

# Planning for Mantle of the Expert

	1. Choose a Theme	Science museum- The Human Body		
<b>Stage 1</b> Foundations ↓	2. Create an Overview of the Students' Learning	3. Make a list of things that make the theme interesting	4. Generate questions for inquiry	
	<input type="checkbox"/> identify and name the main parts of the human <u>circulatory system</u> , and describe the functions of the <u>heart, blood vessels and blood</u> <input type="checkbox"/> recognise the impact of <u>diet, exercise, drugs and lifestyle</u> on the way their bodies function <input type="checkbox"/> describe the ways in which <u>nutrients and water</u> are transported within animals, including humans <input type="checkbox"/> using a stimulus to generate and create art and models <input type="checkbox"/> Further learning will include developing an understanding of what clients want to find out about, whether it is right to manipulate and influence others <input type="checkbox"/> researching the understanding of the <u>role of the heart through history</u> and the <u>developments of medicine</u> with regards to heart surgery	<ul style="list-style-type: none"> <li>• Creating a science exhibition</li> <li>• Generating an online exhibition</li> <li>• Supporting the public to be healthier and understanding what it means to be healthy</li> </ul>	<ul style="list-style-type: none"> <li>• What makes a good exhibition?</li> <li>• Is it ever right to manipulate and influence others?</li> <li>• Why is healthy living important?</li> <li>• What does it mean to be healthy? Both mentally, physically and emotionally.</li> <li>• What are the barriers to living a healthy lifestyle?</li> </ul>	
<b>Stage 2</b> Context ↓	5. Invent a narrative – include tension, location, time characters and events	6. Select an Expert Team – create a list of powers, responsibilities and values	7. The Client – their role, purpose and authority	
	<p>A science museum, considering current events, has decided that it wants to devote a section of its museum to the workings of the human body, especially what it needs to remain healthy. This exhibition will develop the use of futurist materials such as nanoprobes to show the inner workings of the heart and the impacts on the body of healthy and unhealthy lifestyles. The exhibition is on a tight time schedule and it opens to the public in 5 weeks.</p> <p>In addition to this the client believes that good mental health is important and wants to support the public in this matter.</p>	<p>Exhibition Planners Corp.- a team of efficient exhibition planners who have a good understanding of modern technology and are open to new ways of thinking. This means that they are open to conducting new research and employing different approaches. They are also excellent manipulators of social media to increase the footfall with regards to exhibitions. Within the current climate they can also create virtual tours with almost the same desired effect as the real thing.</p> <ul style="list-style-type: none"> <li>• Communicating messages and ideologies of their client with clarity and understanding</li> <li>• Research facts to ensure validity</li> <li>• Ensuring that the exhibition is open in time- both in the real world and virtually</li> <li>• Ensuring that the exhibition can be accessed by all (using recordings for those that wish to listen to the information)</li> </ul>	<p>A curator of a science museum, they are organised and punctual. They enjoy working to tight deadlines. This exhibition is one of the most important that they have ever worked on. The client has strong positive beliefs in the importance of healthy living- healthy body and healthy mind. They are incredibly serious with regards to this matter and desire to communicate this to the public through the exhibition using state of the art technologies and up to date research. They will leave no stone unturned to achieve success. Despite this, they are calm, understanding, and supportive- they lead their beliefs by example.</p>	
	8. Device the Commission	9. Consider other points of view		
	<p>The team are asked to create a virtual reality simulation, where visitors sit in a vehicle, with hydraulics that will simulate the movement of the vehicle. They will wear a virtual reality headset, which will create the impression of sitting in a vehicle – a bit like a submarine. The people in the vehicle are a team of scientists who are going to be shrunk and injected into the human body.</p> <p>The task for the Exhibition Planners (ExPs) is to navigate around the human body showing visitors experiencing the tour how the circulatory system works, and in particular the heart.</p> <p>The ExPs will need to learn: about how the circulatory system works; about how blood transports oxygen around the body; the role of red and white blood cells; about vessels, arteries, and veins, plasma, etc.</p> <p>The ExPs will not be concerned with the design of the vehicle, or the headset, or the room. These things have been designed in advance, the team's job is to design a virtual reality tour, and to make it as anatomically accurate as possible. The purpose of the tour is to educate as well as entertain. It is aimed at visitors of all ages from five upwards</p> <p>The ExPs need to consider: how to use the virtual reality effectively; how long the tour will last; how much information can be usefully conveyed in that time: whether to use voice-over narrative, or text; which order the information will be conveyed during the tour; at which point there will be tension to keep the audience entertained as well as informed; and how much an audience of people between the ages of eight upwards could understand.</p>	<ul style="list-style-type: none"> <li>• NHS and Public Health England</li> <li>• Supermarkets</li> <li>• Parents, children</li> <li>• Schools</li> </ul>		
<b>Stage 3</b>	10. A list of Team tasks and classroom activities	11. ACE Curriculum Links		12. Literacy Links & Ideas

<p>Activities &amp; Curriculum Links ↓</p>	<ul style="list-style-type: none"> <li>• Sketching (hearts)</li> <li>• Learning about the circulatory system</li> <li>• Research and experimentation with regards to exercise and the impact it has on the human body</li> <li>• The importance of mental health and the positive impact that it has on the human body</li> <li>• Writing persuasive letters and producing persuasive leaflets</li> <li>• Creating information texts and extracts</li> <li>• Writing play scripts linked to the healthy body?</li> <li>• Generating scripts for media (exhibition teaching points)</li> <li>• Creating an online exhibition.</li> <li>• the creation of presentation from different 'sub'-teams within the ExPs – each presentation will offer information on a different way to conduct the tour, possibly using PPP, images (drawings, diagrams, etc), bits of film, as well as writing.</li> </ul>	<p><u>Science</u></p> <ul style="list-style-type: none"> <li>• identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels, lungs and blood</li> <li>• recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function</li> <li>• describe the ways in which nutrients and water are transported within animals, including humans</li> </ul> <p><u>Art</u></p> <p>inc. portraits. -2 point Perspective. -Use a sketchbook to record observations, collect visual information and develop ideas. (5) Refine and extend drawing technique. -3 point perspective</p> <p><u>History</u></p> <p>Use documents printed sources, the internet, data bases pictures, photos, music, artefacts, historic buildings and visits/visitors to collect information about the past. (yr5) Identify and use different sources of information, and artefacts. (yr 6) Use sources to justify their own conclusions (yr 6)</p>	<ul style="list-style-type: none"> <li>• Play scripts</li> <li>• Information texts</li> <li>• Persuasive letters and leaflets</li> <li>• Formal and informal writing- blogs, social media vs online promotions</li> <li>• Sci-fiction story (</li> </ul>
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<p>Stage 4 Start</p>	<p>13. Plan a sequence of steps into the fiction</p> <p>This sequence will start with a short discussion about a science museum and what it might contain. The discussion need not last long. Resources: - Notebooks and pens for the students.</p> <p><b>Step 1:</b> Teacher – <i>“I don’t know if you have ever visited a science museum - one dedicated to the history and exploration of science – but when you think of one, what comes to mind? I mean, what is the building like – is it a modern building, made of glass and concrete, or an older building, built in the C19th, with stone columns and towers? Have a quick chat with the people sitting next to you, let’s see what comes up.”</i> Give the students chance to share ideas with one another.</p> <p><b>Step 2:</b> <i>“So, what kinds of things were you discussing?”</i> Let the students share their ideas. As they talk, ask them more questions and use their ideas to build up an image of the building. Don’t worry if some of the ideas conflict, you’re not after a single version – this is about the visualisation. The conversation might go something like this: <i>“Danny, you start... Okay, so you’re imagining a huge building made of glass and metal – a modern building then? And there is a flight of steps going up the front. Can I ask, how do people go in the building – do the doors slide silently open as they approach or do they have to push? And what about security?”</i> Etc. <i>“Emily, tell us about your ideas... So, your museum is much older, like the one in London. I see... And people have to cue outside when it’s busy... What about a cloakroom, is there a place where people can leave their coats and bags? And do they have to pay or can visitors enter for free?”</i> And so on. When you ask the more general - like <i>“Do visitors have to pay?”</i> - you can open these up to the rest of the class: <i>“What does everyone think, should this be a museum that lets everyone in for free or do some people have to pay?”</i></p> <p><b>Step 3:</b> Once this conversation is over, the teacher says (you might want to read this): <i>“The exhibitions in the museum are of many kinds - science through the ages, engineering, power, space exploration, computer technology, and the human body. The doors to the part of the museum dealing with the human body are on the third floor and visitors can either take the lift or climb the stairs. These rooms are full of the most amazing displays – many interactive – dealing with every aspect of human biology: the brain, respiration, diet, muscles, human psychology, as well as blood and circulation. At the back of the room is a door, with a number pad and a sign saying: Private, staff only. On the other side of the door and along a corridor is a meeting room and in the meeting room is a team of people sitting in front of a board and a huge TV screen. Written on the board are the words: <u>11:30 – Meeting: Exhibition Design of Virtual Reality Tour.</u>”</i> [The teacher writes this on the board and turns to the students] <i>“What do you make of that?”</i> Give the students time to talk. Discuss VR, and the use of VR headsets, and as them how VR might be used in this part of the museum.</p> <p><b>Step 4:</b> <i>“The people sat in the room, waiting for the meeting to start, are a team of Exhibition Planners [ExPs], their speciality is virtual reality, and they have been invited to the museum today to talk about a new VR exhibition the museum are planning to build on the third floor. [TASK] Now, if you were these people - sat in this room – what questions might be going through your head? – Talk to the person next to you.”</i>  Give the students a bit of time to talk and then to feed back. What they say will give you an idea of where their thoughts are going and if there are any misconceptions. <i>“Now, remember this is at the back of the room dealing with blood and circulation – so it is probable blood and circulation is going to be the subject matter of the VR exhibition.”</i> – <i>“Yes, you’re right to ask about money. We will want to know how much we are going to get paid – nothing like this is cheap.”</i> And so on. Notice the use of <u>we</u> here, the purpose of this is to build the team and an investment in the fiction.</p> <p>When this conversation is over, prepare the students for coming into the fiction as the ExPs – <i>“So, are we ready? This is an important meeting so I expect we’re wearing our best clothes and we’ll want to create a good impression, so let’s sit up straight. Get ready to take notes, I expect there will be a lot of information.”</i></p> <p><b>Step 5:</b> This is the introduction of Teacher in Role (TIR) as the curator of the exhibitions in this part of the museum. Play it straight, the students won’t take it seriously if you don’t. And give them time to take notes,</p>
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slow down if necessary and repeat if you think they missed something. If they need support, come out of the fiction – “I’m just going to stop the story for a moment...” – and then go back in once you’ve helped them out.

“At just before 11:30, the Team heard the sound of footsteps coming down the corridor and the door opening to the meeting room. A man/woman entered the room [the teacher points at her chest to let the students know she will be representing this person] and says:

“Good morning everyone, thank you for coming. I guess you have a lot of questions and I’ll do my best to answer them. We are, as you can imagine, very excited about this new project and I am looking forward to working with you all.

“I’d like to start by showing you a slide [Show slide 1]. This is a model of a vehicle we are planning to build in a room on this floor. The idea is that visitors will come into the room and after taking a seat they will put on a VR headset [Show slide 2]. Once the headset is switched on they will find themselves inside a small vehicle – like a submarine – and will be told they are scientists who have been chosen to go on an extraordinary expedition – an expedition inside the human body. [Slide 3] At this point the vehicle – which is on hydraulics – will begin to shake and (inside the VR world) the visitors will be shrunk to the size of a blood cell. The vehicle will then be sucked up into a syringe and injected into a human artery.

“Our idea is for the vehicle to travel around the circulation system, visiting all parts of the body – most importantly the heart – and, as it travels, for the visitors to learn all about the system: blood, circulation, blood vessels, and everything else. This is where you come in – we want your team to design the tour: to decide where the vehicle goes, in what order, what happens to keep the visitors interested, and what information is going to be conveyed to them. We want the tour to be suitable for visitors of eight years and older and to last for approximately ten to fifteen minutes. The purpose of the tour is to educate people as well as entertain them.”

“I expect you have questions you would like to ask?”

Answer their questions.

**Step 6:** This is the end of the meeting where the curator sets the ExPs the task of creating a presentation to be made at a future date.

“Well that nearly concludes our meeting. There is only one more thing left to say – we would like to see a presentation of your ideas in [X] weeks

	14. Events	15. Activities- Language/drawing/enacting	16. Purpose (inside the fiction)	17. Learning (curriculum)
<b>Stage 5</b> Continuing	<p><u>Science</u></p> <p>Back in the office. Setting the scene. “This is what the team need to know.” The team research:</p> <ol style="list-style-type: none"> <li>How blood circulates around the body</li> <li>Plot the route of the voyager around the body</li> <li>What is blood? Red, white, plasma – what does it do?</li> <li>What is the function of the lungs?</li> </ol> <p>Letter received from PHE about being healthy. They have heard about the exhibition and want to contribute, with the caveat that the VR tour includes the impact of the circulatory system by unhealthy lifestyles.</p>	<p><u>Science lessons</u></p> <p>Enactively - How does the blood flow around the body? Where does it start? Where does it stop flowing? Stand up and let’s see if we can work out the direction of blood flow. Watch a film - <a href="https://www.bbc.co.uk/teach/class-clips-video/science-ks2-how-our-circulatory-system-keeps-us-alive/zhf76v4">https://www.bbc.co.uk/teach/class-clips-video/science-ks2-how-our-circulatory-system-keeps-us-alive/zhf76v4</a> <a href="https://www.bbc.co.uk/bitesize/topics/zwdr6yc">https://www.bbc.co.uk/bitesize/topics/zwdr6yc</a></p> <p>Draw – the circulation of the blood on an outline of the body.</p> <p>Track it on the drawing of the body and write the route: “We suggest injecting the... First the voyager will visit...</p> <p>Research using media (film, books, etc)</p> <p>Thinking about another part of the circulatory system, the lungs, what do you suppose the purpose of these are? Do you think you could show us where we would find them in our bodies? If we were to draw the lungs what do you think they would look like?</p> <p>These notes will then be used and referred to in their presentations. (The information will need to be timed to enable it to fit within the length allocated for each journey.</p> <p>Mindmap- what things have an impact on the human body, positive and negative. (Floor Book)</p>	<p>Research what the team the team need to know to put on the exhibition both the VR side and the physical side. And prepare for the presentation.</p> <ul style="list-style-type: none"> <li>The science fiction story is to be sold in the shop part of the exhibition.</li> <li>Information texts for each part of the VR tour- script to be recorded for the journey through the circulatory system (timings are important?)</li> </ul> <p>Looking at the idea of ‘Good mental health’</p> <p>Formal letter reply to PHE.</p>	<p>Science lessons – various lessons about the circulatory system.</p> <p>PSHE/PE - talk about the body and how it works.</p> <p>Formal reply to the email.</p>

	<p>5. How do we keep our bodies healthy?</p> <p>Back in the EXP office- I'm just wondering, what is the office like? Is it old or new? What are the chairs like? Are they the chairs with wheels that you might like to zoom around on? The team discuss their findings. An email is received to see how they are getting on and the children respond about their work. They have discovered that the blood flows .... because of the way the heart and lungs work with the blood vessels. The children now need to look at whether the route they have tracked will work by creating the parts of the circulatory system on a life size model of a person and making the parts they need to focus on in the body for their part in the project.</p> <p>The children/Team will then prepare their information texts to share with the client. These can use photographs, diagrams and text powerpoint presentation.</p> <p>The final piece will be a script of that the journey through the body recorded</p> <p>[Science fiction story] Is the story of the scientists in the voyager - Series of events that tell that story:</p> <ol style="list-style-type: none"> <li>1. Where to start (how to capture the reader's attention)</li> <li>2. Backstory (how to tell the story of the crew and why they are on this expedition – first person POV: I thought to myself, "I hope nothing goes wrong, we're the first..."</li> </ol>	<p><u>Symbolic (language)- writing of an email</u></p> <p><u>Information text to share research</u> Draw a map of the virtual tour and label</p> <p><u>Narrative writing</u> Drawing the submarine and label</p> <p>'Enacting' is a better term, then break the action up into smaller steps (about five is usually right). Something like: "In the novel (sold in the bookshop) there is a chapter – not a long one – describing the team flying the submarine around the body. It starts with a description of the control panel and the steering mechanism.</p> <ol style="list-style-type: none"> <li>1. Can you imagine how the submarine is steered? Try taking hold of the mechanism – it might be a wheel like in a car, or a stick like in a helicopter, or two sticks like on a digger, or it might be something more futuristic like a game controller.</li> <li>2. Feel it in your hands, make the submarine move forwards, now backwards, to the left... see if you can imagine the submarine moving through the blood – blood, as you know, is a thick viscous liquid, dark coloured, and travelling fast in one direction. Going with the flow will mean steering at high speeds and pulling back to slow down, while going against the flow will involve pushing the power up high and steering against the rushing liquid.</li> <li>3. Take a look at a computer screen in front of you – it's attached to a frame and an arm, which you can adjust to bringing it closer to you or further away. On the screen is a map of the human circulation system – locate where you are now (possibly the heart or in the main artery of the right leg or in a capillary in the left hand). Now decide on a destination – somewhere else inside the human body – and plot a route.</li> <li>4. Once you have your route planned, decide whether you are going with the flow (which might be faster, but involve a long, trickier journey) or against the flow (which might be more direct but slower). In your mind, start to take the journey - don't worry about anyone else, you might close your eyes to make it easier. See the journey in your mind's eye, look at the walls of the blood vessels, the organs you travel through – some, like the lungs, might be moving, others – like the brain might flashing with light.</li> <li>5. Now, keep all that in your mind and pick up a pen, see how much of it you can write down – remember this is for an audience – the reader of the novel – so make it exciting and fast paced.</li> </ol> <p>Use the 6 forms of dramatic imagination.</p>	<p>Formal language – writing an email. (set up purple mash)</p>	<p>Information text to share what they have researched and how to go about the virtual tour – what would appeal to children 8 years and above.</p> <p>Script writing of the journey through the body.</p> <p>Narrative – science fiction. These will be a series of side steps. Setting the scene Feelings and emotions – on board a submarine What would they see on the journey – description.</p>
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