicates part of the document is hidden.

INSERTING A DROP CAP

A **drop cap** is the first letter of a paragraph that is larger than the rest of the text, and is typically used to indicate the beginning of an article or chapter. **Drop** means the letter drops down over

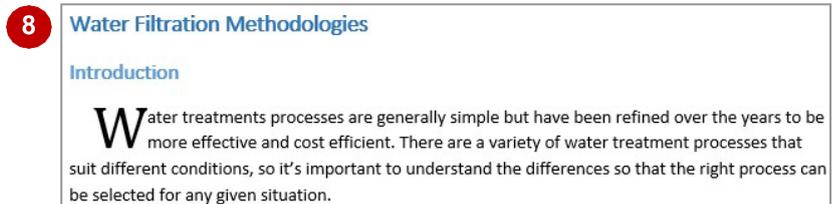
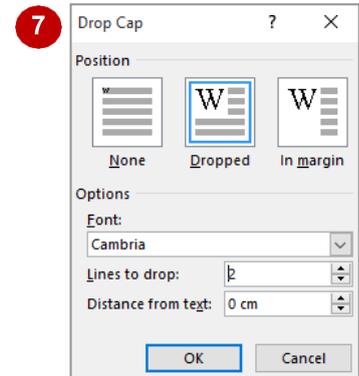
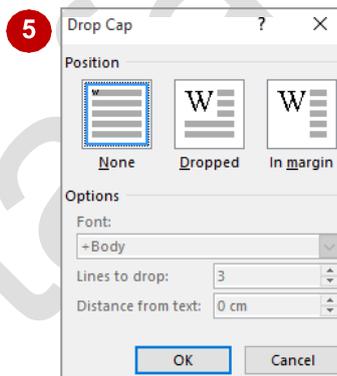
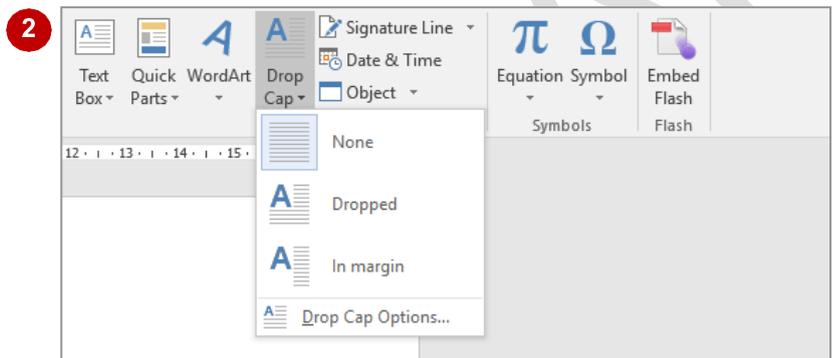
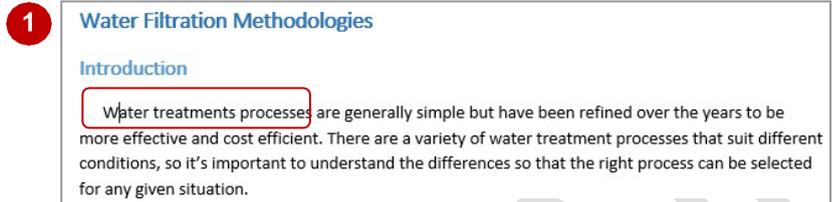
several lines of the paragraph. **Cap** means the letter is in uppercase. As a drop cap is somewhat larger than the rest of the text, it helps the reader to navigate a document or book.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file *Formatting_10.docx...*

- 1 Click in the paragraph below the **Introduction** heading
It doesn't matter where you click – the drop cap will only be applied to the first letter in the paragraph...
- 2 Click on the **Insert** tab, then click on **Drop Cap** in the **Text** group to display the options
- 3 Point to **Dropped** to see the drop cap in Live Preview
- 4 Point to **In margin** to see this option in Live Preview
- 5 Select **Drop Cap Options** to display the **Drop Cap** dialog box
- 6 Click on **Dropped**, then click on the drop arrow for **Font**, and select **Cambria**
- 7 Click on the down spinner arrow for **Lines to drop** until it reads **2**, then click on [OK]
- 8 Click away from the drop cap to deselect it



For Your Reference...

To **insert** a **drop cap**:

1. Click in the paragraph
2. Click on the **Insert** tab, then click on **Drop Cap**
3. Click on the option of your choice or select **Drop Cap Options**

Handy to Know...

- You can modify a drop cap by clicking on it, selecting the text and making changes such as font or font size. You can also drag it to different positions.
- You can remove a drop cap by clicking in the paragraph, then clicking on **Drop Cap** and selecting **None**.

UNDERSTANDING RETURNS

A **return** is a hidden character that forces the text onto the next line. This terminology comes from the old typewriter days when you would want the typewriter head to 'return' to the left-hand side of

the paper. In word processing packages, returns are a little more sophisticated because they are created automatically as you type. This page discusses the use of returns in word processing.

Word Wrap and Automatic Soft Returns

Word processing packages are designed to place words on a page. They include margins and indent markers that control where the text is placed. When you add text that doesn't fit on a line, the word processing package automatically moves the text to the start of the next line. This is known as **word wrap**.

Word wrap is made possible because the computer inserts a hidden character to indicate the text should start on a new line. This is known as a **soft return**. It is not visible in Word, even if you display the paragraph markers. Part of the reason they are called soft returns is because they are flexible and adjust as the text is modified. If text is deleted and more words can fit on the line, the soft return is repositioned automatically to allow for an adjustment of the word wrapping. If additional text is added to a line, the soft return is also repositioned to push any text that doesn't fit to the next line and so on through the paragraph.

A paragraph wrapped using soft returns, when displayed using **Show/Hide**, will appear as shown below. The **paragraph marker** indicates the end of the paragraph.

Coagulation ¶

To improve the effectiveness of sedimentation, chemicals such as aluminium, sulphate and ferric chloride are added to the water to bind particles that would not otherwise settle. The process causes the chemicals to become part of the larger particles, known as flocs and they are therefore removed with the sediment when the water is filtered. ¶

Hard Returns and Manual Soft Returns

There are times, however, when you want text to appear on the next line and don't want to use word wrap. You can do this using either a **manual soft return** or a **hard return**. A **manual soft return** (Shift + Enter) forces text onto a new line without starting a paragraph and uses the current line spacing settings, while a **hard return** (Enter) creates a new paragraph and applies the spacing between paragraphs that applies according to the style.

When you press Enter to create a hard return, a paragraph marker is inserted at the end of the paragraph. This portion of text – the paragraph, can be formatted independently of other paragraphs.

When you press Shift + Enter to create a soft return, a soft return marker is inserted at the end of the line and the text is forced onto the next line. However, both lines are part of the same paragraph and therefore, any paragraph formatting that is applied to either line will affect both. A soft return is also sometimes referred to as a **line feed**.

A paragraph including a **manual soft return**, when displayed using **Show/Hide** will appear as shown below. The paragraph marker indicates the end of the paragraph and the position of the **hard return**.

Coagulation ¶

To improve the effectiveness of sedimentation, chemicals such as aluminium, sulphate and ferric chloride are added to the water to bind particles that would not otherwise settle. ¶
The process causes the chemicals to become part of the larger particles, known as flocs and they are therefore removed with the sediment when the water is filtered. ¶

INSERTING HARD AND SOFT RETURNS

Returns are used in documents to force text to appear on the next line. **Hard returns** create a new paragraph while manual **soft returns** just place the text on a new line within the same

paragraph. How you use returns in a document will depend entirely on the layout that you want to create. Manual soft returns are particularly useful in lists when you don't want a new bullet or number.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file *Formatting_11.docx...*

1 Scroll down to page **2** until you can see the bulleted list

2 Click at the end of the second bullet point on **Ultrafiltration**

3 On the **Home** tab, click on **Show/Hide** in the **Paragraph** group to display the paragraph marks and other symbols

Each item in the list is a separate paragraph. The dot between each word indicates a space...

4 Press **Enter** to insert a hard return (paragraph marker) and create a new bullet point

5 Type **Reverse Osmosis**

6 Press **Shift** + **Enter** to insert a manual soft return

This time there is no new bullet – just the manual soft return marker and a continuation of the paragraph formatting...

7 Type **Great for desalination**

8 Repeat step **3** to hide the formatting symbols

2

Membrane Filtration

Because the impurities in water are often particulates, a filter that allows only water to pass through is ideal. This is concept behind membrane filtration, where the size of the holes that the water passes through, known as pores, can be controlled to allow or block particles. These filters are made from various forms of plastic, creating very accurate pore sizes.

The size of the pore is reflected in the terminology used to describe various water filtration processes. These include:

- Microfiltration (0.1 microns) which removes bacteria
- Ultrafiltration (0.01 microns) which removes viruses
- Nanofiltration (0.001 microns) which removes liquid organic matter and some minerals

The only problems with membrane filtration are that the membranes can become blocked easily, they are more expensive than other filtration systems, and liquid organic matter can still pass through with the water, unless you use expensive nanofiltration, causing colour, odour or flavour problems.

4

Membrane-Filtration¶

Because-the-impurities-in-water-are-often-particulates,-a-filter-that-allows-only-water-to-pass-through-is-ideal.-This-is-concept-behind-membrane-filtration,-where-the-size-of-the-holes-that-the-water-passes-through,-known-as-pores,-can-be-controlled-to-allow-or-block-particles.-These-filters-are-made-from-various-forms-of-plastic,-creating-very-accurate-pore-sizes.¶

The-size-of-the-pore-is-reflected-in-the-terminology-used-to-describe-various-water-filtration-processes.-These-include:¶

- → Microfiltration-(0.1-microns)-which-removes-bacteria¶
- → Ultrafiltration-(0.01-microns)-which-removes-viruses¶
- → ¶
- → Nanofiltration-(0.001-microns)-which-removes-liquid-organic-matter-and-some-minerals¶

The-only-problems-with-membrane-filtration-are-that-the-membranes-can-become-blocked-easily,-they-are-more-expensive-than-other-filtration-systems,-and-liquid-organic-matter-can-still-pass-through-with-the-water,-unless-you-use-expensive-nanofiltration,-causing-colour,-odour-or-flavour-

6

Membrane-Filtration-¶

Because-the-impurities-in-water-are-often-particulates,-a-filter-that-allows-only-water-to-pass-through-is-ideal.-This-is-concept-behind-membrane-filtration,-where-the-size-of-the-holes-that-the-water-passes-through,-known-as-pores,-can-be-controlled-to-allow-or-block-particles.-These-filters-are-made-from-various-forms-of-plastic,-creating-very-accurate-pore-sizes.¶

The-size-of-the-pore-is-reflected-in-the-terminology-used-to-describe-various-water-filtration-processes.-These-include:¶

- → Microfiltration-(0.1-microns)-which-removes-bacteria¶
- → Ultrafiltration-(0.01-microns)-which-removes-viruses¶
- → Reverse-Osmosis-¶
- → ¶
- → Nanofiltration-(0.001-microns)-which-removes-liquid-organic-matter-and-some-minerals¶

The-only-problems-with-membrane-filtration-are-that-the-membranes-can-become-blocked-easily,-they-are-more-expensive-than-other-filtration-systems,-and-liquid-organic-matter-can-still-pass-

For Your Reference...

To **insert a hard return**:

- Press **Enter**

To **insert a soft return**:

- Press **Shift** + **Enter**

Handy to Know...

- Manual soft returns can be used to override the default spacing between paragraphs. For example, if you want to type an address and have the lines of the address close together, press **Shift** + **Enter** between the lines instead of pressing **Enter**.

REMOVING RETURNS

Removing unwanted and extra hard and soft returns in a document is a common editing task. The trick is to be careful about where you place the cursor before you press **Del**. As returns are

considered characters, albeit usually hidden, you can use the same commands to delete them as you use to delete any other characters.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file *Formatting_12.docx...*

1

On the **Home** tab, click on **Show/Hide** in the **Paragraph** group to display the formatting marks

2

Click at the end of the bullet point **Reverse Osmosis** on page 2

You'll find that you can't click after the manual soft return marker; the insertion point appears in front of it...

3

Press **Del** to delete the manual soft return, then type : (colon) and press **Space** to separate the words

4

Click at the beginning of the paragraph immediately above the bulleted list

5

Press **Back Space** to delete the hard return at the end of the previous paragraph

The sentence 'The size of the pore...' now becomes part of the previous paragraph...

6

Click on **Show/Hide** to hide the formatting marks, then save the document

2

Membrane-Filtration¶

Because-the-impurities-in-water-are-often-particulates,-a-filter-that-allows-only-water-to-pass-through-is-ideal.-This-is-concept-behind-membrane-filtration,-where-the-size-of-the-holes-that-the-water-passes-through,-known-as-pores,-can-be-controlled-to-allow-or-block-particles.-These-filters-are-made-from-various-forms-of-plastic,-creating-very-accurate-pore-sizes.¶

The-size-of-the-pore-is-reflected-in-the-terminology-used-to-describe-various-water-filtration-processes.-These-include:¶

- Microfiltration-(0.1-microns)-which-removes-bacteria¶
- Ultrafiltration-(0.01-microns)-which-removes-viruses¶
- Reverse-Osmosis-¶
Great-for-desalination¶
- Nanofiltration-(0.001-microns)-which-removes-liquid-organic-matter-and-some-minerals¶

The-only-problems-with-membrane-filtration-are-that-the-membranes-can-become-blocked-easily,-they-are-more-expensive-than-other-filtration-systems,-and-liquid-organic-matter-can-still-pass-

3

Membrane-Filtration¶

Because-the-impurities-in-water-are-often-particulates,-a-filter-that-allows-only-water-to-pass-through-is-ideal.-This-is-concept-behind-membrane-filtration,-where-the-size-of-the-holes-that-the-water-passes-through,-known-as-pores,-can-be-controlled-to-allow-or-block-particles.-These-filters-are-made-from-various-forms-of-plastic,-creating-very-accurate-pore-sizes.¶

The-size-of-the-pore-is-reflected-in-the-terminology-used-to-describe-various-water-filtration-processes.-These-include:¶

- Microfiltration-(0.1-microns)-which-removes-bacteria¶
- Ultrafiltration-(0.01-microns)-which-removes-viruses¶
- Reverse-Osmosis-Great-for-desalination¶
- Nanofiltration-(0.001-microns)-which-removes-liquid-organic-matter-and-some-minerals¶

The-only-problems-with-membrane-filtration-are-that-the-membranes-can-become-blocked-easily,-they-are-more-expensive-than-other-filtration-systems,-and-liquid-organic-matter-can-still-pass-through-with-the-water,-unless-you-use-expensive-nanofiltration,-causing-colour,-odour-or-flavour-

5

Membrane-Filtration¶

Because-the-impurities-in-water-are-often-particulates,-a-filter-that-allows-only-water-to-pass-through-is-ideal.-This-is-concept-behind-membrane-filtration,-where-the-size-of-the-holes-that-the-water-passes-through,-known-as-pores,-can-be-controlled-to-allow-or-block-particles.-These-filters-are-made-from-various-forms-of-plastic,-creating-very-accurate-pore-sizes.-The-size-of-the-pore-is-reflected-in-the-terminology-used-to-describe-various-water-filtration-processes.-These-include:¶

- Microfiltration-(0.1-microns)-which-removes-bacteria¶
- Ultrafiltration-(0.01-microns)-which-removes-viruses¶
- Reverse-Osmosis-Great-for-desalination¶
- Nanofiltration-(0.001-microns)-which-removes-liquid-organic-matter-and-some-minerals¶

The-only-problems-with-membrane-filtration-are-that-the-membranes-can-become-blocked-easily,-they-are-more-expensive-than-other-filtration-systems,-and-liquid-organic-matter-can-still-pass-through-with-the-water,-unless-you-use-expensive-nanofiltration,-causing-colour,-odour-or-flavour-problems.¶

For Your Reference...

To **remove hard** or **soft returns**:

- Click in front of the return and press **Del**, or
Click at the beginning of the next line and press **Back Space**

Handy to Know...

- Removing returns is easier if you can see what you're doing – which is why we used **Show/Hide** in the **Paragraph** group. If things don't go as expected, look for extra spaces or other hidden characters that may be causing problems. Don't forget that you can always click on **Undo** if you get stuck.

REVEALING FORMATTING

The **Reveal Formatting** pane displays all of the formatting applied to selected text, such as font and paragraph formatting. You can click on the hyperlink for a particular format in the **Reveal**

Formatting pane to display the relevant dialog box and make changes to the formatting as required.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file *Formatting_13.docx*...

1 In the first paragraph beneath the **Coagulation** heading, click in the word **Sedimentation** in the first line

2 Press **Shift** + **F1** to display the **Reveal Formatting** pane on the right side of the Word window

The formatting that is applied to 'sedimentation' will be detailed in the task pane...

3 Double-click on **aluminium** (four words along) to select it, then click on **Italic** in the mini toolbar to change the format

The task pane will show that *italic* is applied to the font...

4 Click on **SPACING** in the **Reveal Formatting** pane to display the **Paragraph** dialog box

Here you can make further changes to the formatting for selected text...

5 Click on **[Cancel]**

6 Click on **Close** to close the **Reveal Formatting** pane

Coagulation

To improve the effectiveness of sedimentation, chemicals such as aluminium sulphate and ferric chloride are added to the water to bind particles that would not otherwise settle. The process causes the chemicals to become part of the larger particles, known as flocs, and they are therefore removed with the sediment when the water is filtered.

The most commonly used form of water filtration in the world is a combination of sedimentation, coagulation and flocculation. This process has been around since the early part of the 1900's and is successful at removing nearly 100% of bacteria and viruses. This is because the bacteria and viruses normally adhere to the particles in the water.

The only downside of the sedimentation type of processes is that organic matter may be left in the water causing a discolouration, smell and/or taste that is unsatisfactory from a consumer point of view.

1

The screenshot shows the 'Reveal Formatting' pane for the word 'sedimentation'. The 'Selected text' field contains 'sedimentation'. Below it, the 'Formatting of selected text' section is expanded to show 'Font' settings: (Default) +Body (Calibri), 11 pt, and English (Australia). The 'Paragraph' section is also expanded, showing 'ALIGNMENT' (Left), 'INDENTATION' (Left: 0 cm, Hanging: 0.5 cm, Right: 0 cm), and 'SPACING' (Before: 10 pt, After: 0 pt, Line spacing: Multiple 1.15 li). At the bottom, there are 'Options' for 'Distinguish style source' and 'Show all formatting marks'.

2

The screenshot shows the 'Reveal Formatting' pane for the word 'aluminium'. The 'Selected text' field contains 'aluminium'. The 'Formatting of selected text' section is expanded to show 'Font' settings: (Default) +Body (Calibri), 11 pt, and English (Australia). The 'Paragraph' section is also expanded, showing 'ALIGNMENT' (Left), 'INDENTATION' (Left: 0 cm, Hanging: 0.5 cm, Right: 0 cm), and 'SPACING' (Before: 10 pt, After: 0 pt, Line spacing: Multiple 1.15 li). At the bottom, there are 'Options' for 'Distinguish style source' and 'Show all formatting marks'.

3

For Your Reference...

To **display** the **formatting applied** to **selected text**:

1. Click in the text
2. Press **Shift** + **F1**

Handy to Know...

- Click on **Distinguish style source** at the bottom of the **Reveal Formatting** task pane to view the styles applied to the text or paragraph.
- The **Show all formatting marks** option at the bottom of the **Reveal Formatting** task pane is the same as **Show/Hide**.