Volunteer Walkthrough

Power Changers

STEM Lessons for Primary Schools in the UK and Ireland

Jobs for the Future

sse | For a better world of energy

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Volunteers should be aware of the following pieces of information before delivering these lessons:

All lessons in this suite are designed to be delivered in a normal classroom setting, although facilitators could adapt them for use in an assembly.

Each lesson plan contains information about how it can be adapted to suit pupils with SEND provision.

Each lesson plan builds one essential skill step from the Skills Builder Framework for essential skills. This Framework provides a common language for defining and developing eight essential skills. You can explore the Framework here.

Lesson slide decks, worksheets and knowledge organisers for each lesson can all be found in the appendix ready for download at SSE's STEM website.

The lessons can be delivered by an in-class teacher or delivered by SSE volunteers. To contact SSE about this opportunity, please email stem@sse.com. It is suggested that if only one lesson is to be delivered, that this is the first lesson in the topic.

Please share your pupils' work on social media, tagging @SSE on Twitter or @SSEplc on Instagram and using the #STEMatSSE tag.

JOBS FOR THE FUTURE

Lesson 1

MOVING WITH THE TIMES

	Introduce yourself as the educator.
	Briefly introduce yourself and explain who SSE are and what they do.
	Do Now (10 mins) Introduce the talk thread: a career is a job Explain to the children that at this stage, you want to gauge their understanding of these two words as they are important in the lessons on jobs for the future. Children to discuss in pairs and then share ideas with the facilitator. Take ideas from the children and identify if children can see the key differences. Ensure this information is recorded onto a shared display so it can be referred to later in the session.
	Explain key words used in the lesson Facilitator to make it clear that a job is a single role and tends to be shorter term whereas a career is longer term and is something you do because it's your purpose. Can children give an example of a career that someone may have?

Introduction (20 mins)

Show slide focusing on careers vs jobs. It is important that children do not confuse a career with a job. Spend some time focusing on the differences between the two terms and build in discussion about what children think a career pathway is.

Show the task to the children and ask them to complete the statements to review their understanding.

Explain that in this unit. Children will be considering what jobs in the future might look like. In order to do this, we need to consider jobs from the past and how jobs have developed over time.

Show 3-part Venn diagram with headings of past, present, future. Use two examples to discuss where they might go – teacher is something that is from the past, present and future so would go in the middle. Youtuber would go in present and future. Facilitator may wish to add their own examples or children's. Important to give clarity on the term 'past' and ensure children are aware that for this task, we are considering 50+ years ago.

Children then to add the remaining ideas to their own Venn diagrams (this could be on whiteboards / rough paper or the facilitator could print a copy of the slide).

If any children complete this task, they are able then to add their own ideas to the Venn diagram.

Introduce Listening as the receiving, retaining and processing of information or ideas.

Explain that during the lesson the children will be using their Listening skills to record important information that is shared with them about jobs and careers.

Reflect on the previous task – why is it so difficult to come up with careers that belong in the 'future only' section of the Venn diagram? Explain that this is why the big question is so important: how do we prepare for careers that may not even exist yet?

Take ideas from the children from the Venn diagram task and display this. Ask if the roles that are two or all three of past, present, future have remained the same. Discuss the example of teaching and how this might have changed over time e.g. using technology, changing behaviour management etc.

Show example of past career and career from modern-day. Discuss with the children what is changing in each image (mechanic shown with an old-fashioned engine, a modern, petrol engine and an electric car with laptop). Discussion should also be extended to what will be the same (e.g. all require training, skill, patience…)

Children to share their ideas with the facilitator about what is changing in each image.

Children will understand that the careers available to them in 10 years' time may not even exist yet however there are trends that we can see. They will see how the development of technology and important issues lead to new careers.

Show table for the pupil practise session – model using a familiar example of how a career in this area might have changed (use car mechanic as example – past focusing on older, less reliable cars; present developing understanding of electronics and fuel efficiency; future may focus on electric cars, solar powered etc.). Take ideas from the children. Clicking on the slide reveals suggested responses.

Children to suggest ideas of other professions and how they might have changed during this stage of the input. Important that they giving rationale behind their ideas for how things might have changed in the future.

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Pupil practise (15 mins)
Show pupil practise sheet on the interactive whiteboard showing the mechanic example and two others. Show the ideas suggested so children are able to see that on the social media influencer, ‘did not exist’ is recorded in the ‘past’ section as this was not a career until recently.
Children to examine examples of careers available and how they have changed over time as well as predicting how they might change over time.
In some boxes, they will write ‘did not exist’ or ‘will not exist’ if they think this is appropriate.
GD: children to consider any roles that may not exist yet but will do in the future.
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Review of learning (5 mins)
Explain to the children that careers will continue to change however there are many things that all careers need – even ones that don’t exist yet – which we all have. Ask the children to consider the questions shown.
How have careers changed?
How do you predict they will change in the coming years?
Will career pathways be very different because of these changes?
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Finally, show video of SSE apprenticeship. Explain to the children that one person’s career pathway can be very different to another’s. The best thing about being an SSE apprentice? – YouTube https://youtu.be/QgRW1kzNG9w
Tell the children that they are going to be looking in more detail about SSE.
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Give each child a post-it and ask them to write what their key take away is from today’s lesson. There are some suggestions of sentence starters shown on the slide but children can also choose their own.
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Ask the reflection questions to help children understand and communicate the skill they have focussed on alongside their knowledge. Use the children's answers to judge their understanding of Listening Step 5 – I listen to others and record important information as I do.

Activity	Time Allocation Guide
Do Now: talk thread	5 mins
Introduction: past, present and future venn diagram	20 mins
Provide Model: modelling of graphic organiser	15 mins
Pupil Practise: graphic organiser – past, present, future careers	15 mins
Review of Learning: how are careers changing?	5 mins

Use these timings as a guide – this can be adjusted for the session being led

Please provide feedback via QR link – encourage children to submit examples of pupil work to social media.

A more detailed lesson plan can be found in the SSE 'Power Changers' Primary booklet.

CHANGING CAREERS FOR CHANGING TIMES

Lesson 2

STEM EDUCATION PROGRAMME Jobs for the future Changing careers for changing times *LO: To **identify** a range of roles needed to develop or maintain vital technology* 	Introduce yourself as the educator.
WHO ARE SSE? 	Briefly introduce yourself and explain who SSE are and what they do.
Do now: 5, 4, 3, 2, 1 • 5 examples of careers available today • 4 examples of careers which were available in the past • 3 things you remember about the work of SSE • 2 types of technology which is important for this work • 1 key difference between a job and a career	**Do Now (5 mins)** Explain the 5, 4, 3, 2, 1 task to the children where they will be recapping the previous lesson. 5,4,3,2,1 Children talk in pairs / small groups with: 5 examples of careers available today 4 examples of careers which were available in the past 3 things you remember about the work of SSE 2 types of technology which is important for this work 1 key difference between a job and a career Through this, children will be accessing their prior learning.
KEY WORDS solar power hydroelectricity renewable 	Explain key words used in the lesson

Introduction (10 mins)

Explain that today, we are going to be looking at an organisation called SSE to help us better understand Jobs for the Future.

Children given a structure to help take in the key details about SSE.

What makes SSE special / unique?

Share the big question and ask the children to consider this in relation to the development of technology at SSE.

Introduce Creativity as the skill used to think of new ideas.

Explain that throughout the lesson, children will be using their Creativity skills, particularly by asking questions to develop ideas.

Optional: Describe when you have demonstrated this skills step in your current role

Provide model (15 mins)

Show example of technology developed or maintained by SSE through showing the children the video up to 2m30seconds Hydro: Power a Net Zero Future (SSE COP26 Exhibition) - YouTube

Show mind map structure on the slide with image of hydro-electric plant in the middle. Ask the children to give ideas of the roles needed to create, maintain and improve this.

Children to devise ideas for the careers, skills, questions, technology needed for SSE to consider running a hydroelectric plant. Work in pairs or small groups for this.

Take ideas from the children and add this to the mind map. Complete the mind map with as much detail as possible. Important that children are questioned to go further with thinking. e.g. is it working as efficiently as it can? How do we protect habitats in the surrounding areas?

	Highlight to children that questioning is being used to develop their ideas, which is an aspect of the Creativity skill.
	Pupil practise (20 mins) Show the video on wind turbines and hydro SSE Renewables ¦ For a better world of energy - YouTube Explain that children have already looked at hydro and they will now consider the jobs, skills, questions and technology needed to develop, maintain and improve the wind turbines. Children will create a graphic organiser to form a basic structure around SSE wind turbines They will have made decisions on the number of people key to developing and maintaining this. Children to work in pairs to record their ideas.
	Review of learning (10 mins) Finish the session with a discussion-focused activity: would you rather. The facilitator can use four parts of the teaching space with each part being A, B, C or D. Alternatively, they could ask children to show their selection in another way (e.g. whiteboards, hands up). Show the statement and options on the slide and then take ideas from the children for why they have chosen that option. Children to respond and feedback to the facilitator on the questions on the slide.
	Ask the children how they used their Creativity skills. Open a class discussion around the questions on screen. This will help children understand and communicate the skill they have built alongside their knowledge.
 Activity / Time Allocation Guide Do Now: recap of career / 5 mins Introduction: who are SSE and what do they do? / 10 mins Provide Model: shared discussion of jobs needed / 15 mins Pupil Practise: considering jobs needed / 20 mins Review of Learning: Would you rather? / 10 mins	Use these timings as a guide – this can be adjusted for the session being led

	Please provide feedback via QR link – encourage children to submit examples of pupil work to social media.

A more detailed lesson plan can be found in the SSE ‘Power Changers’ Primary booklet.

CELEBRATING OURSELVES

Lesson 3

	Introduce yourself as the educator.
	Briefly introduce yourself and explain who SSE are and what they do.
	Do Now (5 mins) Show images of hydroelectricity and wind turbines. Ask the children to think about the roles of the people who are essential to developing, maintaining and improving these assets. Children to work in pairs or small groups to discuss prior knowledge and access the learning from the last lesson.
	Explain key words used in the lesson
	Introduction (15 mins) Share the big question and ask the children to share their ideas based on their previous learning.

Tell children that they are going to have the opportunity to listen to a range of people who have different roles at SSE. Explain to the children that they are going to watch the first video and they need to make notes about the person speaking about working for SSE on their whiteboards.

Show the first video (Mark, project manager)

Children to record notes based on the video using the prompts of who, what, when, where, why, how.

It is important to say to the children that they might not get information for every detail.

Once they have done this, the children should then be given time to share what they noted with their partner or group.

Introduce Speaking as the skill used to transmit information or ideas.

Explain that throughout the lesson, children will be practising their Speaking skills by using appropriate language in their video CVs. Encourage children to consider what kind of language they heard Mark use in the previous video.

Provide model (20 mins)

Show writing / notes structure. Shared write as example to reflect the SSE colleague shown in the first video. Important that none of this includes personal information e.g. gender, ethnicity – good teaching opportunity about equality and diversity in the workplace.

Using the Mark Beaman video (top left) as an example, complete the shared structure based on their role, background, what their role entails, vital skills, why this role is important, any other information.

Do this for the next three slides.

Pupil practise (15 mins)

Explain to the children that they are going to think about what they would need to do / have in order to get a role in the future with SSE. They are going to make a video application for one of the roles.

Say that when you are looking for a job / career, it is vital to think why the employer would want to work with you but it is just as important to think about why you would want to work for the employer.

Show the two questions: why would you want to work for SSE? Why would SSE want to work with you?

This would be a good opportunity to point out positives within the class such as them being hard working, being caring, communicating calmly etc.

Children then to work independently to form notes for why SSE would want to employ them and also why they would want to work for SSE. This can then be filmed in pairs using iPads or another alternative based on what is available.

Other options for the written task (would need a longer session) are:

- Could also write a cover letter

Another option is a NCR of the roles that are available at SSE / persuasive piece 'Are you thinking…?'

Review of learning (5 mins)

Use the end of this session to review the previous 3 sessions with key questioning.

After the session, children should be given the opportunity to watch their video applications back.

Use the reflection questions to guide discussions around how children have used their Speaking skills during the lesson. This discussion will help children understand and communicate the skill they have focussed on alongside their knowledge.

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<td>Reflect on the big question as a group.</td>
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Activity	Time Allocation Guide
Do Now: If… then…	5 mins
Introduction: exploring the work of SSE	15 mins
Provide Model: Our poem structure	10 mins
Pupil Practise: Writing our emotive poems	20 mins
Review of Learning: Performance and pledges	10 mins

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