

Leeds Museums & Galleries Careers for All Toolkit



The object store at Leeds Discovery Centre which houses over one million objects

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1. Stakeholders

Leeds Museums & Galleries (LMG) - creators of the Careers for All Programme,
Natural History Museum and the Real World Science Network - funding partner
Eranda Rothschild Foundation - project funders

Project Partners:

National Coal Mining Museum for England
Leeds Parks and Countryside (Tropical World)

Professional Partners:

Ahead Partnership
People Matters Leeds
IVE
STEM Learning

Career Fair partners:

Leeds Arts College
Leeds Playhouse
Thackray Medical Museum
National Science and Media Museum
Mind the Gap Theatre
Lighthouse Futures Trust
Outside the Box

Participating partners:

Abby Grange Academy
Benton Park School
Bishop Young C of E Academy
Bradford Academy
Brigshaw High School
Broomfield South SILC
Cardinal Heenan Catholic High School
Cockburn John Charles Academy
Co-op Academy Leeds
Corpus Christi Catholic College
Doncaster College
East SILC Brigshaw
East SILC John Jamieson School
Fairfields
John Smeaton Academy
Leeds City College
Lighthouse School
North West SILC
Springwell Leeds
Swarthmore Education Centre
West Oakes
West SILC
White Rose Academies
Woodkirk Academy

Before we get started:

In this toolkit the following abbreviations will be used, see below for what they mean:

SEND: Special Educational Needs and Disabilities

SEN: Special Educational Needs

STEM: Science, Technology, Engineering and Mathematics

CfA: Careers for All

LMG: Leeds Museums & Galleries

2. Introduction

This toolkit is designed to highlight the different ways you can engage young people with SEND in career aspiring activities. Activities are split into separate chapters to enable you to cherry pick what you feel most comfortable delivering. Each activity will include examples of the approaches that LMG have facilitated and found successful.

The toolkit is designed for Museum and Heritage settings. It can be used to generate a greater understanding of including careers based learning at your site and how to make these activities accessible.

Throughout the toolkit there will be references to what LMG can do to help. This toolkit is a guide but is not designed to be used in isolation. We want to help you build through face to face interaction. If you have any questions or queries please contact us via email Carl.newbould@leeds.gov.uk.

What is written in this toolkit is what we have found to be good practice, however we do not advise you to follow it to the letter! It is important to note that every site, school and young person is different and activities should be adjusted to suit the needs of the group.

If you want to know more about working with SEND in museums in general then read the Special Schools and Museums Toolkit available for free here: <https://southeastmuseums.org/special-schools-and-museum-toolkit/>

3. Why Careers for All? Facts and stats

In 2019 Mencap identified that the number of young people with a learning disability who are in sustained employment is at 6% and this figure is falling, in 2015 it was at 7%, yet there is the potential for 70% to be in employment. The evidence from the CEC (Careers and Enterprise Company) highlights that “a young person who has four or more high-quality encounters with an employer is 86% less likely to be unemployed or not in education or training.” With this knowledge more

needs to be done. There needs to be opportunities for young people to explore careers and these opportunities need to happen more frequently. It is important to note here that this is not a niche group, according to the Department of Education (2017) 14.4% of all school age children have SEN and 8% have a disability.

LMG CfA was created in 2019 through the Real World Science Network; a collaborative network which supports natural history institutions to deliver inspirational, authentic and relevant informal science learning across the UK. Phase 1 is funded by the Eranda Rothschild Foundation until December 2020.

This toolkit is written to tie in with both the SEND Gatsby Benchmark Toolkit and the Department for Education SEND code of practice:

The SEND code of practice (2015) states that it is important that young people think about career aspirations as early as possible and that from year 9 at the latest there is help to start planning for a successful transition into adulthood.

The Gatsby Benchmarks

Written by the Careers and Enterprise Company the Gatsby Benchmarks are a framework of 8 guidelines that define the best careers provision in secondary schools:

https://www.careersandenterprise.co.uk/sites/default/files/uploaded/1051_the_send_gatsby_benchmark_toolkit.pdf

1. A stable careers programme
2. Learning from career and labour market information
3. Addressing the needs of each pupil
4. Linking curriculum learning to careers
5. Encounters with employers and employees
6. Experiences of workplaces
7. Encounters with further and higher education
8. Personal guidance

CfA is linked to these benchmarks, however it is particularly relevant on points 3 to 6. If you want to more about the Gatsy benchmarks you can download their toolkit for schools, colleges and SEND for free.

4. What is Careers for All?

a. Phase 1

CfA is a programme aimed at young people (11-25 years) with SEND to engage in a diverse range of career aspiring opportunities with STEM (science, technology, engineering and maths) running through the core of it. The aim of the project is to:

- Help pupils increase their experience, understanding and/ or knowledge of STEM based careers, thus removing barriers which prevent them pursuing a STEM career.
- Give pupils the opportunity to gain or improve upon life skills which could be carried into a future career.
- Increase the confidence/ self-esteem of pupils with SEND in regards to STEM careers.

As you read on through the toolkit you will find the methods used to achieve this.

“The Careers for All project has been such a valuable experience for our learners. The Museums and Galleries have been able to offer a bespoke learning experience for a wide range of our learners that have included taster days that have enabled students to learn about working in museums, to outreach days, where Carl has visited the school to give differentiated learning experiences to students, including those with complex sensory needs. In addition to these, students have been able to access work experience opportunities. Students accessing these work experiences have noticeably benefitted from this opportunity and have learned key work skills. Students have grown in confidence and self-belief.

Learners with SEND often have a limited range of external opportunities available to them, but the Careers for All project has changed this, providing students with valuable learning experiences that are relevant, engaging and meaningful.”

Careers Lead from Leeds East SILC (Specialist Inclusive Learning Centre)

b. Phase 2

The second phase of the CfA project will run from January 2021. This was made possible by popularity of the project and the importance it has had to those who have participated.

Phase 2 will create the opportunity for new organisations to join the CfA project to help tackle the employment gap issue.

Any organisation partaking in the CfA project will gain the following advantages;

- The Careers for All toolkit
- Contact with the Learning and Access Officer managing the project who will meet you and discuss ways you can create your own effective career aspiring activities.
- Staff training and information sessions on a choice of topics related to SEND including; SEND code of practice, introduction to SEND, introduction to autism, terminology.

5. What you can do?

We are aware that from organisation to organisation there will be a difference in time and capacity. This is why the toolkit offers several activities that you can run. These are listed below and are in order of simplicity to set up, with the most straight forward first:

- **Careers fairs;** letting your local schools and colleges know that you are available to go into their site and hold a stall representing your organisation.
- **Outreach;** going into a school or college to deliver presentations or activities on museum and heritage careers.
- **Career taster days;** inviting pupils into your organisation to partake in one day of activities that reflect careers in your organisation.
- **Work experience/ placement;** a young person spends an extended period of time with your organisation allowing them to gain an understanding of potential job roles, skills and working practices.

Making a positive difference to your organisation

It is not just the pupils who partake in your activities that will benefit. One of the unexpected outcomes LMG had from the project was the benefit to staff. The project allowed staff to have exposure to a diverse audience and see some of the talent that is within local schools.

Some of the training and information sessions also helped teams who already have a member/ members of staff to know more about how to make a work space more accessible, but also helped staff be more understanding.

Working together

To set up any of these activities, please get in touch with our team. We will send a staff member out to visit your site and discuss;

- Which activities may work best in your setting
- How to plan and deliver an activity within your setting
- How to advertise/ network within your area.

6. Careers Fairs



Ian Hendry from the National Science and Media Museum at a careers fair

Careers fairs are a great way to show off your organisation to pupil and may be the first time a young person considers museums and heritage as a career. Throughout the CfA programme LMG have attended fairs in both schools and colleges as well as hosted an event at Leeds City Museum.

How to get involved

The simplest way to get involved is to contact local schools and offer to attend their events. Many will be grateful for the offer.

Time

The organisation behind the event will be done by the school or college therefore the time to your organisation is often only half a school day, approximately 2-3 hours, or a full school day (5-6 hours). You will need to take time to consider what resources you will take with you.

At the SEND careers conference held at Leeds City Museum exhibitors brought objects and activities that helped them not only explain but demonstrate what careers are available on their site and what their museum is about.

7. Outreach

Outreach is important to engage young people who may lack the confidence to visit a museum or find leaving the safe environment of school difficult. It is also important to help schools who may struggle to organise transport for their pupils due to either practical or financial reasons.

What Leeds Museums & Galleries have done

LMG offered two different outreach workshops to discuss museums, their collections and the jobs people do. One workshop is for pupils who are independent or working towards independence the other is a sensory workshop for young people with more profound learning needs. The lesson plans for both of these workshops are in appendix 1a and 1b.

Time

Time will be needed to plan your activity/ activities. We would recommend that even if you have a tried and tested workshop that you give it to teachers to look through before your visit to ensure the activities you have planned will work for the pupils you are going to see. Teachers and tutors will often give useful and insightful feedback that will help tailor your workshop to be more accessible. The delivery time of an outreach workshop can be as long as you think necessary however in phase 1 of our CfA delivery we found that shorter workshops were more popular, these go up to 45 minutes at most.

Working together

All partners in the CfA project are welcome to observe our outreach workshops if it will help to see how we do them.

CfA also has funding that allows us to work with you to create an outreach offer. We can then use our database of contacts to inform teachers and tutors of your workshops and if possible can attend outreach with you for your first couple of workshops to help with the delivery and give feedback.

8. Career Taster Days



Conserving the collection; Museums and Galleries taster day activity at Leeds Discovery Centre.

A career taster day is held at your museum/heritage site. They are designed to give a brief insight into your sector and allow pupils to gain knowledge and understand the skills required to pursue careers in your setting, or ones which are similar. Taster days are important as they create a touchpoint for pupils to think about their future beyond school and what they may want to achieve.

What has been done?

LMG career taster days are highly popular; at LMG we deliver 2 a month and within a year engaged over 160 pupils. Taster days also have receive positive feedback from both teacher and pupils; pupils identify a strong increase in knowledge of museum and heritage careers at the end of the day in comparison to the start. This aspect of the project has been delivered at Leeds Discovery Centre for a museums and heritage day and Thwaite Watermill for a building and engineering focused day. Partner sites have also delivered their own programmes; the National Coal Mining Museum for England in Wakefield had their own interpretation on the museums and heritage day and Tropical World in Leeds delivered a taster day on gardening and zoo keeping. Each of these four sites all have unique buildings, staff and working practices and it is important show pupils this. Taster days benefit from being unique, not just the same day copied and pasted into different locations.

Time

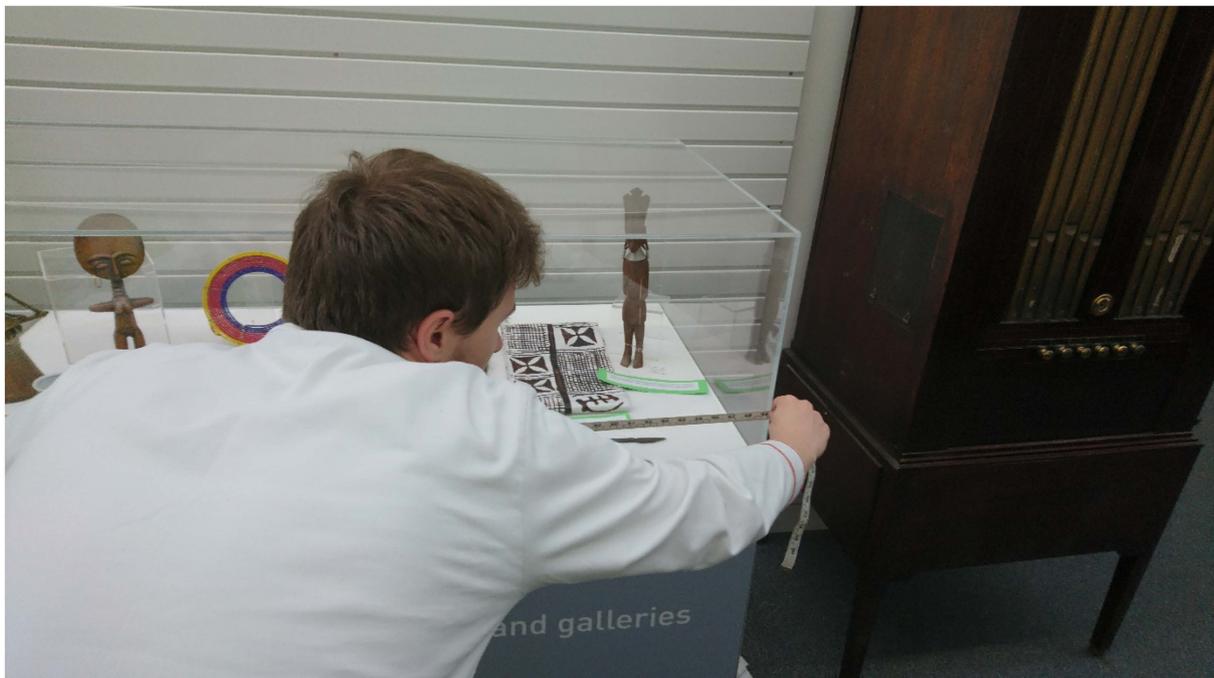
Taster days require time to plan and then take up a full school day to deliver.

Working together

An example of a lesson plans and resources used in careers taster days are in appendix 2. If you would like help setting a taster day up then we can visit your site and discuss what the strengths would be for deriving taster days on your site. If required we can also advertise your event to our partner schools and colleges.

9. Work experience/placement

Work experience can provide young people with valuable life skills and a snapshot into what a work environment is like and how to talk to colleagues. It can also help young people to start to create their own career path, learning from the types of jobs they do and do not like.



A placement pupil measuring up a display case in preparation to create his own.

Approaches to placement

CfA has trialled several different methods of work experience and each one has its own merits and drawbacks. It is for you and your colleagues to decide what will work best for your site and how best you can make reasonable adjustments for people with SEND. Placements can either be intensive but short; working every day for two weeks or more spread out; one day a week for a longer period of time.

Placements can either be prescribed; setting out day by day what the young person will be doing, or free-flow where the pupil gets involved with whatever is happening on site on any given day. The choice you make appropriately match the pupil you are working with.

Know your pupil

It is important to know your pupils before they begin a placement, We would strongly advise that you do not take on a placement pupil without meeting them and their teacher/ tutor to establish what working environment will suit the young person most and what reasonable adjustments can be made to accommodate for their needs.

For the CfA project we have a placement process to ensure a pupil is happy to attend and has a positive experience. This is why placements at LMG follow these steps;

- Initial contact with school/institution to establish if they want to take part.
- Correspondence on the offer with school representative
- Visit school/college to understand the needs of the pupils there
- Offer site visit to young people; identify potential placement students with teaching staff.
- Offer one-day work experience to pupil through career taster day
- Deliver informal training to site staff about the specific placement pupil and the needs they may have
- Commence placement starting with two-hour working days
- Extend time spent on placement days as appropriate
- Run mock interview after the pupil has gained experience from their placement

For a placement position the candidate must;

- Be at least 16 years of age
- Be willing to give two hours a week of their time for a total of a half term (approx. six weeks)
- Attend a site visit prior to their placement which they will learn about a museum site and meet the people who work there
- Be willing to work with a variety of museum professionals

The steps described above do not need to be followed to the letter but have been very successful at LMG.

10. Making placement meaningful

Placements should create meaningful experiences for young people not just be used as a box ticking exercise. This is why our placements are assessed to track the progress of the project but also to ensure the pupil is feeling fulfilled.

The method we use at LMG involves target questions both at the start and end of placement, a mock interview post placement if the pupil feels happy to do so and an ongoing reflective journal (see appendix 3).

Reflective journals can either be written by the pupil's placement mentor, dictated by the pupils to the mentor or written by the pupil themselves. For more visual and/or less verbal pupils journals could be created through use of photographs and pictures. Journals allow the mentor to see what the pupil is taking away from their work but most importantly allows the pupil to recognise their achievements themselves. Journals can be taken away by the pupil following their placement to help them to write job applications and to provide answers at interviews.

Our placement journals have four objectives that we look for in a pupil;

- The pupil used a STEM based skill
- The pupil increased their experience, understanding and/or knowledge of science based careers
- The pupil gained or improved upon a life skill which could be carried into a future career
- The pupils showed signs improving confidence/ self-esteem.

Our objectives are STEM and life skills based however there is nothing to prevent your organisation from creating your own objectives which would suit you better. (See appendix 3a for journal guidance used at LMG)

Mock interviews

With the majority of our placement pupils at LMG we run mock interviews. This gives the pupil a chance to partake in one and allows them to know how to apply what they learnt on their placement to a job interview.

Questions are taken from the top employment seeking websites to make the experience as real as possible (see appendix 4 for common interview questions).

Evaluation questions

At LMG we also ask a number of questions pre and post placement to evaluate what type of placement a pupil may benefit from but also to assess any progress made by the pupil (see appendix 5 for the questions we have used at LMG).

“I don't want to just be stuck at home doing nothing, I want to do something with my life and this is my first stepping stone”

Quote from placement pupil

Working together

If you would like to discuss how a placement could work in your museum and heritage site then we are happy to discuss this with you and help.

If you are in the Leeds area we can match up pupils for you and help with the set up and start of the placement.

We have a number of training sessions that we are able to deliver and outsource that we can deliver to staff on your site. This includes:

- Diversity and inclusion
- Working With SEND
- Autism information session
- How to run meaningful work placements for pupils with SEND
- Terminology and SEND

11. References and useful links

SEND Gatsby Benchmark Toolkit

https://www.careersandenterprise.co.uk/sites/default/files/uploaded/1051_the_send_gatsby_benchmark_toolkit.pdf

SEND Code of Practice

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/398815/SEND_Code_of_Practice_January_2015.pdf

Special Schools and Museums Toolkit

<https://southeastmuseums.org/special-schools-and-museum-toolkit/>

Contact for Careers for All Project

Carl.newbould@leeds.gov.uk

12. Appendix 1; Outreach

Example

Workshop Title: Careers for all outreach

Workshop topic – please identify curriculum links here for schools workshops:

What scientific work do people in museums do?

STEM careers for all. Life skills. Gatsby Benchmarks (3-6)

3. Addressing the needs of each pupil

4. Linking curriculum learning to careers

5. Encounters with employers and employees

6. Experiences of workplaces

Aim of session:

- To highlight the careers that can be pursued in a museum setting
- Gain hands on practical experience of science work
- Increase awareness and confidence in young people regarding career options in the future

Number of participants: 1 class

Lead person: Learning and Access Officer

Duration: 45 mins

Resources needed: outreach box, staff profiles, card sorting activity

Objects needed: sea shell, clam, snail shells, snake skin, deer antler

Activity	Duration	Objectives (key questions)	Activities	Resources	Differentiation
Introduction	5 min	Introductions and prep for assessment	<ul style="list-style-type: none"> • Introduce who you are and what you do. • Ask the group if they have visited a museum before and what they know about museum jobs. 		Use intro to determine group's knowledge of museums.
Careers told through an object	10 min	Use object as stimulus for discussion on museum careers.	<ul style="list-style-type: none"> • Discuss with the group what careers they think people can do within a museum. Use card sorting activity to follow the path of an object; from digging it up to getting the public to see it. Create the "chronology of an object" <p>Potential extension activity (5 mins);</p> <ul style="list-style-type: none"> • Hand out career profiles for the pupils to read and get them to think about where in the chronology of the object that particular staff member would work. 	Cards, staff profiles	Extension activity to be used with pupils with higher reading ability.

Option 1 Conservation	20 mins	To gain practical experience of packing museum objects.	<ul style="list-style-type: none"> • Key questions; What is a conservator and what do they do? Why is conservation important? • Discuss the nature of the Discovery centre (“where I work”) and how packing objects safely is of great import. • Model how to pack an object safely then ask the pupils to pack their own items. 	Objects in outreach box including bubble wrap and object paper	Match objects to the motor skills of the pupils.
What we have	5 mins	To learn about the types of objects found in museums	<ul style="list-style-type: none"> • After objects have been packed ask the groups to discuss the objects by forming their own key questions 	Unpacked objects!	Give class key questions as required; What is it? What is it made of? What is it used for? Who would have used it? What does it remind you of?

Option 2 Interpretation	20 mins	<p>To gain a knowledge and understanding about how museums display their objects.</p> <p>To build team working skills.</p>	<ul style="list-style-type: none"> • Discuss what an interpretation and curatorial department is and what they do. • Look at example museum cases and ask the group if they can identify what the themes are for each case. • Ask the group to work in small teams to think of a theme for a display based around an object given to them. • Ask the group to think about what other objects they could include and what they would want to teach their visitors. • Group thinks about labels they may use, colours for their display and content they would include on interpretation panels. • Extension activities- <ul style="list-style-type: none"> A- Matching labels to objects and/or images which they like the most. B- Look at several different ways to display the same piece of text and image and ask the group to 	Objects and/or images which can be used to create a display.	Use group work to allow all class to get involved. Staff to and direct moderate questioning.
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			choose which they think is best and why.		
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1b Sensory Outreach

Example

Workshop Title: Natural World; Sensory Environments

Workshop topic – please identify curriculum links here for schools workshops:

What scientific work do people in museums do?

STEM careers for all. Life skills. Gatsby Benchmarks (3-6)

3. Addressing the needs of each pupil

4. Linking curriculum learning to careers

5. Encounters with employers and employees

6. Experiences of workplaces

Aim of session:

- Explore three different habitats through sensory experiences
- See, touch, hear and feel what colours, sounds and wildlife you may encounter in a desert, the sea or in woodland

Number of participants: 1 class

Lead person: Learning and Access Officer

Duration: 45 mins

Resources needed:

- Colour changing lights (yellow, green and blue)
- Sounds: cd/ mp3/ YouTube (sea, desert and woodland)
- Sand pit
- Water pit (with salt)
- Smell cubes
- Video of three habitat locations

Objects needed: Animal artefacts from the three habitats

Summary	Duration	Objectives (key questions)	Activities	Learning Style (VAK)
Sea habitat	15 mins	What sights and sounds are there in the sea?	Introduce and briefly explain the animal environments you are going to recreate. For each habitat there will be sensory experiences including; See; <ul style="list-style-type: none"> • Videos and images of the environment Woodland https://www.youtube.com/watch?v=XxP8kxUn5bc Desert https://www.youtube.com/watch?v=fvRkWO5g2HE	V,A,K
Desert habitat	15 mins	What sights and sounds are there in the Desert?		V,A,K

Woodland habitat	15 mins	What sights and sounds are there in woodlands?	<p>Ocean/ sea https://www.youtube.com/watch?v=CbdJYCYAgtk</p> <ul style="list-style-type: none"> • Lights which use the colour of the environment (green, yellow and blue) • Museum artefacts. <p>Hear;</p> <ul style="list-style-type: none"> • Sounds of the environment using videos above • Rain stick for sea waves? • Turbo shell for sea noise <p>Touch;</p> <ul style="list-style-type: none"> • Natural science museum artefacts including; Rock python skin, rat snake skin, Roman snail shells, Sea turbo shell, Clam shell, Deer antler. <p>Smell;</p> <ul style="list-style-type: none"> • Smell cubes with environmental scents. <p>Using museum objects ask the group which environment they believe they belong too. Class can point or place objects in correct location or use verbal communication if able.</p>	V,A,K
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13. Appendix 2

Career Taster day Lesson plan

Example

Workshop Title: Careers experience day (full day at Discovery Centre)

Workshop topic – please identify curriculum links here for schools workshops:

What scientific work do people in museums do?

STEM careers for all. Life skills. Gatsby Benchmarks (3-6)

3. Addressing the needs of each pupil

4. Linking curriculum learning to careers

5. Encounters with employers and employees

6. Experiences of workplaces

Aim of session:

- To highlight the careers that can be pursued in a museum setting
- Gain hands on practical experience of STEM work.
- Increase awareness and confidence in young people regarding career options in the future

Number of participants: Up to 15 pupils

Lead person: Learning and Access Officer

Duration: Approx 4 hours

Resources needed: Visual timetable, Sticky notes, Question scales, Post it/ tag, Objects and images, Dig pit, brushes, Skeleton burial re-creation items, String for gridding, Cotton wool, cocktail sticks, deionised water and items for cleaning.

Objects needed: Items for cleaning and a mix of items for ice breaker and interpretation activities.

Summary	Duration	Objectives (key questions)	Activities	Resources	Differentiation
Introduction and ice breaker activity	10 min	Introductions and prep for assessment	<ul style="list-style-type: none"> • Introductions and H&S • Show the group the list of activities they will be doing through the day • Assessment; the class will mark their name on a scale answering the questions “how interested are you in science?” and “how knowledgeable you about the types of jobs you can do in a museum” • Discuss with the group what careers they think people can do within a museum. Outline of Staffing Structure for Discovery Centre 	<p>Visual timetable (digital or concrete)</p> <p>Sticky notes</p> <p>Question scales</p>	<p>Visual timetable made available at start of the day.</p> <p>Assessment questions on scale can either be 1-10 or emoji’s.</p> <p>Flash cards with activities of the day can be used throughout day and introduced here.</p>

Ice breaker activities	5 min	Grow class's confidence within the new environment. Gain a greater understanding of classes needs and abilities and communication ability.	<ul style="list-style-type: none"> • Ice breaker activities; • Pupils will write their name on a post it note/ tag and then label an item/object/image they find interesting. As a group they will then discuss the reasons for their choices. 	Post it/ tag Objects and images	<p>Use this activity to help gauge the level of pupils and their interests ready for the rest of the day.</p> <p>Staff can write on tags through dictation if required.</p> <p>Describe objects to partially sighted as required.</p>
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Follow an object		Gain a snapshot into a number of different museum roles people do.	<ul style="list-style-type: none"> • Ask groups to place in order the “journey of an object” from being underground and undiscovered to being in a museum for the public to look at. • When groups have ordered the cards ask them to feedback. • Discuss at each stage what the job title is and what skills each job requires. <p>Extension for pupils who have the literacy ability to read staff profiles;</p> <ul style="list-style-type: none"> • Give out staff profiles of people who work within LMG and ask the groups to read about them. • The pupils will match the staff profiles to cards from the previous activity. Working out where in the timeline they do work. 	Sorting cards Staff Profiles	Work as a whole class group for those that need the support, using images on the cards as a prompt. Staff profiles for more able pupils to extend their knowledge.
Archaeology intro	5 min	Gain practical experience of an archaeologist and some of the roles they may have.	<ul style="list-style-type: none"> • What is an archaeologist and what they might find? • Explain archaeology activities. 		Targeted questioning, scaffolding knowledge.

Archaeology activities	15 min	<p>Gain practical experience of an archaeologist and some of the roles they may have.</p> <p>Fine motor skills.</p>	<ul style="list-style-type: none"> • Table A- Gridding; pupils search through a recreated dig pit and then record their findings by drawing them onto paper, using a grid to assist them • Table B- sieving; using a collection of sieves ask the pupils to sieve through soil to separate it into different sizes of rock. • Table C- Investigation; Pupils look at a recreated Bronze Age burial and record the location of the objects they can see on worksheets. <p>Extension to table 3; pupils answer questions on the objects, theorising what time period they are from and what occupation the buried skeleton may have had, explaining through reasoning.</p>	<p>Skeleton burial re-creation items</p> <p>String for gridding</p> <p>Brushes</p> <p>Paper (with grids) and pencils</p>	<p>Objects in pit and grid can be changed to make the activity more or less challenging.</p>
Lunch	45 min				

Conservation	45 mins	To gain practical experience of cleaning and packing museum objects.	<ul style="list-style-type: none"> • If possible meet the conservator • Key questions; what is a conservator and what do they do? Why is conservation important? • Model to the class how you can clean and maintain museum objects using de-ionised water and cotton. • Pupils will clean their own objects picked out earlier in the day by a curator. 	Cotton wool, cocktail sticks, deionised water, fossils or items for cleaning	Give smaller more delicate items to pupils who have better fine motor skills.
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Interpretation	45 mins	<p>To gain a knowledge and understanding about how museums display their objects.</p> <p>To build team working skills.</p>	<ul style="list-style-type: none"> • Discuss what an interpretation department is and what they do. • Look at the cases in the corridor of the Discovery Centre and ask the group if they can identify what the themes are for each case. • Set up tables and chairs so that the pupils are all around one table and sat that they are now going to be panel to decide what display case the museum could do next. • Use a single object in the collection as a starting point and ask the group to draw up a spider diagram of what questions people might ask about the object and therefore what could go into its interpretation. • Create a second spider diagram which looks at the themes you could discuss around the object e.g. natural history, mammals, shells, adaptation etc. • Create a final spider diagram which would theorise what other objects could go into the display case. 	<p>Objects and/ or images which can be used to create a display.</p>	<p>Use group work to allow all class to get involved. Staff to and direct moderate questioning.</p> <p>If group is able pupils could work more independently in smaller groups.</p>
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Assessment	5-10 mins	Assessment of days activities and pupils understanding .	<ul style="list-style-type: none"> • The class will answer the same questions that were posed in the morning “how interested are you in science?” and “how knowledgeable you about the types of jobs you can do in a museum” • Ask the group if there are any jobs they discovered that they would/ would not like to do themselves • Take questions and if applicable discuss next steps. 	Scale and tags	
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Appendix 2a. "Journey of an object" cards

Object is found in the ground.	Object is dug up from the ground.
Object is cleaned and maybe repaired.	Object is researched to find out more about it.
Object is placed inside a case at a museum.	People are told that the object is in the museum.
People go to see the object inside the museum.	Object is underground and undiscovered.

Object is found in the ground.



Object is dug up from the ground.



Object is cleaned and maybe repaired.



Object is researched to find out more about it.



Object is placed inside a case at a museum.



People are told that the object is in the museum.



People go to see the object at a museum.



Object is underground and undiscovered.



<p>1. Object is underground and undiscovered.</p>	<p>2. Object is found in the ground. Archaeologist</p>
<p>3. Object is dug up from the ground. Archaeologist</p>	<p>4. Object is cleaned and maybe repaired. Conservation</p>
<p>5. Object is researched to find out more about it. Curator</p>	<p>6. Object is placed inside a case at a museum. Curator/ interpretation</p>
<p>7. People are told that the object is in the museum. Marketing</p>	<p>8. People go to see the object inside the museum. Front of house/ education/ learning</p>

14. Appendix 3; blank placement journal

Date	Objective	Activity	Observation/ comments

Location;

Pupil;

Placement duration;

Objectives reference;

1. The pupil used a STEM based skill
2. The pupil increased their experience, understanding and/ or knowledge of science based careers.
3. The pupil gained or improved upon a life skill which could be carried into a future career
4. The pupils showed signs improving confidence/ self-esteem

Appendix 3a Journal Guidance

Reflective Journal Guidance

What is the Journal for?

The placement pupil can use the journal as a reminder of the skills and experience they have gained. They can also use the journal to help them with job applications and interviews.

For LMG staff the journal is a record of the placement which is important for project evaluation.

How and when to write in the journal?

In the first two weeks of a placement a pupil should have the journal explained to them. Time should be given at the end of every placement day to fill in an entry for the day. The journal can be written using a variety of different methods depending upon the pupils needs.

If able the pupil should be encouraged to write their own journal. If this is the case then the mentor can also write a separate journal to link project objectives (see

below) to the pupil's experiences and reference what the pupil has written as necessary.

If the pupil does not write their own journal then it can be done in collaboration with their mentor as a "reflection of the day" activity. Where possible the pupil should dictate what they have done to their mentor.

If neither of the above are possible then the mentor can fill in the journal on behalf of the pupil. If this is the case then it is important to have good communication with the pupil's teachers/ tutors so that personal milestones can be recognised.

Objectives

The following 4 objectives are the aspects of the project that need to be identified;

- The pupil used a STEM based skill
- The pupil increased their experience, understanding and/or knowledge of STEM based careers.
- The pupil gained or improved upon a life skill which could be carried into a future career
- The pupils showed signs improving confidence/self-esteem

Below are examples of what you could include for each objective point;

The pupil used a STEM based skill;

- Problem Solving - how to get around or fix an issue. This could be done through a task which is directly a problem solving task e.g. how to bring visitors into a building when the main doors are closed or a problem which occurs during a task such as planting flowers in the garden to discover the soil is not deep enough.
- Working Creatively - using imagination to plan for example thinking about a display that they would like to create and drawing up a spider diagram with ideas. Conception and planning.
- Observing and Recording - learning through observation such as popularity of an exhibition in a gallery by the number of people who visit it, Following a tour, taking down notes, writing up what they have learnt. Measuring something (distance, weight or temperature) and recording data.
- Intellectual Curiosity - asking relevant questions of the world around them, showing a desire to research to learn more. Testing an idea using trial and error such as building something and seeing if it works efficiently then changing how it is built to see if it can be better.

The pupil increased their experience, understanding and/or knowledge of STEM based careers.

- Digital - use of computer programmes, software, photography, filming

- Natural science - gardening, animal welfare and weather related activities.
- Museums and Heritage - archaeology, buildings and engineering, maintenance, working with STEM based collection (e.g. animals and bugs)
- Maths - measuring, recording, figure analysis, reporting

The pupil gained or improved upon a life skill which could be carried into a future career.

- Communication - electronic, written and verbal
- Self-awareness - of skills, strengths and weaknesses, own work capacity, taking responsibility for work and actions. Time keeping.
- Empathy - understanding work force as a whole and needs of organisation are not person centric.
- Resilience - able to get through something which is difficult.
- Willingness to learn - asks questions, researches into topics being explored.
- Collaboration - working with others in the team/ organisation this can be with their mentor or with someone new and different for the day.

The pupil showed signs of improving confidence/self-esteem

- Taking on something new
- Doing something that made the pupil nervous/ completing something they were unsure about.
- Feeling a sense of achievement/ proud of their work
- Completing a task/ project

15. Appendix 4

Common interview questions

- Tell me about yourself
- Why do you want to work for us?
- What are your strengths?
- What are your weaknesses?
- Can you tell me about a time you worked in a team?
- Tell me about a time you showed leadership
- Describe a time you found something difficult, how did you overcome this?

16. Appendix 5

Evaluation questions

- What interests do you have?
- Have you ever visited a museum before?
- (If yes) where have you visited and what did you like about it?
- Do you enjoy learning about science in school/ college?
- Do you consider yourself a scientist? (ext. why/why not?)
- Do you see yourself as a potential scientist as part of your career in the future?
- What types of jobs do you think you could do/ would want to do in the future?