


LESSON PLAN KS2



Programme: Forensic Science Masterclass Programme of Study: Science

<p>TARGET AUDIENCE:</p> <p>Key Stage 2 (Age 8 – 11 years) Years 5 & 6</p> <p>Useful for Whole Year Group and Whole Class Teaching</p>	<p>DURATION:</p> <table border="0"> <tr> <td>Full morning session</td> <td>9:30 am – 12:00 pm</td> </tr> <tr> <td>Full afternoon session</td> <td>1:00 pm – 3:30 pm</td> </tr> <tr> <td>Full Day session</td> <td>9:30 am – 3:30 pm</td> </tr> </table> <p><i>Timings are flexible according to your school's timetable</i></p>	Full morning session	9:30 am – 12:00 pm	Full afternoon session	1:00 pm – 3:30 pm	Full Day session	9:30 am – 3:30 pm
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<p>LESSON AIMS</p> <p>To develop pupils' awareness of Forensic Science and the applications, techniques and authentic processes used within a Crime Scene Investigation (CSI) scenario.</p> <p>Cross-curricular basic skill development; supports elements of the following subjects (including National Curriculum references and levels, as appropriate):</p> <p>SC1 Scientific Enquiry, Mathematics Ma1, English: En1 Speaking & Listening, En2 Reading, En3 Writing, Drama, History (Level 1), Geography (Level 1), ICT, PHSE & Citizenship, Health & Safety and Enterprise Education.</p>	<p>PUPILS</p> <p>Number of pupils: 30 – 45 per session Example 6 x Groups of 5 students situated at Desks / Tables within classroom</p> <p>Ideal group size: 30 pupils</p> <p>Larger group sizes: School Hall / Gym required</p>						
<p>SCHOOL BENEFITS</p> <ul style="list-style-type: none"> ▪ Contribute to raised attainment ▪ Learn about new topics and try new ideas in a less pressured environment ▪ Celebrate science ▪ Raise the profile of science within the school ▪ Increase interest and attitude towards science ▪ Encourage independent working and team work, in order to approach and solve scientific problems utilising Forensic Science and Crime Scene Science as a tool ▪ Assist teachers and schools to raise standards across the whole Curriculum ▪ Support the "Every Child Matters Agenda" ▪ Opportunity for Continued Professional Development for both Teachers and Support personnel 	<p>RESOURCES</p> <p>All learning resources will be provided by PULSE</p> <p>Schools to provide A4 sheets of paper for activities</p> <hr/> <p>CEOP (Child Exploitation Online Protection)</p> <p>ThinkUKnow Programme. Short 8-minute film available for teachers to view prior to this workshop.</p> <p>ThinkUKnow Programme http://www.thinkuknow.co.uk (See end of lesson plan)</p>						
<p>OBJECTIVES – INTENDED LEARNING OUTCOMES</p> <p>By the end of the session each pupil will have a good overall knowledge of 'Forensic Science':</p> <ul style="list-style-type: none"> ▪ Engage the pupils in an introduction to Forensic Science in preparation for KS3, highly recommended for Year 5 & Year 6 groups ▪ Give pupils the opportunity to explore areas of Forensic Science - an ideal introduction to the Science Curriculum ▪ Allow pupils to participate in practical 'hands-on' science activities using authentic equipment ▪ Broaden pupils' enthusiasm for science, encouraging them to be active and curious ▪ Teach pupils that science is all around them - gain a greater understanding of scientific enquiry and it's wider aspects ▪ Allow pupils to gain confidence in their own thoughts and how to communicate scientifically to different groups ▪ Pupils will learn how these Forensic Science techniques relate and integrate into everyday life and the importance that this specialist skills set plays within today's Criminal Justice System – important for pupils' transition to KS3 learning <p>NB: If school has opted for CEOP (Child Exploitation Online Protection) KS2 film, this resource will highlight, prepare and reiterate to pupils the importance of 'Online Internet Safety'.</p>							

TIME	CONTENT	STUDENT	TUTOR / TEACHER
<p>9:30 am</p> <p>(Commence Workshop)</p> <p>(5 mins)</p>	<p>Welcome and brief introduction to the exciting world of CSI (Crime Scene Investigation), Forensic Science and more importantly, the specialist processes used within Forensic Science today.</p> <p>So what is Forensic Science? So what is CSI? What are the people in the white overalls called? 'Ideal photo opportunity'</p>	<ul style="list-style-type: none"> Listen Ask questions Observe 	<ul style="list-style-type: none"> Speak Ask questions Respond to questions Poll for examples of Forensic Science and collate on white board
<p>(10 mins)</p>	<p>Class Participation – 7 pupil volunteers to come and stand out at the front of the class:</p> <p>2 minute role play, resulting in a Crime Scene Scenario: 1st pupil = Victim 2nd pupil = Suspect 5 pupils = SOCO Officers</p> <p><i>(PM Session includes <u>all students</u> dressing up in SOCO suits)</i></p>	<ul style="list-style-type: none"> Listen Drama/Act (Question full class) Dress up pupils as SOCOs in authentic SOCO suits <p>Prepare: CRIME SCENE SCENARIO</p>	<ul style="list-style-type: none"> Lead 7 "volunteers" Class participation: we have a CRIME SCENE – what is the first thing we need to do? What is a SOCO? Collate information on white board What they need to wear and relevance 5 SOCOs to put on specialist suits <p>PHOTO Opportunity for School / Local Press</p>
<p>(45 mins)</p> <p>Morning Break (15 mins)</p>	<p>Latent Prints – 'hidden'</p> <p>Left by a thin film of sweat & oil in our skin. We use different chemicals to enhance prints on different surfaces.</p> <p>In this session we will learn how to retrieve hand and fingerprints from a Porous surface (no holes to absorb moisture, ie paper).</p> <p>Using magnetic Fingerprinting Powder.</p>	<ul style="list-style-type: none"> Listen and watch demonstration for hands-on fingerprinting activity Work in groups and individually Carry out individual fingerprint and hand prints using magnetic fingerprint powder 	<ul style="list-style-type: none"> Health & Safety brief Put pupils into groups of 5 – 10 (mixed abilities) and preferably 'non-friendship' Explain "hands on" exercise and reiterate importance of Health & Safety Hand out materials / resources: magnetic fingerprinting powder, fingerprinting wands, magnifying glasses and fingerprint comparison cards <p>(Teachers to assist pupils at tables)</p> <ul style="list-style-type: none"> Explain what a "Tenprint Form" is and how it is used by the police
<p>Return from Morning Break</p> <p>10:45 am</p> <p>(60 mins)</p>	<p>Criminals 'always' leave a trace?</p> <p>Non-Porous Fingerprinting Exercise (no holes, smooth and rough surfaces) example: window.</p> <p>This session teaches pupils how another type of fingerprinting powder is utilised at a crime scene; using Aluminium Powder – this demonstrates to the pupils how to retrieve a fingerprint / ear print from a common window pane.</p> <p>Additionally, the pupils are taught about the importance of evidence retrieval and the different forms evidence comes in ie Tyre Marks, Hair, Blood & Fibre, Footprints and personal effects; Weapons, Wallet, Mobile Phone etc.</p> <p>Examples shown of potential 'Evidence' from a crime scene and the packaging that Police would use to preserve the evidence.</p> <p>Pupils are shown how 'Ultra Violet' can be used within a Crime Scene Investigation.</p>	<ul style="list-style-type: none"> Watch the Aluminium Powder retrieval demonstration Listen Respond to polling questions Ask questions Pupils to participate in Footwear Analysis Exercise Pupils to participate in Chromatography Activity Pupils to participate in Hair, Blood and Fibre retrieval 	<ul style="list-style-type: none"> Health & Safety brief Show fingerprint and ear print gel lift evidence to all pupils Explain why criminals 'always' leave a trace and the importance of Forensic evidence in a Court of Law Different types of Forensic Evidence that might be used ie Tyre Marks, Footprints, Hair, Blood & Fibre and Fingerprints / Ear prints etc Show and explain materials used in Hair, Blood and Fibre retrieval Footwear analysis activity using 'white flour' to show example of footwear impression Case Studies: Briefly discuss the Rees Jones murder and the evidence found, which led to a conviction 2 years after the actual murder. Signify the importance of Forensic evidence in the Court of Law and how the Criminal Justice System operates.

<p>11:45-12:15</p>  <p>www.thinkuknow.co.uk</p>	<p>COMPUTER FORENSICS SESSION</p> <p>This session is completely optional and all the materials are provided by CEOP (Child Exploitation Online Protection).</p> <p>Leaflets will also be handed out at the end of the session to all pupils.</p> <p>Normally the short film and discussion would take place at the beginning of the workshop. CEOP films can now be viewed on YOUTUBE by putting CEOP – Jigsaw.</p> <p>To end the workshop on a high – our last activity is producing a 'UNIQUE' keyring, which will have the pupil's own fingerprint encased in it.</p>	<ul style="list-style-type: none"> All pupils sit and view short film based on online internet safety All pupils get to take home an individual impression of their own 'unique' fingerprint encased in a keyring fob 	<ul style="list-style-type: none"> Show CEOP KS2 film on internet safety, relating to MSN Instant Messenger and Facebook Questions taken from pupils about short film Pupils asked how many of them actually knew about the REPORT ABUSE button prior to watching the film Teachers must be aware that this film may cause some pupils to be affected more than others and so it is suggested that a teacher who has attended a Child Protection course is available This keyring is a reminder and keepsake of their day. The website address printed on the front allows the pupils to visit other Forensic Websites and Lincoln University, where they deliver several different Forensic Science Degrees.
<p>CLOSE</p>	<p>Conclusion and Evaluation</p>		<ul style="list-style-type: none"> Teachers to assist with the collection of all resources and supervise the folding of SOCO suits

Full Day Activity

Full Day Session – includes pupils attending their own Crime Scene Scenario

Full Day activities for both Year 5 and Year 6 will include all pupils dressing up in white / blue SOCO suits, visiting their own individual Crime Scene Scenario and using their newly acquired skill set – this would take place in the afternoon session. All pupils will be required to work within a team with their fellow pupils and retrieve, preserve and document any evidence. During a half-day or full-day activity, a series of photos are taken and a CD containing these images is sent directly to your school. None of these photos would be used by PULSE without the school's prior permission.

