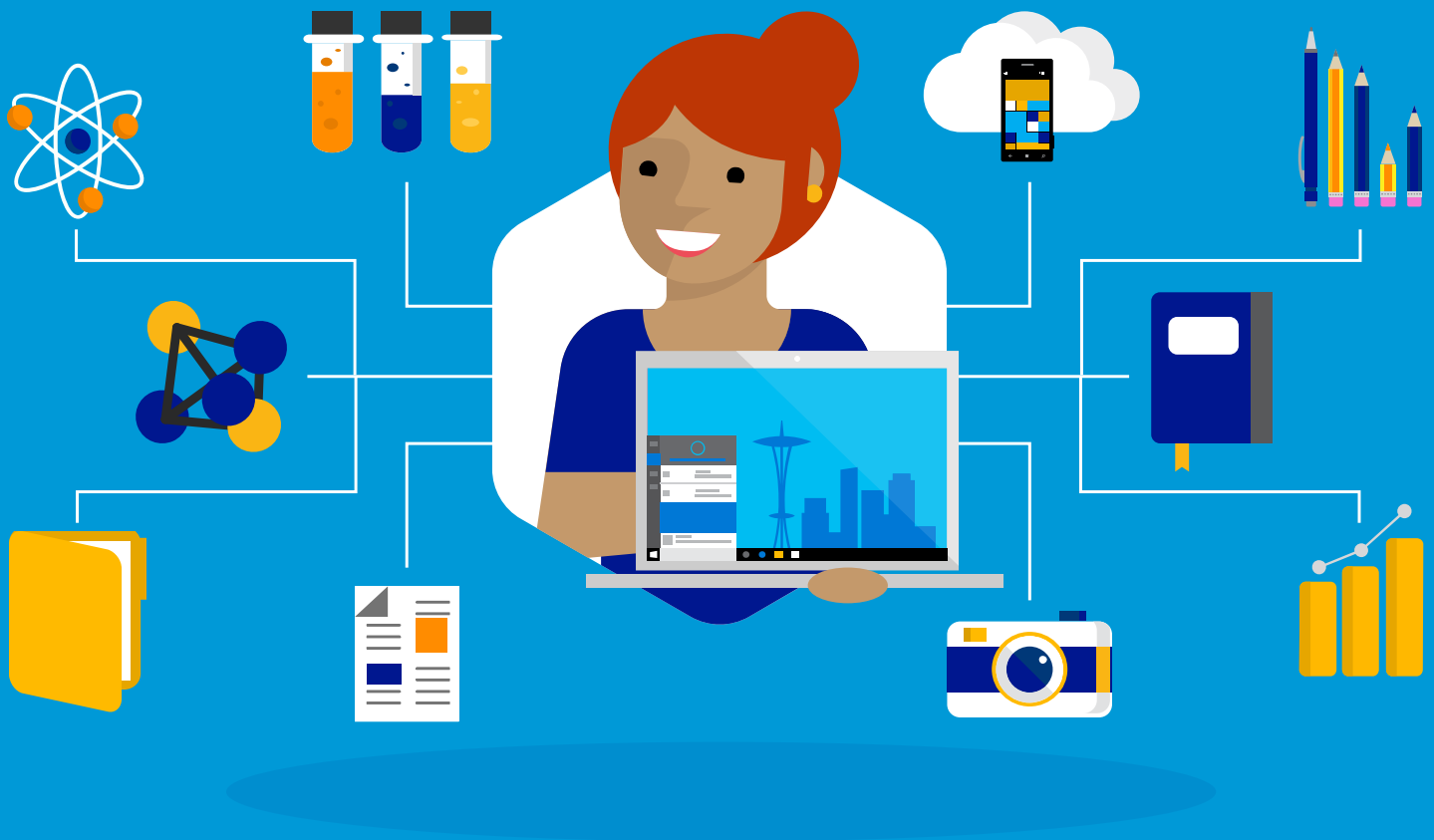


# Getting serious about STEM?

Microsoft helps educators and students to explore, invent, prototype and solve authentic STEM problems using real-world technology



As a technology company Microsoft is passionate about STEM education. We're enthusiastic to welcome the next generation of app developers, game designers, Artificial Intelligence experts and coders to the workplace. And we're excited by what they will imagine, invent and create.

To prepare them with a future skillset and to help educators gain the knowledge and confidence to engage them in meaningful STEM learning, we provide a suite of resources, platforms, tools and devices – all designed with modern STEM learning in mind.

# Supporting learning at every step of the STEM journey

We've identified four critical stages in the STEM journey where Microsoft programmes and technology can make a real difference.

## 1. Inspiration

- Microsoft communities and programmes enable visionary STEM educators to share best practice and inspire others to try something new.
- Microsoft partners offer STEM solutions, training, technical support and advice.

## 2. Preparation

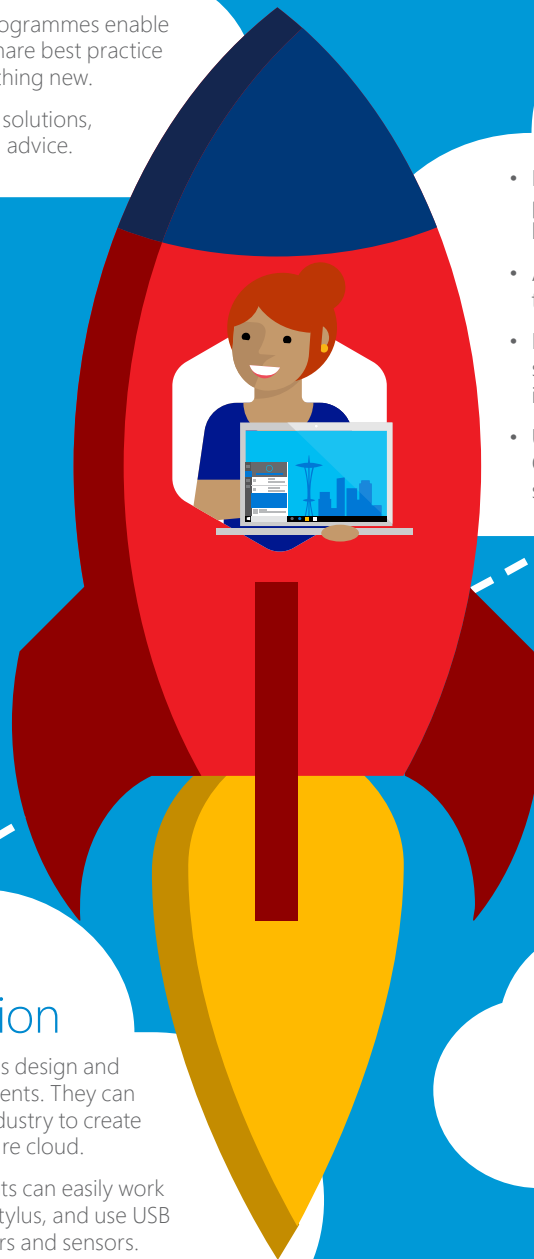
- Microsoft professional development programmes help educators deliver on digital literacy curriculum in schools.
- All educators can gain certifications to increase the depth of their knowledge.
- Microsoft courses and certifications help students boost their job readiness with industry-relevant skills.
- Ubiquitous Microsoft technologies such as OneNote allow students to organise, problem solve, collaborate and design STEM solutions.

## 3. Experimentation

- Powerful software and free tools let students design and code games, apps and immersive environments. They can code using professional software used in industry to create solutions for any platform including the Azure cloud.
- Windows devices are built for STEM. Students can easily work with equations and formulae with a digital stylus, and use USB ports to connect microscopes, thermometers and sensors.
- Windows 10 Runs on Xbox and Raspberry Pi, so students can even create for the Internet of Things.

## 4. Showcasing

- Microsoft global competitions provide encouragement and a way for students to meet like-minded innovators.
- Microsoft offers tools to showcase your projects such as Sway and PowerPoint.



# Resources

As a technology company, the focus of our resources sit firmly in the 'T' of STEM. However, with the Internet of Things, mobile apps, automation and robotics opening up so many exciting career opportunities, we see this as an area of tremendous potential both for Australia's economy and the personal development of young people.

In addition to our cloud services, most of which are free, Windows 10 and our broad device ecosystem combine to create a powerful hardware platform for STEM learning.

We also offer schools extensive support through our partnerships, our communities and our programmes to develop capabilities and skills in educators and students alike.



## 1. Inspiration – for educators

It takes skilled and inspired educators to prepare students for the exciting STEM opportunities that lay ahead. We support them through these programmes:

<b>Microsoft Educator Community</b> Share STEM resources and ideas online with educators all over the world	Educators and school leaders	Free	<a href="http://education.microsoft.com">education.microsoft.com</a>
<b>Microsoft Innovative Educator</b> Join a group of visionary educators who use technology to transform learning	Educators and school leaders	Free	<a href="http://education.microsoft.com">education.microsoft.com</a>
<b>Microsoft Certified Educator (MCE)</b> A single exam that certifies educator computer literacy competency in six areas	Educators and school leaders	Free	<a href="http://www.microsoft.com/en-us/education/imagine-academy/certification/default.aspx">www.microsoft.com/en-us/education/imagine-academy/certification/default.aspx</a>
<b>Microsoft Showcase Schools</b> Be inspired and emulate best practice from a global community of brilliant schools	Educators and school leaders	Free	<a href="http://www.microsoft.com/en-us/education/school-leaders/showcase-schools/default.aspx">www.microsoft.com/en-us/education/school-leaders/showcase-schools/default.aspx</a>



## 2. Preparation – for students and educators

From basic digital literacy to advanced computational capabilities, we help you skill students for the ideas economy.

<b>Microsoft Digital Literacy</b> A certificate program designed to help beginners understand computers	All ages	Free	<a href="http://www.microsoft.com/digitalliteracy">www.microsoft.com/digitalliteracy</a>
<b>Microsoft Imagine Academy</b> Certification courses in technology skills development for students and educators	11+	Paid	<a href="http://aka.ms/imagineacademy">aka.ms/imagineacademy</a>
<b>Creative Coding through Games and Apps (CCGA)</b> Students learn how to code by designing and programming apps and games	11-15	Free	<a href="http://aka.ms/creativecoding">aka.ms/creativecoding</a>
<b>Microsoft Office</b> Powerful tools to ideate, plan, design and prototype across distance and device	6-18	Paid	<a href="http://office.com/getoffice365">office.com/getoffice365</a>
<b>Microsoft Office Specialist</b> Students can earn a MOS certification in a specific Office program	11-18	Paid	<a href="http://www.microsoft.com/en-us/learning/mos-certification.aspx">www.microsoft.com/en-us/learning/mos-certification.aspx</a>
<b>CS50x AP (with Harvard)</b> A year-long computational thinking, computer science and programming course	15+	Free	<a href="http://education.microsoft.com/GetTrained/cs50ap">education.microsoft.com/GetTrained/cs50ap</a>
<b>YouthSpark</b> A global initiative to increase access for all youth to learn computer science	15+	Free	<a href="http://www.microsoft.com/en-us/philanthropies/youthspark">www.microsoft.com/en-us/philanthropies/youthspark</a>
<b>Microsoft Virtual Academy (Imagine@MVA)</b> Free online training in STEM subjects by industry experts with videos and tutorials	15+	Free	<a href="http://mva.microsoft.com">mva.microsoft.com</a>
<b>DigiGirlz</b> Courses and a camp that let girls learn about careers in technology	15-18	Free	<a href="http://www.microsoft.com/en-us/diversity/programs/digigirlz/default.aspx">www.microsoft.com/en-us/diversity/programs/digigirlz/default.aspx</a>
<b>Microsoft Technology Associate (MTA)</b> An introductory certification for students considering a career in technology	15-18	Paid	<a href="http://www.microsoft.com/en-us/education/imagine-academy/certification/default.aspx">www.microsoft.com/en-us/education/imagine-academy/certification/default.aspx</a>
<b>Microsoft Certified Professional (MCP)</b> MCP validates technical expertise through rigorous exams	18+	Paid	<a href="http://www.microsoft.com/en-us/education/imagine-academy/certification/default.aspx">www.microsoft.com/en-us/education/imagine-academy/certification/default.aspx</a>
<b>Microsoft Educator Community</b> The place for K-12 teachers to upskill with new teaching techniques for STEM	Educators	Free	<a href="http://education.microsoft.com">education.microsoft.com</a>
<b>Microsoft Developer Network (MSDN)</b> A community for students to get the latest resources for application development	18+	Paid	<a href="http://msdn.microsoft.com/en-us/default.aspx">msdn.microsoft.com/en-us/default.aspx</a>
<b>Microsoft Certified Educator (MCE)</b> A certification within the Imagine Academy programme for educators	Educators	Free	<a href="http://www.microsoft.com/en-us/education/imagine-academy/certification/default.aspx">www.microsoft.com/en-us/education/imagine-academy/certification/default.aspx</a>
<b>Tech girls are super heroes</b> This site provides role models and events from industry partners to support girls in the technology fields.	Students	Free	<a href="http://www.techgirlsaresuperheroes.org/teammicrosoft">www.techgirlsaresuperheroes.org/teammicrosoft</a>



### 3. Experimentation - for students

We equip STEM students with powerful software, tools and devices that bring out their inner inventor, developer, scientist, engineer and visionary.

<b>Minecraft: Education Edition</b> An open-world game that promotes creativity, collaboration and problem solving	All ages	Varied	<a href="http://education.minecraft.net">education.minecraft.net</a>
<b>Kodu</b> Students create 3D games on the PC and Xbox via a visual programming language	6-14	Free	<a href="http://www.kodugamelab.com">www.kodugamelab.com</a>
<b>Microsoft Office</b> Use industry-standard tools to plan, problem solve and develop computational thinking using software such as O365, planner, OneNote, PowerApps and more!	6-18	Paid	<a href="http://office.com/getoffice365">office.com/getoffice365</a>
<b>Microsoft Windows &amp; Windows 10 IoT Core</b> Help students and teachers to do great things in STEM	6-18	Paid	<a href="http://www.microsoft.com/en-au/education/Products/Windows/default.aspx">www.microsoft.com/en-au/education/Products/Windows/default.aspx</a>
<b>Microsoft Office Specialist (MOS) World Championship</b> Compete against peers across Australia and the world and gain valuable industry-standard qualifications at the same time	11+	Varied	<a href="http://microsoftchampionship.com.au">microsoftchampionship.com.au</a>
<b>Paint 3D</b> Easily create 3D objects and models for STEM projects with this smart app	11+	Free	<a href="http://www.microsoft.com/en-us/store/p/paint-3d-preview/9nblggh5fv99">www.microsoft.com/en-us/store/p/paint-3d-preview/9nblggh5fv99</a>
<b>3D Builder</b> Input photos or start from scratch as you create and edit 3D models	11+	Free	<a href="http://www.microsoft.com/en-au/store/p/3d-builder/9wzdnrcfj3t6">www.microsoft.com/en-au/store/p/3d-builder/9wzdnrcfj3t6</a>
<b>PXT.IO coding tool</b> Students use touch or a keyboard to create apps and games on their devices	11-18	Free	<a href="http://www.pxt.io">www.pxt.io</a>
<b>Imagine Access</b> Get industry-standard tools and Azure cloud access	15+	Free	<a href="http://www.imagine.microsoft.com/en-us/account">www.imagine.microsoft.com/en-us/account</a>
<b>Windows App Studio</b> Create mobile and web applications quickly in an app studio prototyping tool	15+	Free	<a href="http://appstudio.windows.com/en-us">appstudio.windows.com/en-us</a>
<b>Microsoft Azure for Students</b> Professional developer tools, Azure App Services, Notification Hubs, SQL database, websites, web apps and more	15+	Free	<a href="http://azure.microsoft.com/en-us/community/education">azure.microsoft.com/en-us/community/education</a>
<b>Visual Studio Community</b> A fully featured Integrated Development Environment (IDE) for any platform	15+	Free	<a href="http://www.visualstudio.com">www.visualstudio.com</a>
<b>Xbox and Kinect developer tools</b> Code the Kinect Sensor to create your own applications	15+	Free	<a href="http://www.xbox.com/en-AU/Developers/id">www.xbox.com/en-AU/Developers/id</a>
<b>HoloLens</b> A powerful holographic computer that students wear as a headset	18+	TBD	<a href="http://www.microsoft.com/microsoft-hololens/en-us">www.microsoft.com/microsoft-hololens/en-us</a>



### 4. Showcasing – for students

We provide both local and global forums and opportunities where STEM students can share achievements and build their careers.

<b>Microsoft Office Specialist (MOS) World Championship</b> A global competition that tests students' skills in Office Word, Excel and PowerPoint	11+	Varied	<a href="http://microsoftchampionship.com.au">microsoftchampionship.com.au</a>
<b>Imagine Cup</b> Microsoft's premier international competition for young developers	16+	Free	<a href="http://www.imaginecup.com">www.imaginecup.com</a>
<b>Microsoft Office</b> Use industry-standard tools such as Office Sway, PowerPoint, Excel and Word to present results	6-18	Paid	<a href="http://office.com/getoffice365">office.com/getoffice365</a>