

INDUSTRY IN THE CLASSROOM

VIRTUAL

ENGAGEMENT

BEST PRACTICE GUIDE



DIGITAL
SKILLS
EDUCATION

Skills
Development
Scotland

Industry In The Classroom Virtual Engagement Best Practice Guide

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Thank you, and welcome.

Thank you for considering running virtual engagement sessions with learners. By volunteering your time and committing to this project, you're helping inspire learners into further skills development opportunities in areas of cyber security and digital technologies.

Your industry experience and knowledge will encourage groups of learners to consider a career in Scotland's technology industry.

In this guide, you'll get advice on running interactive workshops, talks, and Q&A sessions with learners remotely. You'll get recommendations of tried-and-tested technology that allow for interaction between learners and you. You'll learn how to make your virtual sessions engaging, and not simply a one-way conversation. The guide takes into account the technical limitations experienced by learners across Scotland, and a "best fit" approach to selecting tools and platforms.

It includes step-by-step instructions on what to do, and not to do. There are examples of good and bad practice to help you out. Each section ends with a few best practice bullet points that tell you the key messages.

We will also give you guidance around the steps to be taken regarding safeguarding, personal privacy, equality, and diversity.

Using this guide means that even if you've never done something like this before, you can feel comfortable, confident and capable of running a session.

By following the best practice in the guide you will be able to deliver an engaging virtual session to a high quality in a fun and safe way.

About this guide

This guide is produced on behalf of Skills Development Scotland's Discover Cyber Programme, which aims to encourage more young people to consider a career in the cyber industry. This work is funded by the Scottish Government in partnership with the UK Government's National Cyber Security Programme.

This document is designed to be used by industry volunteers when they want to run virtual engagement sessions with schools, colleges, and other groups. It'll work equally well for workers in cyber security, software engineering or other tech professions.

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Checklist

Use this handy checklist to keep track of your progress as you prepare for and deliver your virtual engagement.

- Find a teacher** looking for an engagement. Use the SDS/DYW Marketplace
- Set the time.** Discuss the nature of the class, accessibility adjustments, and find a time that works for the class
- Pick your activity.** Use your own, choose from the catalogue, or look at other resources to find a relevant activity you could run
- Plan your session** using the 5 Steps To Virtual Engagement to structure your session around the main activity
- Watch the training.** Online videos provided by University of Edinburgh

2 Weeks before:

- Set up the virtual meeting.** Ask your partner teacher to set up a meeting. We recommend Google Meet within Glow
- Introduce yourself.** Send an introductory slide to the teacher to share with the class
- Check any tools** you use aren't blocked within the school
- Test your audio and video** setup, have a test call
- Read your notes.** Familiarise yourself with the lesson plan

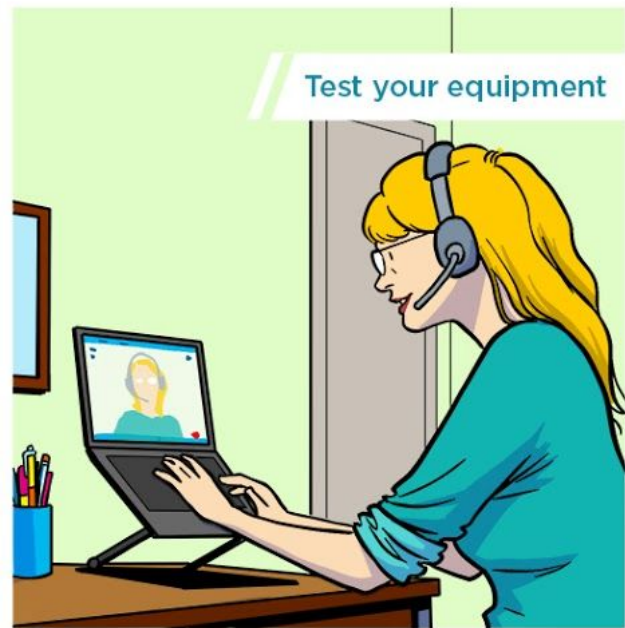
On the day:

- Got your notes? Got your slides? Ready to go?**
- Run your virtual engagement!**

After the engagement:

- Send a thank you email** to the teacher
- Gather evaluations** from learners and the teacher
- Share the experience** with your coworkers

BRINGING SCOTLAND'S TECH INDUSTRY INTO THE CLASSROOM



Organising Your Virtual Engagement

Matching With a Teacher

First, you'll need to find a partner school to work with.

Skills Development Scotland in partnership with Developing the Young Workforce run Marketplace, which is an online tool connecting schools and colleges with business and workers looking to get involved in outreach.

Visit [Marketplace](#)

You will need to post an opportunity for teachers to respond to. Give it a clear and descriptive name so teachers can identify if it's for them or not.

Here is an example post from Marketplace, which is advertising a "meet the expert" virtual engagement event:

Virtual Meet the Expert with Hearts of Midlothian Football Club IT and Digital Technology

Tanya is the Digital Education Programme Manager for Hearts of Midlothian Football Club. Her role involves creating opportunities for the community to learn about STEM (Science, technology, engineering, and mathematics) and the role it plays in all aspects of life. Exciting things young people will learn:

- Find out how much of a role technology plays in a football club
- Discover what it takes to become a computer scientist or engineer
- How volunteering can set you up for your career and show you what you love doing

Get in touch using the contact details they provide so you can confirm a time that works best for you and the class. Be aware that most school periods aren't on the hour, and often don't last an hour.

Best practice:

- Use Marketplace to post an opportunity for teachers
- Name the activity accurately

Time Commitment

You won't need to commit a huge amount of time to planning, preparing, and running your session. Expect to take around a half-day (4 hours) in total if you are using a premade activity plan.

At a minimum you should spend a few hours getting familiar with the content of the lesson and thinking about how you will present. It's definitely a good idea to practice your session out loud before running it for the first time - this will help you feel more confident and relaxed when presenting.

On the day, block out at least 30 minutes on either side of your engagement session. You want to be able to test out your camera, internet connection, and get comfortable without rushing. This will allow you to relax and be at your best when presenting.

After your session, you should allow a little bit of time for any followup and to send some highlights from the feedback to [Debbie McCutcheon](#) at Skills Development Scotland.

Best practice:

- Spend 2 hours preparing for your session by reading over the notes and practicing out loud
- Book enough time in your calendar to cover the engagement session and 30 mins on each side

Setting Up The Meeting

In most cases, the teacher will hold a video call with you which will be shown on the projector or TV within the classroom. Pupils will be at computers to complete the activity. You should not be holding a video call directly with pupils.

Glow is Education Scotland's national online learning environment. It provides single-sign on to a variety of services for all learners in Scotland. Every school in Scotland has access to the Glow environment. We recommend Glow as one of the best ways to engage with schools remotely.

Ask your teacher for advice and guidance on what works best for them.

Glow with Microsoft Teams



All Glow users have access to Microsoft Office 365 for Education. This includes Microsoft Teams. At present, Glow hosted Teams meetings are only accessible to those with a Glow account. Glow accounts are generally not given to those outside the education sector, so as an industry volunteer you won't be able to get one.

Glow with G Suite for Education



Some local authorities have opted in to using G Suite for Education. Teachers can create Google Meet events and invite external participants. By default, anonymous (not signed into another Google account) users are prohibited from joining meetings. Your teacher will be able to change this setting. When you use the URL provided to join the meeting, the teacher will have to accept the join request before you are connected to the session.

If the school you're working with has access to G Suite, using it as part of Glow is the preferred method. You are not required to install any software, just a modern web browser (for example Google Chrome).

If for any reason your school is unable to use Glow then discuss with your partner teacher which platform works best. Please bear in mind that local authorities will have policies on the platforms they permit and you may need to alter the meeting settings to comply with their safeguarding policy. Your teacher will be able to help out and advise.

Best practice:

- Speak to your teacher to select the most suitable platform
- The teacher will:
 1. Create the event
 2. Allow anonymous user to join
 3. Provide you with the URL
 4. Accept your join request
- You will:
 1. Use the URL to join after the meeting start-time

Useful Links:

Glow Guidance for Google Meet:

<https://glowconnect.org.uk/g-suite-for-education/google-meet/>

Glow Guidance for Microsoft Teams

<https://glowconnect.org.uk/teams-in-glow/meetings-in-teams/>



Introductory Slide

Send an introductory slide to the teacher to share with the class in advance of the lesson. This is a good way to introduce yourself to the class ahead of time. Seeing your face and knowing a little bit about you often makes it easier for learners to come up with questions in advance.

Here's an example:

My name is:

Christina

I am a:

Lead Software Developer

I work at:

Stirling Technologies

building mobile apps for
local takeaways



Your slide should include your name, your job, and where you work.

Get this slide template here: [Introductory Slide Template](#)

What Makes A Good Virtual Engagement

Your virtual engagement session is something many learners will be looking forward to, and will offer something out of the ordinary. You'll be the expert in the room and learners and teachers will be keen to hear your story. This is your chance to offer something different to what they'd normally be doing, and bring the real world of work into the classroom.

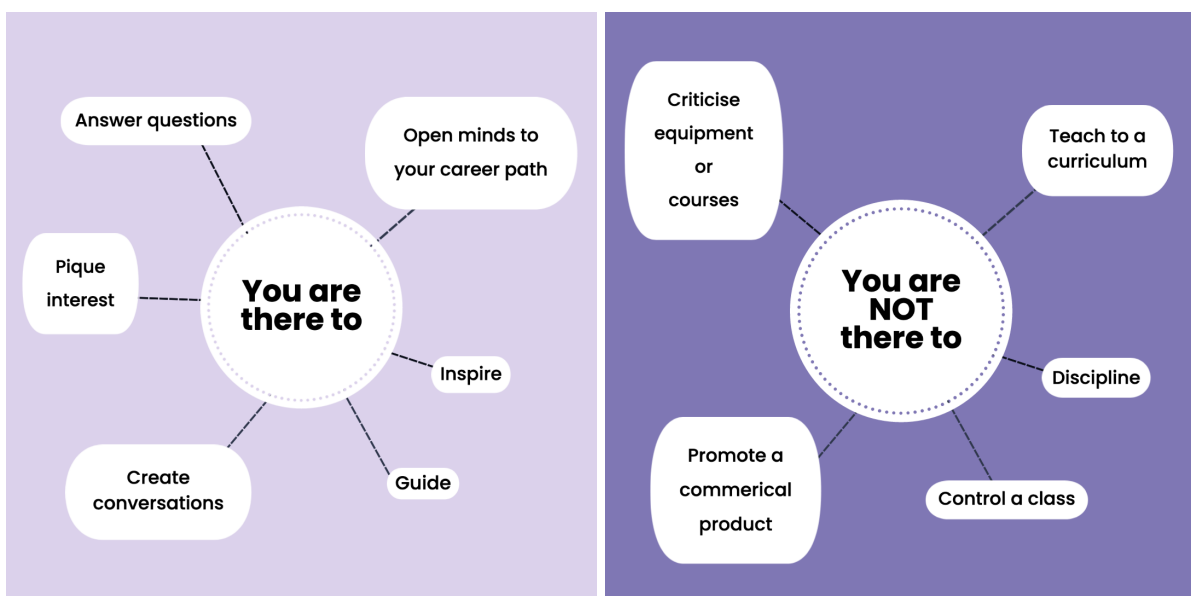
It's not a lesson, and you're not there to be a teacher. This is a fun and engaging taster to get the learners thinking about careers in your area. The activity will be accessible to all learners, it's not about setting a difficult task or challenging people.

Many learners won't know someone involved in your line of work and this is a great opportunity for them to have a conversation that they wouldn't otherwise have.

Remember, you're an ambassador for the technology industry in Scotland, and your company.

The tech industry workforce is not yet representative of the wider population. So be mindful not to reinforce any negative perceptions or stereotypes which are a barrier to participation. This will be visited later in the guide.

What's Expected of You





Structuring Your Virtual Engagement



HOOK

Introduction (3 mins)

ENGAGE

Hype the sector (5 mins)

EXPLORE

Main activity (25 mins)

INVOLVE

Discuss Careers & Q&A (10 mins)

SUSTAIN

Close and Next Steps (2 mins)

These 5 steps will make sure that you get the most out of the time you have in the classroom and meet the needs of learners, teachers, and the industry volunteers. This format is tried and tested with hundreds of learners and is based on good practice from across industry. No matter your specialism, you will be able to use this framework to produce a great session.

Sticking to the structure will keep you on track, and help you feel more comfortable and confident in your engagement. The teacher will also understand what should be happening at each stage.

Learners are good at noticing if you're underprepared or waffling and may lose focus. You will come across as competent and confident by keeping things moving in a structured way.

Remember, you have a teacher in the room. It's much easier to present as a pair, so involve them as much as you'd like.

Next, let's talk about each step in the process.



Step 1: Hook

This first step is the “hook”. This is your chance to make a **positive first impression** and **capture the attention** of the learners. It’s a brief introduction to you and what you do.

Make sure to include:

1. Your name and how you’d like to be addressed
2. Where you are calling from
3. What your role is (and a brief description if necessary)
4. Who you work for and what the company does

Keep it short, no longer than two minutes.

Give an explanation how what you do relates to everyday life. For example

“I write code for the system that can detect if a bank payment is suspicious and then block the account”

is more meaningful than :

“I’m an artificial intelligence engineer working in fraud detection in the financial services industry”.

Example slides:

My name is:

Joseph Parry

I am a:

Data Scientist

I work at:

Deep Data Development



What do I do?

I visit other companies and help them solve their problems using **data, maths, and statistics.**

Your intro should be short and to the point. 3 slides is plenty. [Example template.](#)

Don't over-explain, it's better to seed some curiosity than to overwhelm (or worse, bore) the learners before you start. There will be plenty of opportunities later for the learners to ask you questions to find out more.

Try out your introduction on a partner or friend who doesn't understand the technicalities of your job. Ask them to identify any jargon or unfamiliar words or phrases.

Here's an example of a great intro and hook:

"Hello, my name is Joseph Parry. Feel free to call me Joe today. I work for Deep Data Development as a data scientist. My job is to visit other companies and help them solve problems using maths and statistics.

Right now, I'm helping a food company which grows fruits and vegetables know when the best time to plant, water and harvest their crops. I'm using data from weather forecasts and some sensors planted in the fields to plot lots of graphs and try to spot patterns in the data."

Best Practice:

- Get the key points across in two minutes or less
- Use language everyone in the room will understand
- Relate what you do to everyday life

Step 2: Engage

Once you've introduced yourself, it's time to build up some hype about the sector and introduce key information relevant to the activity. A short presentation (2 or 3 slides) will let you get your message across and may be especially useful if you do something unconventional that the learners won't be familiar with.

What am I working on at the moment?

I'm helping a **food company** which grows fruits and vegetables know when the best time to plant, water and harvest their crops.

I'm using data from **weather forecasts** and some **sensors** planted in the fields to plot lots of graphs and try to **spot patterns in the data**



A clear slide.

Bear in mind that the aim isn't to teach something new, so avoid lecturing the class. Even though this will be a very short presentation, include at least one point of interactivity. This could be posing a question, asking for opinions, or conducting a poll.

"Do you trust your weather app? If it told you it was going to be dry, would you believe it?"

Yes | No

Consider the language you use, don't dumb-down, or overcomplicate. Learners will appreciate you using normal language, avoid trying to 'act or sound cool'.

For example:

"I use a light sensor to detect when the sun is out, and record how much daylight the vegetables get each day." will be understood by all.

"The system polls a photodiode to evaluate the daily exposure time of each product to direct sunlight." is unnecessarily complicated.

Why is interactivity important?

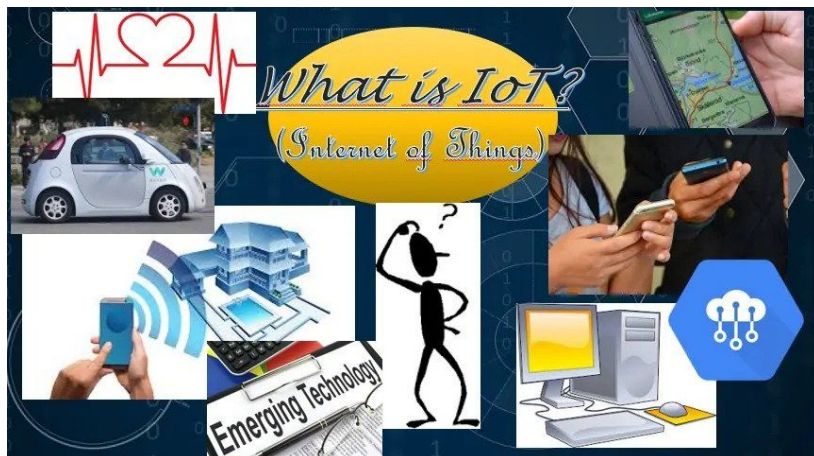
Virtual engagements are a 'live' experience, it's not a book or a recorded video. You want to make the most of the fact you're together in the same virtual space. Asking questions, getting reactions, and discussing things are what makes virtual engagement worth doing. Building in moments of interactivity will make the engagement more valuable, and more enjoyable for you and the learners.

Your slides should act as an aide to the story you're telling. Keep them clear and readable by using a large font size on a background with strong contrast. (include example here)

How to make a Good First Impression

Making a first good impression can be vital when looking for a new job. Whether we like it or not, people do judge a book by their cover. The first few seconds with someone can be critical to your career.

- Be on time. The person you are just meeting is probably not interested in your excuses, even if it is the first time you are late in your whole life. All they are going to know is that you are not keeping up with a previous agreement. The image you are leaving behind is of someone that is not reliable. Make an extra effort and make sure to arrive on time. Too early is always better than too late.
- Be prepared. Before going to your interview you should have done your research about the company, the position you're applying for, and so on. Think about what kind of questions you could be asked, and how you would answer them. In one word, practice!
- Take care of your clothes and your overall grooming. It has been said that 55% can be determined by the person's appearance. So be careful when choosing how to present yourself in an interview. Dress to impress, maintaining in mind the job you are applying to, and when in doubt, choose the most conservative choice.
- Take into consideration non-verbal communication. You might be feeling nervous, but studies have shown that people who present themselves in a more friendly, confident manner usually have better results. Something as simple as a smile can make a difference.



Bad slide examples by 24Slides.

It's a good idea to provide the teacher with your slides ahead of the lesson. Some learners may require a paper copy for accessibility reasons.

Best Practice:

- Aim for a point of interactivity every few minutes when presenting
- Think about what context the learners might need for the activity
- Keep it light, and speak to them at their level



Step 3: Explore

This is the main activity. The activity you choose should be accessible to all in the class, don't make it too challenging. Your company may have produced some or there's lots of off-the-shelf activities to choose from. You can ask colleagues and others who have run sessions before what has worked well for them.

[Cyber Skills Education: Classroom Resource Catalogue](#)

Prepare a lesson plan. Don't worry if you've never written one before, think of it as a "running order" or "recipe". It's something you can easily refer to on the day to make sure you know what's coming next and that you're keeping to time.

Here's a summary of a lesson plan we've prepared. You could adapt this one to suit you. It is designed to give learners a taste of what it might be like to work in digital forensics. It makes use of an existing activity, rather than having to make one.

Time	Lesson Plan for S3 Alba Academy. 11am 5 Nov. Teacher: Mrs Murdoch
Hook	
2	Intro, use my introduction slides, speak about my recent project investigating leaked emails from a bank.
Engage	
5	Introduce the digital forensics roleplay situation - an insider has been leaking sensitive information. We're going to use digital forensics techniques to try and find out how the leak happened.
Explore	
10	Use premade worksheets, part 1. Class answer using Poll Anywhere.
2	Talk about how important it is to use patches/updating software
10	Use premade worksheets, part 2. Class answer using Poll Anywhere.
2	Talk about how you can read and understand file metadata, and access rights.
10	Use premade worksheets, part 3. Class answer using Poll Anywhere.

2	Together, check the email log for an attachment the size of the database. Congratulate everyone
Involve	
10	Q&A / Career Chat. Use my prepared slides, then the teacher will ask the class to type questions into the chat.
Sustain	
2	Next steps and close. Show the Digital World web page for Digital Forensics career. Mention that my company is accepting work experience students, and that they can apply for more information using the website.

Since you're less able to troubleshoot on a one-to-one basis, having pupils work in teams or pairs will encourage them to help one another.

Best Practice:

- Don't make the activity too complicated
- Take inspiration from existing activities or lesson plans
- Remember to create points of interaction
- It's not a radio show! Silence is okay while pupils work through the activity

Using Quiz or Poll Questions

Quiz questions and polls are great interactive moments. You can use these to check how much the group is understanding what you're talking about. This is particularly useful in virtual engagements where you can't see them. Think carefully about what you want the learners to take away from the session and focus your questions here. You shouldn't try and 'test' them on facts or concepts they don't need.

A poor question:

What is the fourth step in the waterfall model Software Development Process?

- A: Design
- B: Verification
- C: Requirements
- D: Implementation

This kind of question is too much like a test, it doesn't encourage the learners to think and isn't relevant. Also, the answer will vary as different waterfall models exist.

A good question:

Sam is a gamer who really enjoys getting every achievement in a game. Which of the following jobs in game development would suit them?

- A: Games Tester
- B: Visual Artist
- C: Marketing Manager
- D: Sound Designer

This question touches on careers, the focus of the engagement. It may be personally relatable to some learners and could act as a springboard for more discussion.

Best Practice:

- Choose questions which are relatable and relevant
- Don't 'test' the learners, it's not an exam!

Tools:

There's a variety of different tools you could use to run polls or quizzes. Here are our recommendations. These allow the participants to answer questions on a computer or phone by going to a specific event URL.

[Slido](#) and [Mentimeter](#) are the most widely used platforms for running polls. Their free offering only allows for a few questions, so may not be suitable depending on your plans.

[Poll Everywhere](#) is a good alternative and does not have a question limit. Our lesson plans contain a template file which can be uploaded to Poll Everywhere containing the right questions.

Watch out! By default, the quiz or Q&A functions on all of these services will make all responses visible and upvotable. To avoid embarrassment or misuse, always run as a **poll** and double check the settings first.

If your activity requires the learners to submit several answers at the same time, [Google Forms](#) is a good option. It's also free and easy to use.

Best Practice:

- Check the tool isn't blocked in the school before the day of the engagement
- Don't ask for or let learners fill in any personal information
- Disable any features which let learners see each other's responses



Step 4: Involve

This is the point where you will discuss careers and take Questions & Answers. Answering questions from the learners will be an important part of your virtual engagement session. Follow these best practices to make sure the learners get the most out of this opportunity.

The teacher will be part of the conversation, they should relay questions from the pupils to you. They will be able to contribute and answer questions too.

Talking Points

When it comes to talking about careers you should follow these best practices:

Present something impressive or interesting in your industry

- *Our company is responsible for delivering 1 billion parcels per year in the UK. 99.9% of them make it to their destination.*

Talk about a challenge/issue in your industry and link this to everyday life

- *Every parcel is important, and it's vital that every single one of them gets to the right place and on time. More and more people shop online, and they want to know what hour their delivery will come.*

Give three examples of job roles in your company which are relevant to this problem. Choose distinct examples where most people would see something that might interest them.

- *Data Scientist - Data scientists look at the huge amount and help us work more efficiently.*
- *GIS Specialist - Routing is really important, it means we can save fuel and deliver more parcels on a trip. Geographic Information System specialists are experts at working with map data.*
- *Software Engineer - We make our own app for warehouse workers and drivers to use. Software engineers make this app.*

Common Questions:

Think about what you might be asked and how you would answer these common questions. We've given you some template answers to help you out:

- *What do you do at your job?*
 - I start my day by doing _____, then I solve problems with _____. My favourite part of the job is _____ because _____.
- *How much are you paid?*
 - People who work as a _____ usually earn _____ to _____ which is above the average salary.
- *Is it hard?*
 - Sometimes it is, yes. _____ can be challenging, but it's really satisfying when you get it working and get to show it off to _____.

If questions aren't forthcoming, you can start by answering one of the above questions. It's a good way to get the ball rolling.

Here's a useful report from Scotland IS with facts and figures about the sector:

[Scotland Digital Technologies Summary Report 2019](#)

Best Practice:

- Link what you say to everyday life, make it relatable to the learners
- Share *your* experience, you can give so much more than generic career information



Step 5: Sustain

Now it's time to wrap up. When there's a few minutes left you should begin to wrap up the session. Here's a checklist of 5 key things you should do at this point.

WRAP UP THE VIRTUAL ENGAGEMENT

THANK

Thank the teacher for inviting you

PRAISE

Praise the class on their accomplishments in the activity

SUGGEST

Suggest some similar activities they could try and a few good resources

REMIND

Remind them they can ask you further questions via their teacher

DIRECT

Let them know about any relevant job openings, or recruitment campaigns happening within your company

Best Practice:

- Think about what the learners could do next and opportunities available to them
- Follow the 5 steps in the checklist

Putting It All Together

Now you've seen all the main ingredients that make up a great virtual engagement:

 HOOK	Introduction (3 mins)
 ENGAGE	Hype the sector (5 mins)
 EXPLORE	Main activity (25 mins)
 INVOLVE	Discuss Careers & Q&A (10 mins)
 SUSTAIN	Close and Next Steps (2 mins)

Following these guidelines will help you build a great session. We have also produced a resource pack that includes lesson plans and materials that follow this guide. These will be available soon.

Other Considerations

Pitch

Pitch is key for communicating effectively. If you go too high, or too low, it'll be difficult for the learners to follow. An easy way to get the level about right is to imagine you're speaking to a friend who doesn't know anything about the industry.

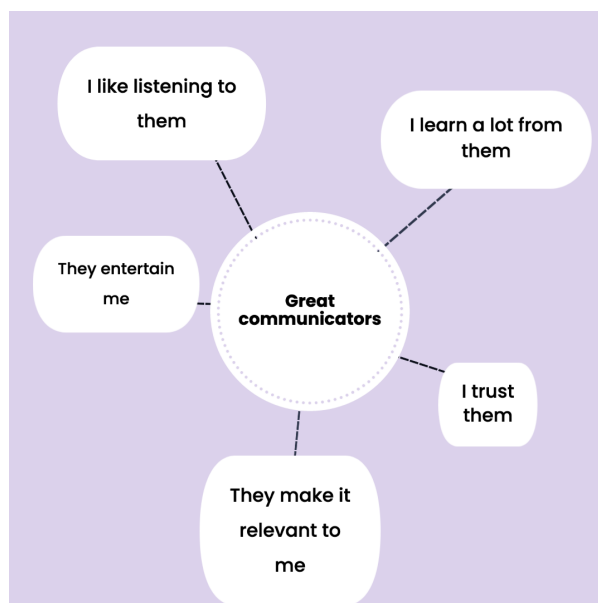
Aim for a warm and friendly tone, and be natural as if you're having a normal conversation. Smile, and try to maintain eye contact with the camera lens when addressing the class. It will make it feel more personal.

What makes a good communicator?

An exercise for you: Take a moment to think about who you regard as a great communicator? They can be someone you know personally, or someone famous. It doesn't have to be someone from a technology background.

Aim for two or three people. Some examples might be: David Attenborough, George Alagiah, Martin Lewis, Hannah Fry, Tom Scott, John Oliver, Sandi Toksvig

Now, think about why you chose them?



Could you adopt some of their style and attributes?

Accessibility and Adjustments

There may be pupils within the class you're working with who require additional support or adjustments. Ask your teacher if there is anything you can do in order to accommodate their needs. They will be able to advise and support you as necessary.

For advice about making online materials accessible check out the UK Government's [Web Content Accessibility Guidelines](#).

Equality and Diversity

The digital technology sector is for everyone and should include everyone whatever their background. When taking part in virtual engagements you should commit to reflecting and representing the diversity of people in Scotland.

Be careful not to reinforce stereotypes of working in technology, or the type of people who work in it. As mentioned previously, the tech industry workforce is not yet representative of the wider population. So reinforcing any negative perceptions or harmful stereotypes is something to avoid.

For advice about equality and diversity check out Education Scotland's [guide to embedding inclusion and equality](#) into education. Also, read Skills Development Scotland's "[Tacking the technology gender gap](#)". The "[Neurodiversity in Digital Technology](#)" report is worth reading to learn more about approaches to working with neurodivergent people (including conditions such as Autism, Dyslexia, Dyspraxia, Dyscalculia, Dysgraphia, and ADHD).

Safeguarding and Child Protection

In Scotland, 'child protection' and 'safeguarding' means protecting a child from abuse or neglect. Everyone has a role to play in child protection, not just core professionals.

While it is very unlikely that you will encounter a child protection situation during these supervised virtual engagements, it is important you are aware of the need for safeguarding. Ask your teacher to share any relevant guidance or advice before the engagement.

If a child makes a disclosure to and they tell you something of concern you should listen, remain calm, allow the child to finish telling you what they want to. Report any and all concerns to your teacher immediately, but in a manner that will not alarm the child.

When discussing your own role, please make sure any examples or content which you show is appropriate for a school setting. If you are unsure about this, please check with your teacher in advance.

Industry Volunteer Training Series

These useful training videos were originally designed for industry volunteers to help them prepare to physically visit a computing classroom, but they apply just as much to a virtual environment. They cover key topics like what to expect, child protection, and an overview of the computing curriculum in Scotland.

The videos were made in partnership with University of Edinburgh, Skills Development Scotland, Digital Skills Education, and Data Education in Schools. We'd recommend watching the series.

Watch the [videos](#)



The videos are presented by education experts, including Professor Judy Robertson.

Technical Considerations

You'll get the most out of virtual engagement when the learners can see and hear you clearly. Follow these best practices to make sure you look and sound great.

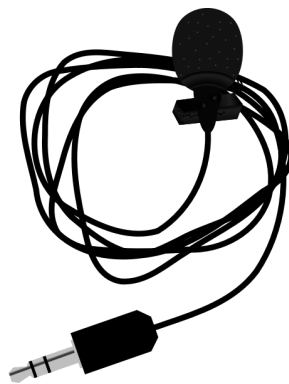
Location

Choose a location where you're comfortable and with a stable internet connection. Where you usually work is probably fine. Tell others who you work or live with that you'll be joining a call so they know not to disturb.

Consider what is visible in the background. Check for any personal or work sensitive information on display or anything else that could be a distraction to the learners? A plain background or virtual will keep the focus on you. If you work somewhere that you can create an interesting backdrop - great! But prioritise getting good audio and video as described below.

Audio

Audio quality is more important than video quality, use your best microphone. It might be the one in your laptop, on a headset, or even on your favourite pair of headphones. We'd recommend using a clip-on lavalier microphone, or a headset.



An inexpensive lavalier microphone can make a big difference to your audio quality

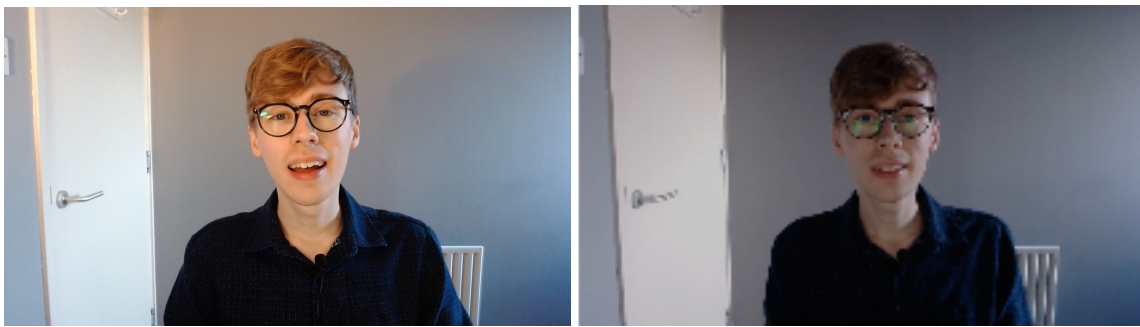
Consider what background noise there might be, pause the washing machine and close the windows. If you have a smart speaker you should mute it, both for privacy and to avoid any embarrassing interruptions.

Video

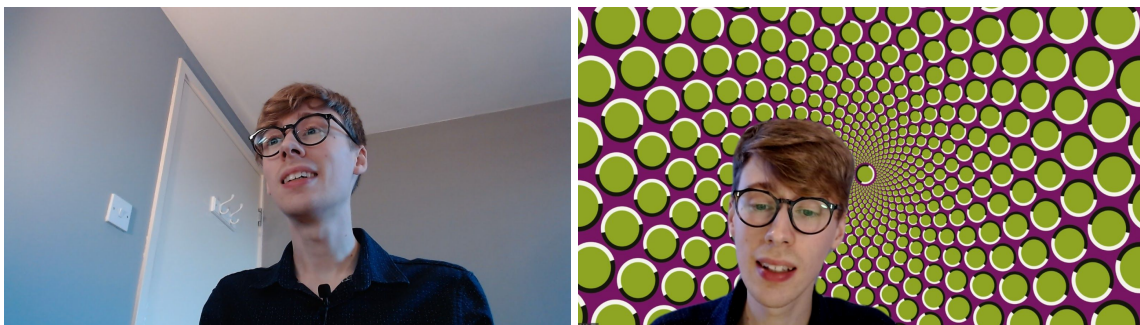
Your camera should be positioned as close to eye-level as possible. The biggest contributor to picture quality is your lighting, so make sure the room is well lit - natural lighting is best. Don't have any bright light sources like a window behind you, they'll cause the camera to underexpose you.

It is good practice to keep some space free at the bottom of the camera feed so learners who have captions enabled don't miss out on anything.

If you have any props, embed a photo or video if you can in the presentation. Some webcams struggle to focus on objects close to them.



Turn on the lights and increase your monitor brightness to get a clear shot.



Try to have the camera at eye level and pointing at you. Avoid busy backgrounds.

Screen Sharing

Will you be sharing your screen? Be wary of any notifications that could pop up on screen from emails or instant messages. It's a good idea to close any windows you're not using, and to check you are comfortable with people seeing what is on your desktop.

After The Virtual Engagement

You made it! Congratulations! But there's still a few things you need to do.

Thank You Email

You should send a short email to thank your teacher for their help after the session. Point towards any links or resources you mentioned. If you'd like, offer to run another session in future!

Hello Mr Miller.

Thank you for inviting me to take part in the virtual engagement session yesterday. I had a great time, and it was lovely to hear the responses from the learners. Thank you for helping set up the meeting, and for helping me present.

As I mentioned, at the bottom of this email is a link to the company website. I've also attached some photos of the server room that the learners were interested in seeing.

I hope we can run a session together again in the near future.

Yours in virtual engagement,
Arthur McKee

Evaluation Forms

It's important to collect feedback from the learners, the teacher, and also you. If there's not time during the session, send the form along with your thank you email.

Here's three premade evaluation forms: [Evaluation Forms](#)

Send your completed forms to: [Debbie McCutcheon](#) at Skills Development Scotland.

Share Your Experience

Organise to do some informal sharing with your team. What did you learn? Encourage them to get involved at a future event, you could even share the hosting role together.

Become a STEM Ambassador

We'd love for you to post another opportunity on Marketplace if you've had a good experience.

You could also consider becoming a STEM Ambassador. You'll get support and join a network of over 30 000 enthusiastic volunteers. You can log any virtual engagements you run on their system.

Find out more about [becoming a STEM Ambassador](#)

What Do I Do When?

Sometimes things don't go as planned, but there's no need to panic. Here's some common concerns that volunteers have, and how you could deal with them.

What if I'm asked something and I don't know the answer?

Don't be embarrassed, nobody expects you to be a genius who knows all the answers. You'll come across as more human and relatable by acknowledging that you don't know. And that even if you're an expert, it doesn't mean you know all the answers.

Depending on the question, you might want to look it up together during the engagement. If it's not relevant to the current activity but a good question, offer to email the teacher later with an answer.

I can't get the attention of the class!

This isn't your job, and the teacher should step in. If for any reason you feel you need some assistance, ask!

Everyone is struggling with the activity!

Sometimes a group might find it more difficult than you expected. There's a few things you could do in this situation:

1. Work through the activity together with the class
2. Cut out a section of the activity
3. End the activity early

Whatever you do, it's important you stick to the timings so you still have plenty of time to have a career Q&A. We've found that even if a group finds it tough or challenging, they still enjoy taking part, as long as they aren't made to feel stupid.

Pupils are getting through the activity too quickly!

It's okay if this happens. In this situation you could slow the activity down by talking more about what they are doing, or by asking for and answering questions. Worst case scenario, you have some extra time for discussing careers.

A pupil sent me something inappropriate

This is extremely unlikely, but in this event you should let the teacher know as soon as possible. They will help you follow any safeguarding rules. Don't reply to the pupil directly.

Platform Matrix

If Glow is unavailable, these are some alternative popular video conferencing platforms. This matrix assumes you are setting up the meeting as a consumer. Teachers using glow are subject to restrictions from Education Scotland and their local authority.

	Google Meet	Microsoft Teams	Skype	Zoom	Jitsi	Team.video
Free	Y	Y	Y	N	Y	Y
Works in a web browser	Y	Y	Y	Y ¹	Y	Y
Account required to create	N	Y	N	Y	N	N
Account required to join	N	N	N	N ²	N	N
Password protection	N ¹	N ¹	N	Y	Y	N
Screen sharing	Y	Y	Y	Y	Y	Y
Commonly used within schools	Y	Y	Y	N	N	N

N¹: The organiser must admit people manually from the waiting room.

N²: The desktop application is required to join without a Zoom account.

Y¹: A Zoom account is required to join using a web-browser.

Blank Lesson Plan

Time	Lesson Plan for _____ Teacher: _____
Hook	
2	
Engage	
5	
Explore	
30	
Involve	
10	
Sustain	
2	

References

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Bad Slide examples by 24slides

Microphone image by Openclipart

Additional sources:

[“Digital World”](#), [“Remote STEM Ambassadors Quick Tips Guide”](#), [“NCCPE Guide to Meaningful Engagement Online Events”](#), [“NCCPE - Working with schools”](#), [“Education Scotland: Guide to embedding inclusion and equality”](#), [“Tacking the technology gender gap”](#), [“Neurodiversity in Digital Technology”](#)

Thanks to:

Conor Ellis, Tanya Howden, Debbie McCutcheon

