

An tSraith Shóisearach do Mhúinteoirí

Junior **CYCLE**
for teachers

*Digital Learning in
the Mathematics
Classroom*

*Mathematics
Symposium*

2019



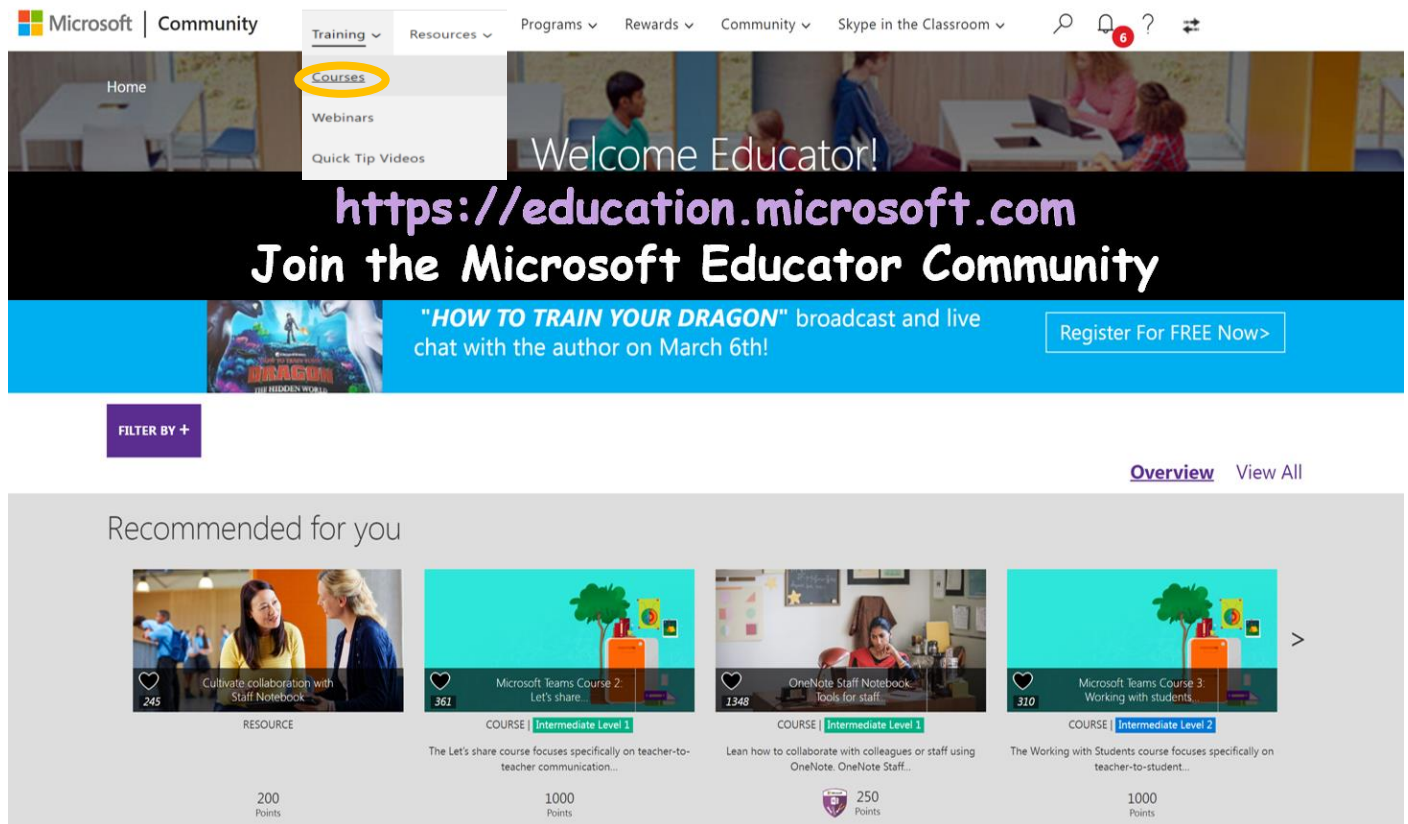
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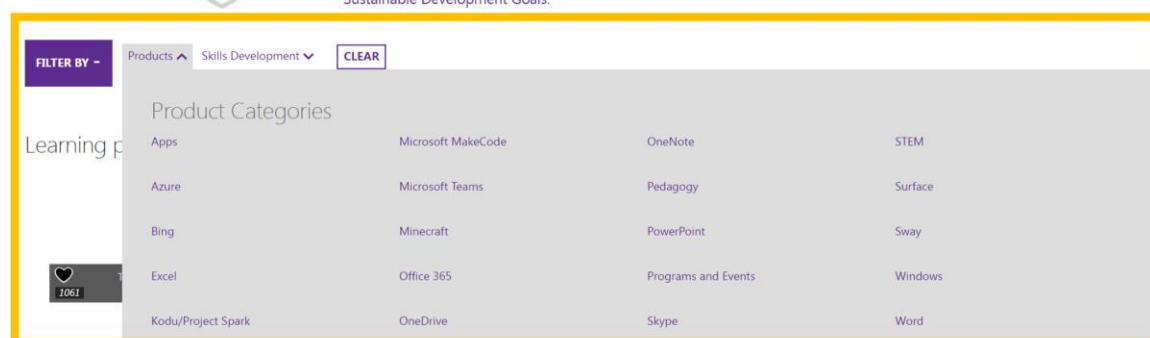
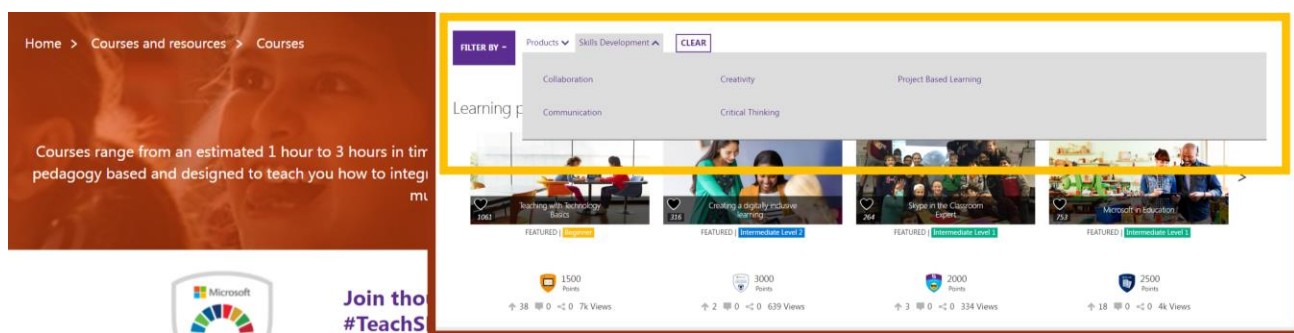
Access Courses and Resources from the Microsoft Educator Community

The [Microsoft Educator Community](https://education.microsoft.com) is one of the world's largest educator social networks. Connect and collaborate, find training and lessons, and earn badges and certificates on this personalised hub created for educators.

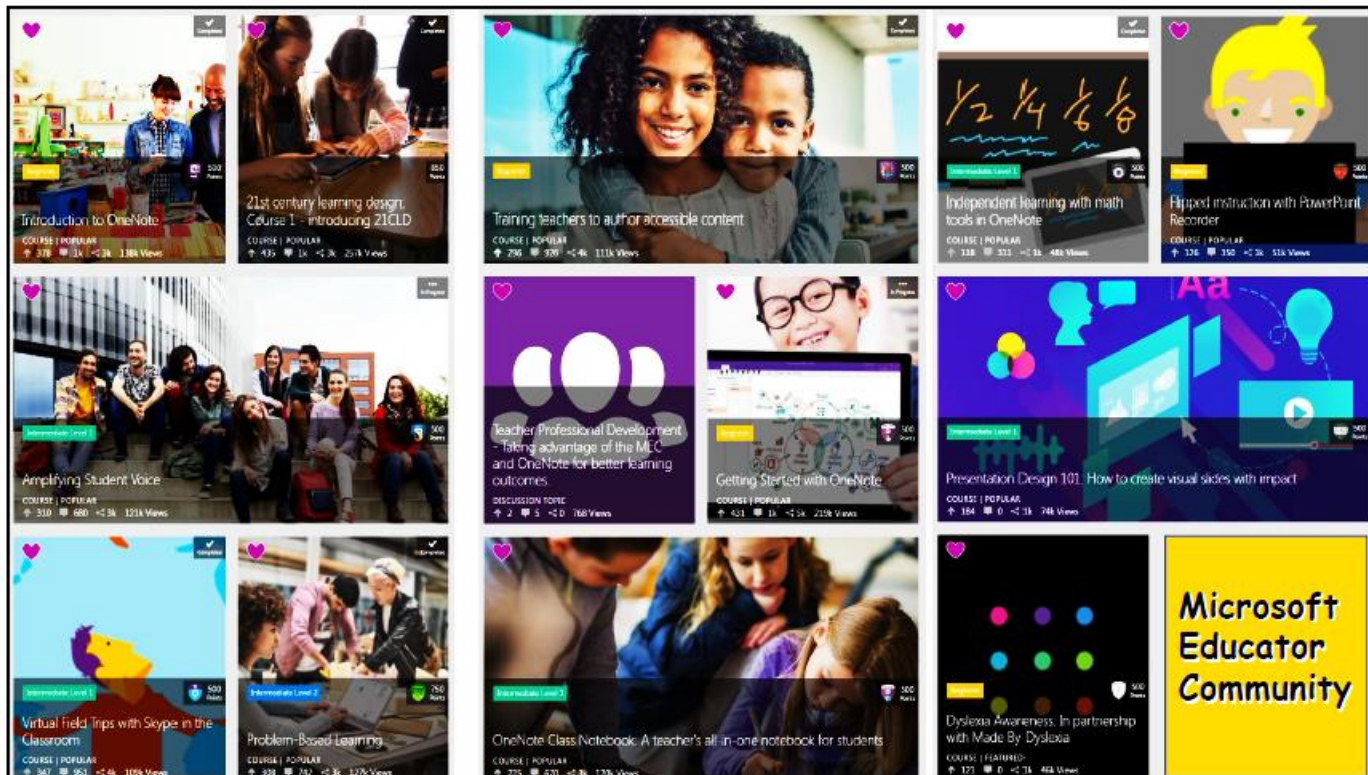
To access courses, open the **Training** menu.



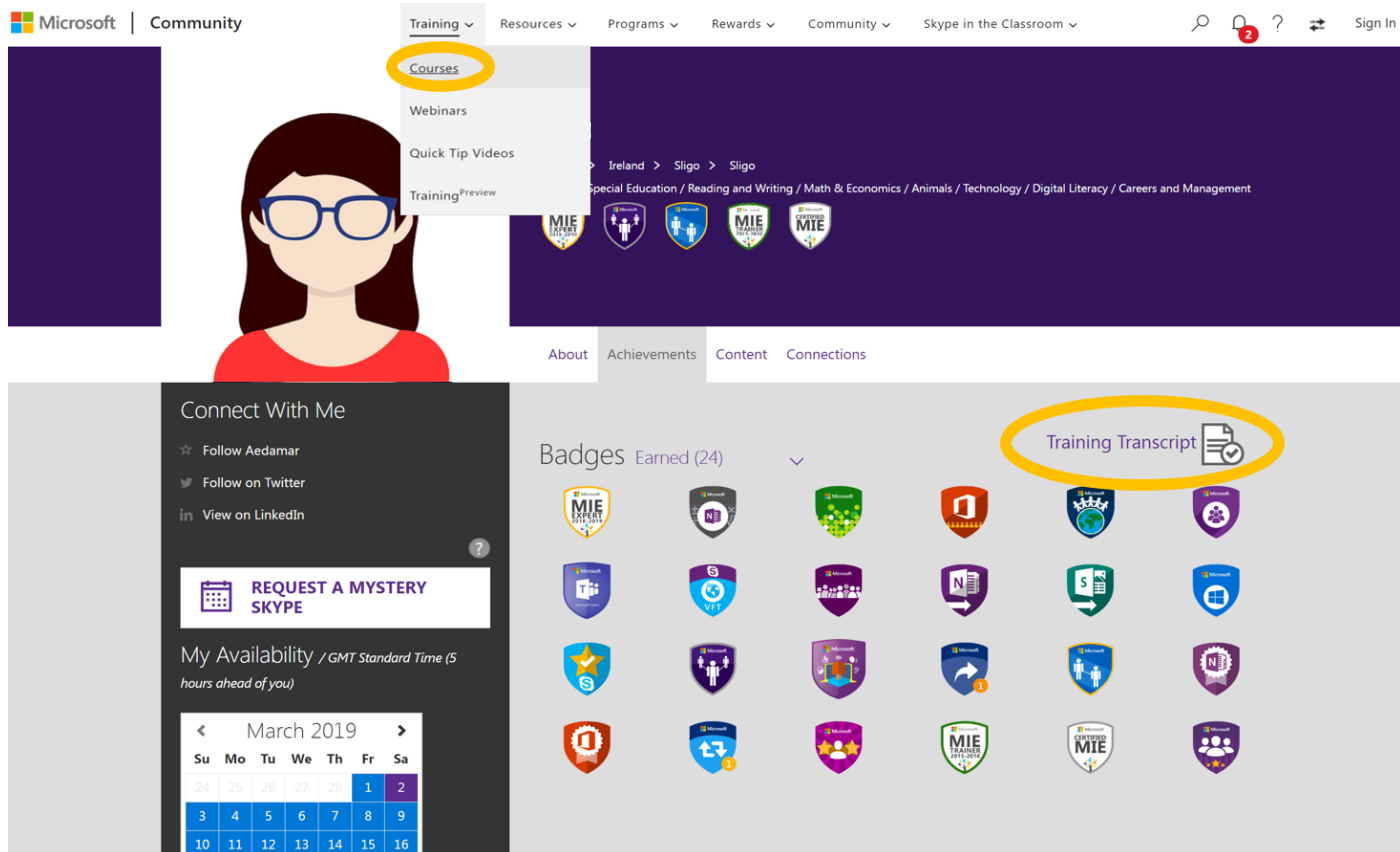
Courses can be filtered by product or skill type.



The Microsoft Educator Community offers a wide range of courses to support educator professional learning at a range of levels.



By setting up a profile on the Microsoft Educator Community and completing courses or learning paths, you will be awarded digital badges in recognition of your progress and achievement.



Downloading and Installing OneNote



OneNote is freely available across Windows, iOS and Android devices and can be downloaded from the appropriate app store. There is also an online version of OneNote called OneNote Online. There may be differences in the functionality

depending on the device and version of OneNote being used. You may also have OneNote 2010 or OneNote 2016 installed as part of the Microsoft Office suite. Notebooks can be synchronised across multiple devices. The version of OneNote used in this workshop is the OneNote Windows 10 app which is free and pre-installed on Windows 10 PCs.

Learning to Use OneNote

Getting Started with OneNote

POSTED 11/29/2017 DURATION 01:00

Microsoft

Complete this course to earn: Points: 500 SIGN IN

Learning is more powerful and dynamic with tools that are already right in front of you – and it's up to educators to impress this on students in the classroom.

With Microsoft OneNote, educators can create digital notebooks that support academic standards and education outcomes across disciplines and tasks, such as writing, reading, mathematics, science, history, CTE, and elective courses. Students may use OneNote across content areas and grade levels, and use OneNote to compile and organize unstructured information, research, and content. OneNote also supports research, collaboration, information management, communication, note taking, journaling, reflective writing, and academic requirements.

Learning Objectives:

- Participants will learn how OneNote is organized and how to quickly find materials within notebooks
- Participants will learn to create, add, and share pages and content
- Participants will learn ways to utilize digital ink and the replay features within the OneNote app

Module 1: Getting started with OneNote for Windows 10

Watch this to find out more about how OneNote for Windows 10 can help teachers:

- Stay organized
- Capture ideas
- Access from any device

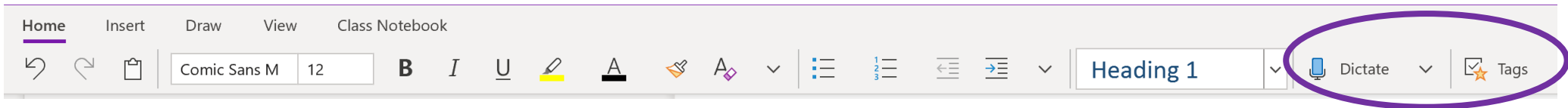
The Microsoft Educator Community includes interactive tutorials to learn how to use OneNote.

To access the Getting Started with OneNote interactive guide the URL of QR code:

<https://education.microsoft.com/Getting-Started-with-OneNote>



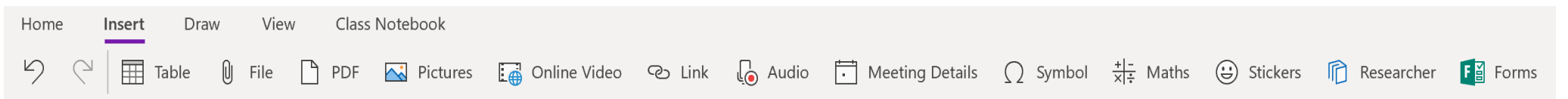
OneNote Tabs



The OneNote Home tab includes text formatting options with added options for dictation and tagging.

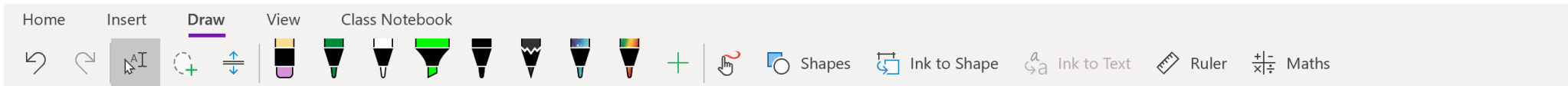
Dictation will convert speech to text.

Tags will bring more organisation to content including checkboxes which can be ticked with a click.



The OneNote **Insert** tab adds powerful functionality to the traditional text editor. Functions include:

- ✓ attaching documents directly on a page using the **File** option
- ✓ printing a copy of a **PDF** to a OneNote page
- ✓ inserting **Pictures** from your computer, online or by accessing a camera
- ✓ inserting **Online Videos** using a video's URL
- ✓ recording **Audio** feedback which will save directly into OneNote
- ✓ keeping **Meeting Details** all in one place through integration with Outlook calendar
- ✓ searching and sourcing information with the **Researcher** across websites and online journals
- ✓ using the **Math** button to graph, solve and show steps for functions and equations
- ✓ embedding quizzes and surveys from **Forms** to gather and provide feedback within OneNote notebooks.



The **Draw** tab allows you to:

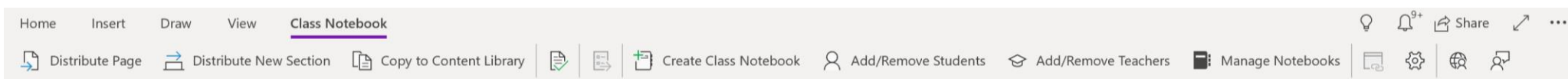
- ✓ add digital ink to a page or annotate a document printed to a OneNote page
- ✓ add **Shapes** and use **Ink to Shape**
- ✓ draw or measure using a digital **Ruler***.

*Information on manipulating the Ruler is provided on pages 9 and 10 of this booklet.



The **View** tab provides options to change the page colours, to add rule or grid lines, translate text and change the zoom level. It also includes:

- ✓ an **Immersive Reader** which is explained in more detail on pages 11 – 13 of this booklet
- ✓ and ability to rewind and **Replay** each ink stroke at any time, allowing others to see how ideas took shape.



The **Class Notebook** tab is available for users with an Office 365 Education account. This tab can be used in conjunction with a OneNote **Class Notebook**. **Class Notebook** provides a platform for teachers to prepare materials and collaborate with students in an organised manner. If your school is using Office 365 and you would like to learn more about **Class Notebook**, the Microsoft Educator Community includes step-by-step guides tutorials on the *OneNote Class Notebook: A teacher's All-in-One Notebook for Students* course. To access the course use this link below.

<https://education.microsoft.com/courses-and-resources/courses/onenote-class-notebook>

Using the Ruler in PowerPoint - Office Support


Instructions from Office Support URL: <https://bit.ly/2SKaXFs>

QR Code:



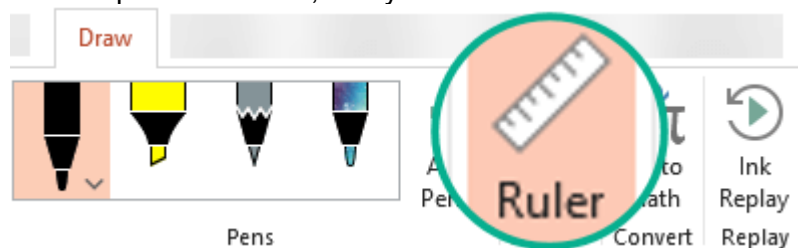
You can use the Ruler on the **Draw** tab of the Ribbon to draw straight lines or to align a set of objects. The Ruler pivots to any position you want: horizontal, vertical, or any angle in between. It has a degrees setting so that you can set it at a precise angle, if necessary.

You can manipulate the Ruler by using your fingers, a mouse, or keystrokes.

 This feature is available in PowerPoint for Office 365 and PowerPoint 2019. If you don't see the Ruler on your Ribbon, see [Requirements](#) section for more details.

Turn on the Draw tab to see the Ruler

1. Open **File > Options**.
2. Tap the **Customize Ribbon** tab in the **Options** dialog box.
3. In the box on the right side of the dialog box, tap the check box named **Draw**.
4. Click **OK** to close the **Options** dialog box.
5. Tap the **Draw** tab, and you'll see the Ruler on the ribbon.



Draw a line or align items

1. Select the slide where you want to use the ruler.
2. Tap the Ruler on the **Draw** tab to make it appear on the drawing surface of the slide.
3. Position the Ruler at the angle you want.
 - Use *one finger* to move the ruler up/down or left/right.
 - Use *two fingers* to rotate the ruler to the angle you want.
 - Use *three fingers* to rotate the ruler by five-degree increments.
4. **To draw a line** Tap a pen or highlighter on the **Draw** tab, and begin drawing.
To align individual items Select each one in turn and drag the object until its selection handle snaps to the ruler.
To align a group of items at once Multi-select the items by pressing Ctrl while tapping each item in turn. Drag the set of objects until it snaps to the ruler.
A shape aligns to the ruler on its edge, whereas an object such as an icon, picture, or text box aligns to the ruler on its bounding box.

Control the ruler with the mouse

Move the ruler by clicking and dragging with your mouse. To stop moving the ruler, release the mouse button.

Rotate the ruler in one-degree increments by turning the scroll wheel on your mouse. The ruler pivots where the mouse pointer is pointing. (Rotation requires a mouse scroll wheel; it doesn't work with laptop trackpads.)

Control the ruler with the keyboard

If you don't have a touch screen, or if you prefer using your keyboard, use these key combinations to manipulate the ruler after you've selected the Ruler button to activate it on the surface of your slide.

To control the ruler with your keyboard:

1. Tap the Ruler on the **Draw** tab to make it appear on the drawing surface of the slide.
2. Click the Ruler with your mouse.
3. Press Shift+F6 to enter ruler-manipulation mode.
4. Use a keyboard shortcut to manipulate the Ruler:

Action

Key strokes

Move the Ruler up, down, left, or right

Up arrow, down arrow, left arrow, right arrow

Rotate the Ruler in 15-degree increments

Hold down the Alt key and tap the left or right arrow once for each increment
The left arrow rotates the ruler counter clockwise; the right arrow rotates it clockwise.

Rotate the Ruler in one-degree increments

Hold down Alt + Ctrl and tap the left or right arrow once for each increment*
The left arrow rotates the ruler counter clockwise; the right arrow rotates it clockwise.

Hide the ruler

- Tap the Ruler on the **Draw** tab to make it disappear from the drawing surface of the slide.

Requirements for the Ruler



Applies to:

App

PowerPoint for Office 365:

Monthly Channel: Version 1702

Semi-annual channel: Version 1803

PowerPoint 2019

[Find your Office version](#)

Operating system

Windows 10, version 1607

[Find your Windows version](#)

Microsoft Learning Tools: Immersive Reader

The below brochure can be accessed at <https://education.microsoft.com/GetTrained/StudentVoice>.



Office 365 Education: Learning Tools

Empower students with tools that help personalize learning

Microsoft Learning Tools are free tools that implement proven techniques to improve reading and writing for people regardless of their age or ability.

Improves reading

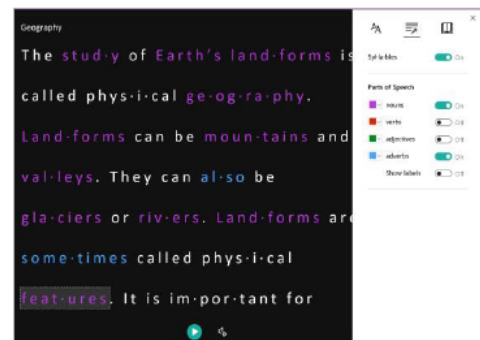
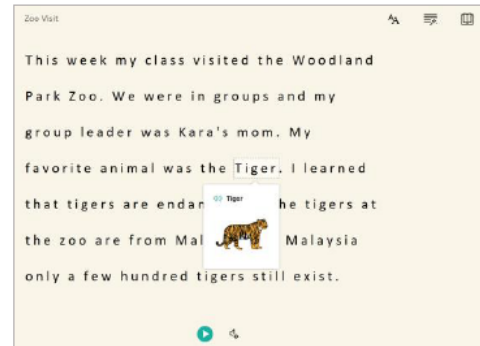
Increase reading speed and comprehension for all learners. Enable students with learning differences such as Dyslexia with text decoding solutions and help build confidence for emerging readers through features like Read Aloud, Syllable Breaks, Line Focus and Picture Dictionary.

Improves writing

With features like Dictate and Read Aloud, students can capture their writing and hear it read aloud providing them essential feedback to edit their work.

Optimizes classroom time

Today's educators are challenged to teach a wide range of abilities. Learning Tools helps them personalize learning for students' varying needs, allowing teachers time to focus on what they love, their students.



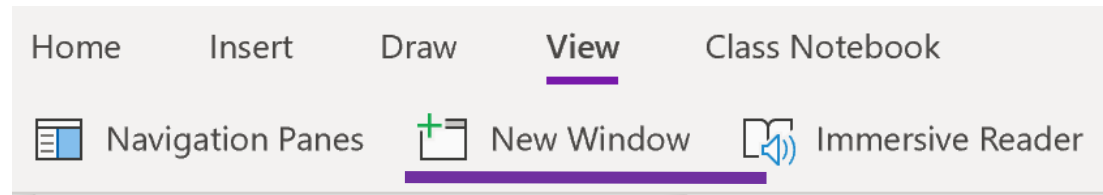
Feature Availability

	OneNote					Word				Outlook		Other		
	Online	2016	Windows 10	Mac	iPad	Online	Office 365	Mac	iPad	Online	Office 365	Microsoft Edge	Teams	Office Lens iOS
Read Aloud and Word/Line Highlighting	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Spacing and Font Size	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
Syllables	✓	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	
Parts of Speech	✓	✓	✓	✓	✓	✓				✓		✓	✓	
Dictate		✓	✓		✓		✓				✓	✓		
Line Focus	✓		✓	✓	✓	✓				✓			✓	
Picture Dictionary	✓		✓	✓	✓	✓				✓			✓	

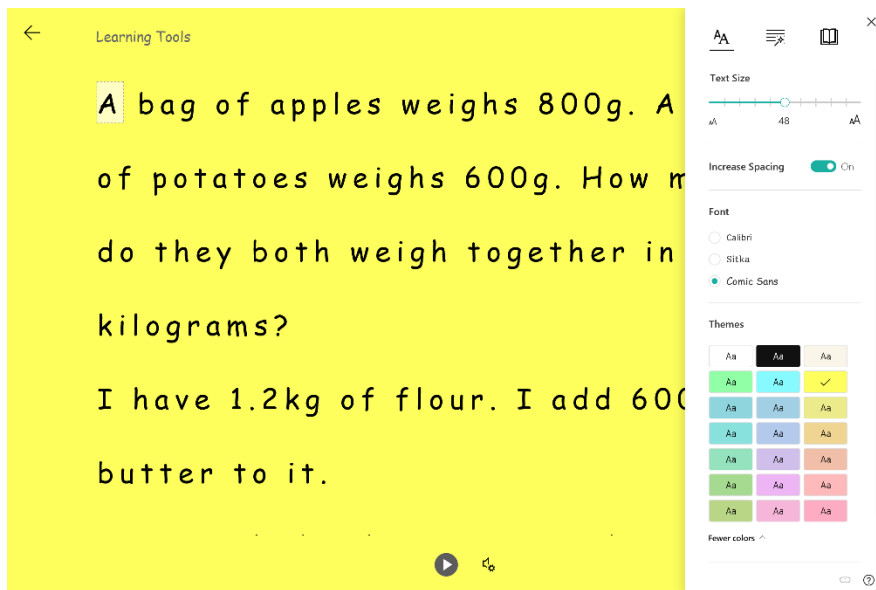
Visit <https://www.onenote.com/learningtools> to learn more.

'Microsoft Learning Tools are free tools that implement proven techniques to improve reading and writing for learners regardless of their age or ability.' Learning Tools is available across devices and applications such as OneNote, Word, Outlook, Edge and Office Lens.

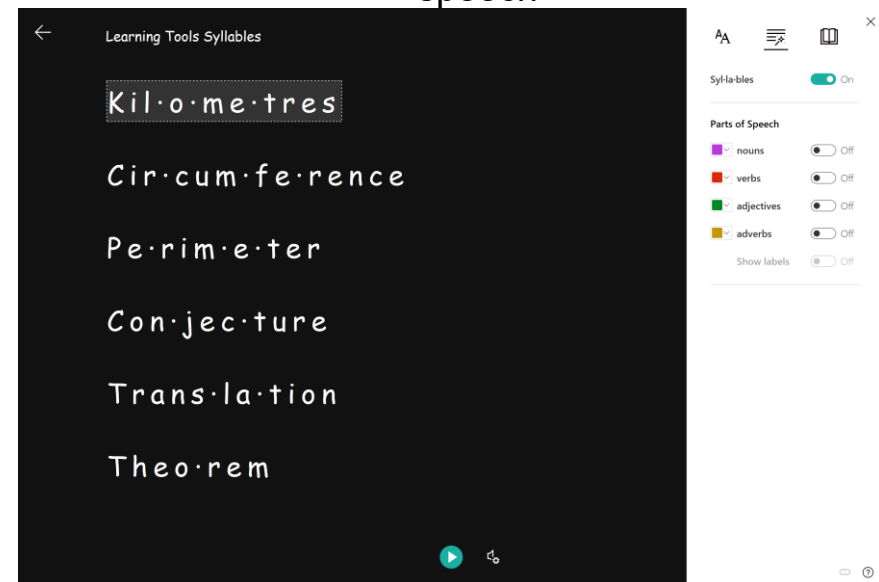
Some key features of Learning Tools within the Windows 10 OneNote app are depicted below.



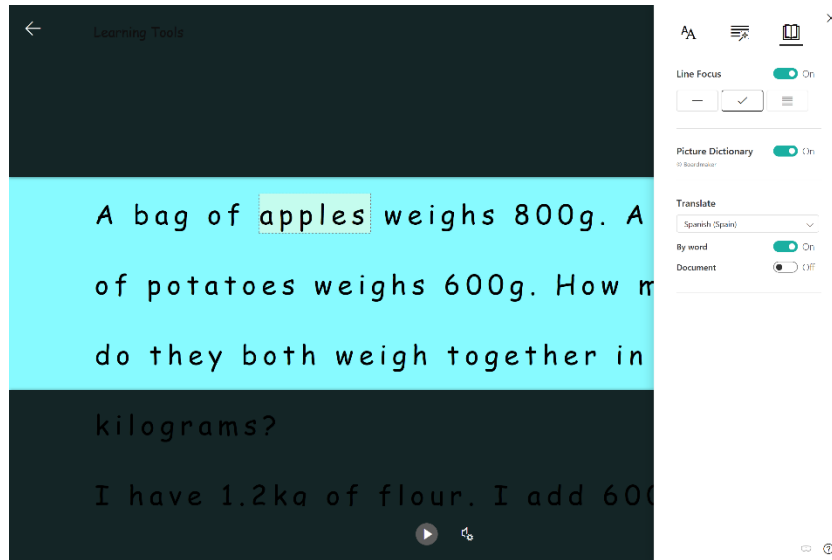
Text Preferences: Change size, font and colour of text



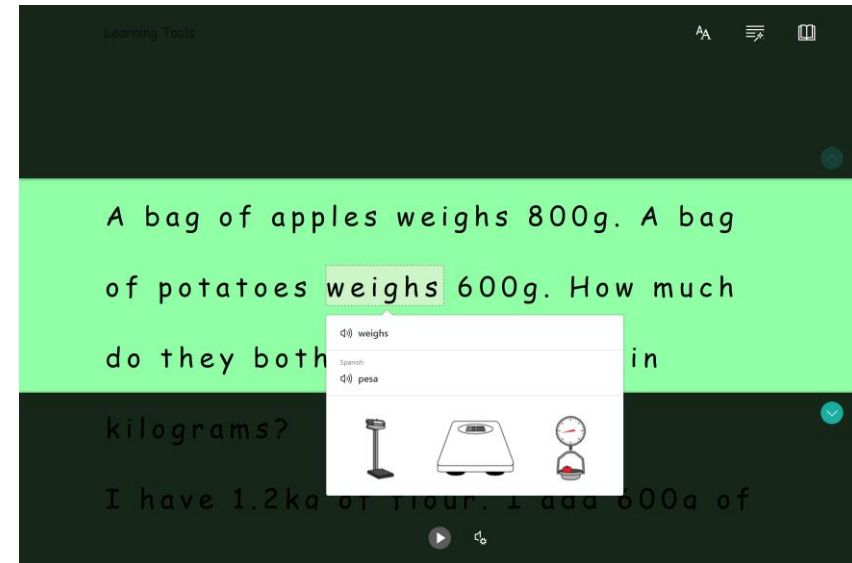
Grammar: Break words into syllables and identify parts of speech



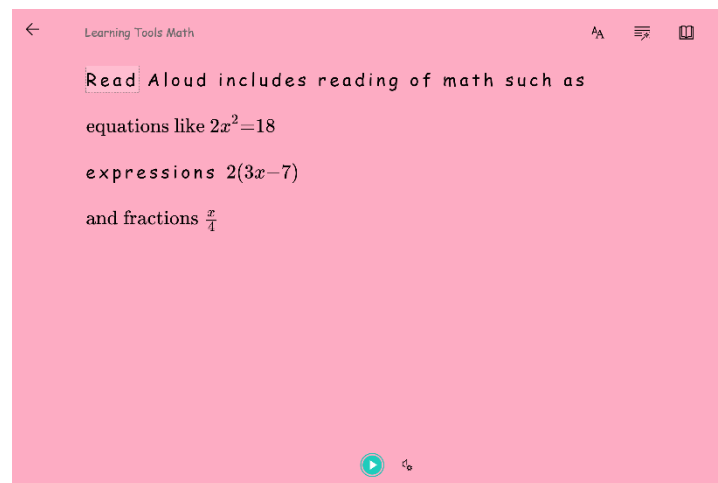
Reading Preferences: Options to change line focus, enable a picture dictionary and translation features




Picture dictionary and translation tools



Learning Tools Immersive Reader supports reading aloud of Math




How to use an Android Device with a Windows 10 PC as a Mobile Visualiser



How to use a Windows 10 PC with an Samsung smartphone (or other suitable Android devices) to create a mobile visualiser

Promote class discussion by sharing/projecting student work



1



On your Windows device open **Windows Settings**

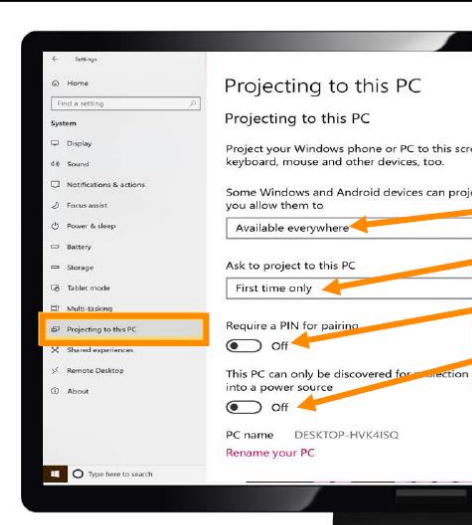
Select **System**

3

Ensure both the Windows 10 device and Samsung smartphone are connected to the same **Wi-Fi network**



2

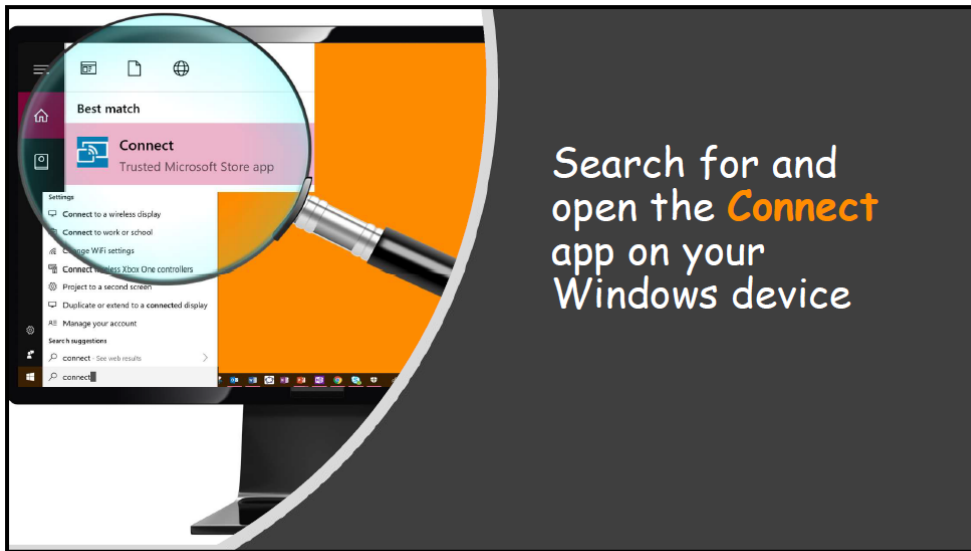


Select **Projecting to this PC**

Apply the recommended settings which are

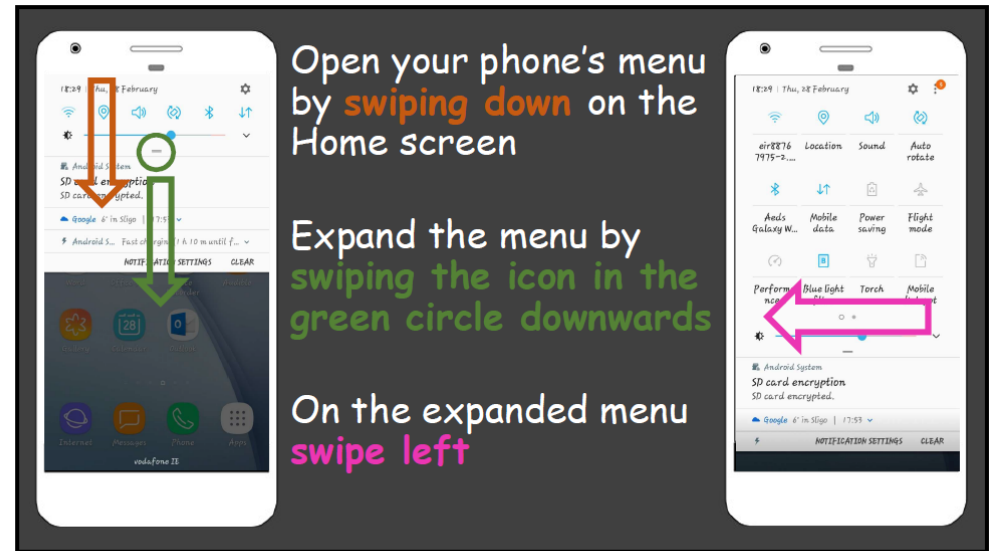
- Available everywhere
- First time only
- Off
- Off

4

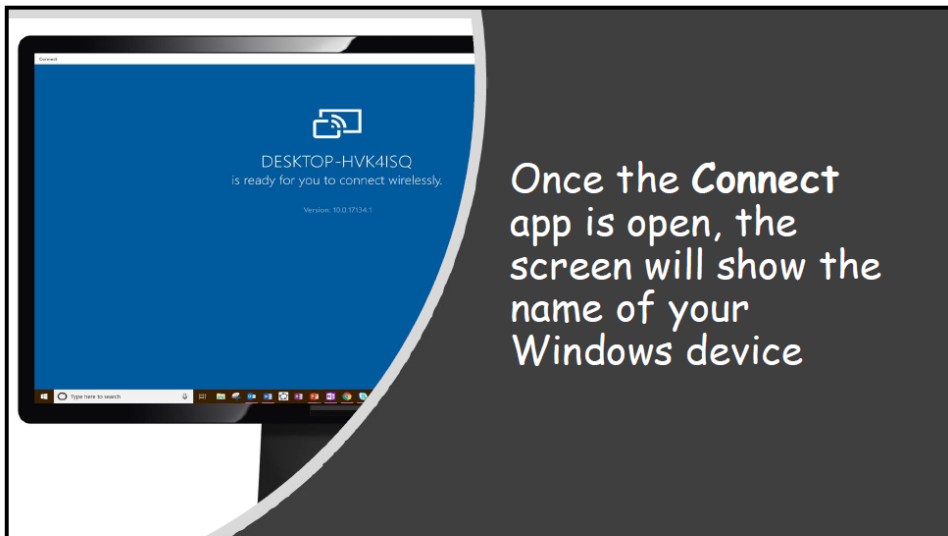


Search for and open the **Connect** app on your Windows device

5

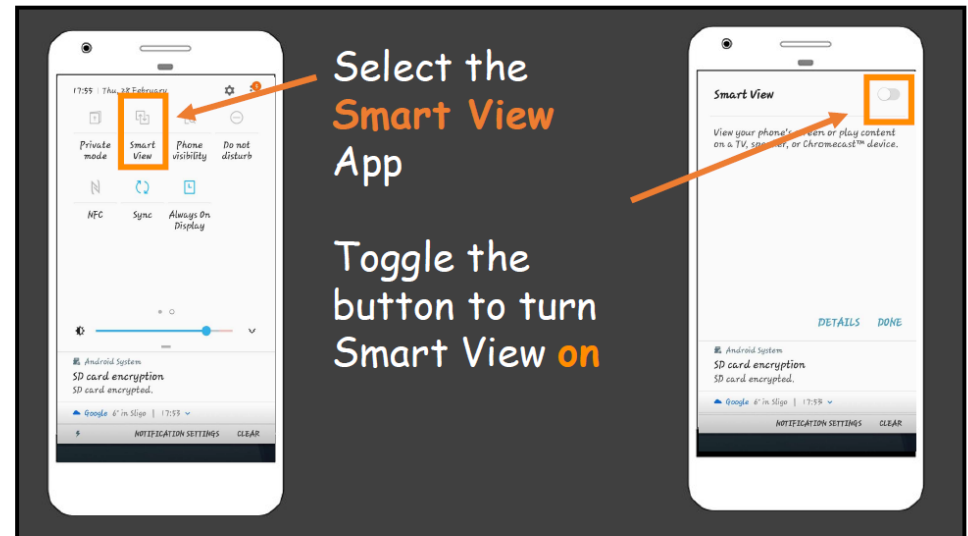


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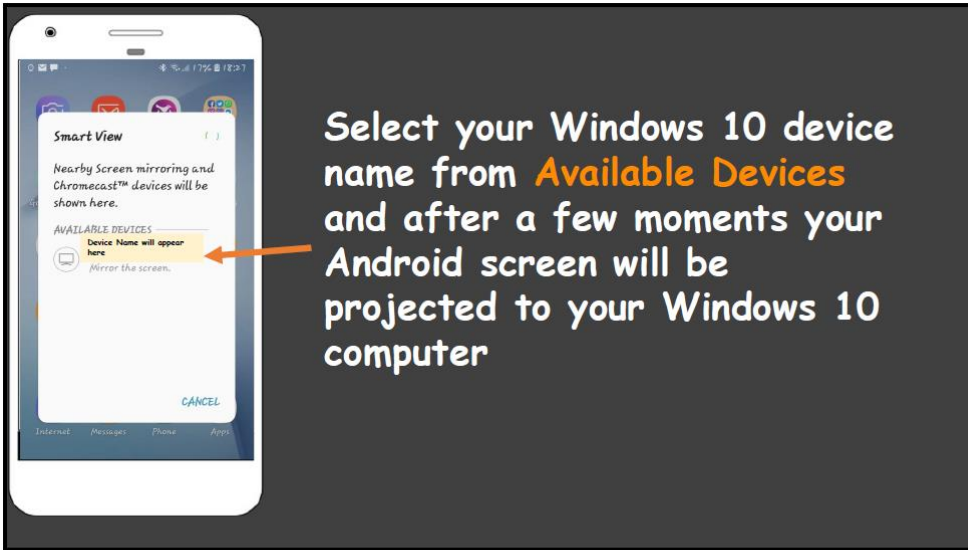


Once the **Connect** app is open, the screen will show the name of your Windows device

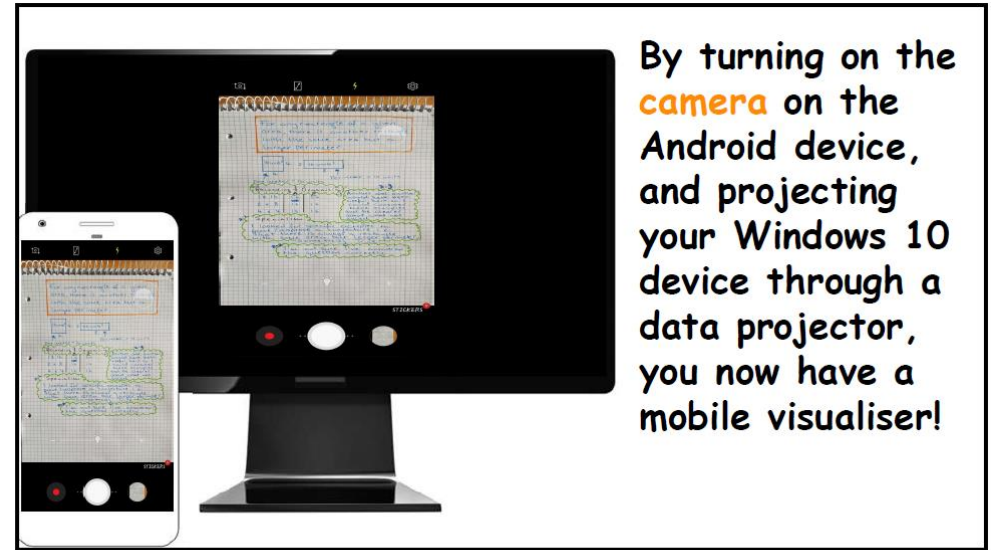
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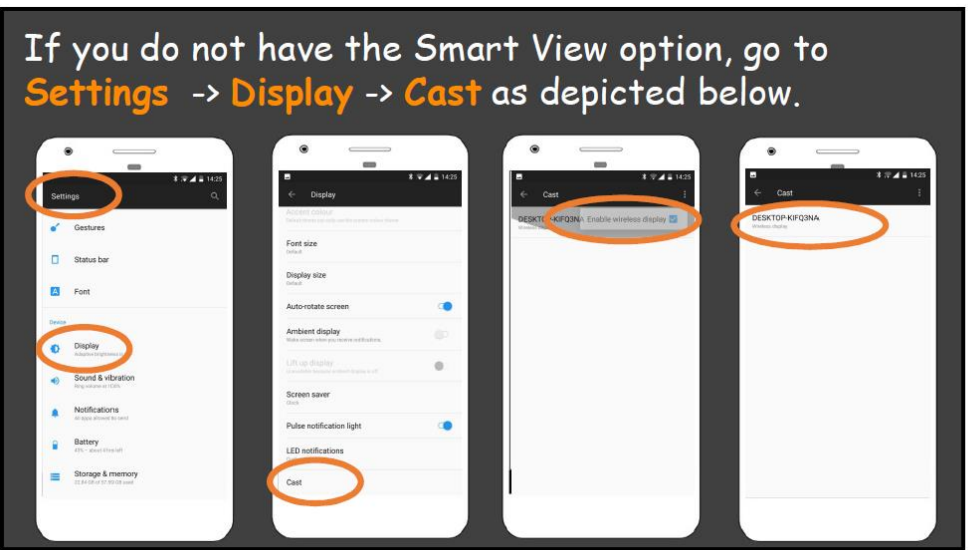
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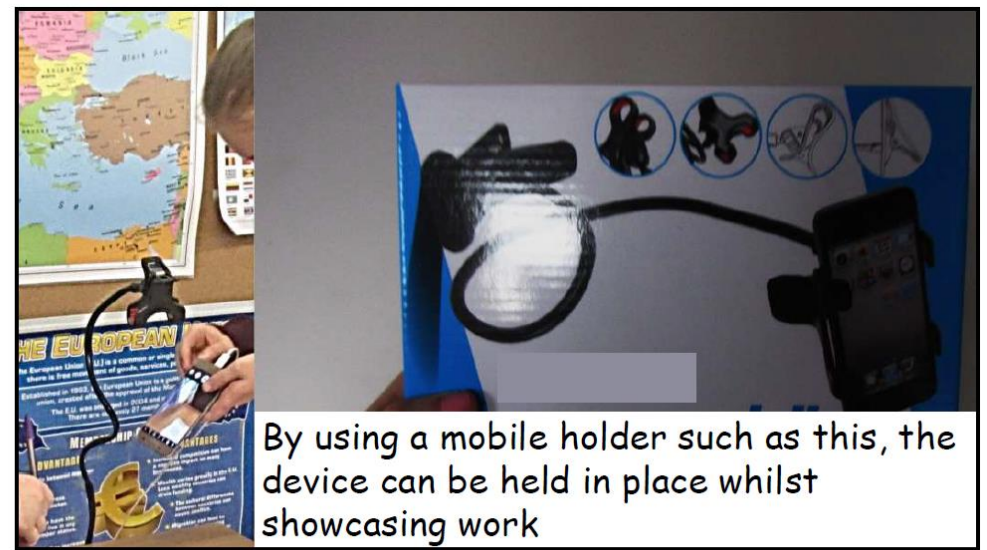
9



11



10



12

Keyboard Shortcuts

Ctrl + C	Copy selected items to clipboard.
Ctrl + X	Cut selected items.
Ctrl + V	Paste content from clipboard.
Ctrl + A	Select all content.
Ctrl + Z	Undo an action.
Ctrl + Y	Redo an action.
Alt + =	Open equation editor.
Windows key + "+" key	Zoom in using the magnifier.
Windows key + "-" key	Zoom out using the magnifier.

Inputting Equations into Office Applications

<p>Alt + = will open the equation editor</p> <p>x^2 followed by spacebar + 1</p>	$x^2 + 1$
<p>Alt + =</p> <p>$x/4$ followed by spacebar</p>	$\frac{x}{4}$
<p>Alt + =</p> <p>$(5+x)/(10+x)$ followed by spacebar</p>	$\frac{5 + x}{10 + x}$