



## GeoCapabilities teacher workshop:

### Expressions of powerful disciplinary knowledge across a school

This table shows the outcome of a workshop held with teachers at the City of London Freeman's School. Teachers worked in their subject teams to identify the 'powerful knowledge' of their subject, on which young people's capability can depend.

<p>a. Increasing factual knowledge of the views of major world religions on the BIG metaphysical and ethical questions.</p> <p>b. Nurturing pupils own viewpoints on these issues and fostering their spiritual awareness through challenging viewpoints.</p>	Religion, Philosophy and Ethics.
<p>a. Universal understanding of processes and properties of everyday things that occur around us all the time</p> <p>b. Consequential knowledge obtained about effects of processes eg. pollution</p> <p>c. Scope for important, ground breaking discoveries</p> <p>d. Making links between key theory and wider application in industry, environment and the world around us</p> <p>e. Vast array of multi-faceted skills obtained: analytical, observational, qualitative, quantitative, mathematical</p>	Chemistry
<p>a. Knowledge of social, cultural, historical and political aspects of theatre and the human condition.</p> <p>b. Theoretical and practical application of key concepts in historical and contemporary theatre.</p> <p>c. The ability to engage, explore, empathise and challenge perceptions of the human condition.</p>	Drama
<p>1. Ability to formulate the question to search the internet for solutions to specific problems</p> <p>2. Training students to think in a strictly logical / deconstructive and dispassionate manner. Trying to break the problems down to the simplest parts to be able to tackle the issue. It takes the human out of the thought process.</p> <p>3. Abstraction – identifying the strictly relevant data to divorce a problem from its context and thus produce an efficient (and possibly counter-intuitive) solution</p>	Computer Science
<p>This subject allows us to demonstrate practical application of theoretical concepts. It uses transferable skills like no other subject. It uses materials, tools and Machines to create new and original solutions to shape their world</p>	Design Technology
<p>a. Structure and function of living organisms</p> <p>b. Interactions within and between organisms and their non-living environment,</p> <p>c. Using knowledge and understanding to make decisions relevant to conservation of Natural Capital</p>	Biology
<p>This subject is the study of concepts such as quantity (numbers), structure, space, and change.</p> <p>These concepts allow us to model real world situations and facilitate understanding thereof. This also enables us to predict outcomes of future events.</p> <p>The knowledge and application of skills to problem solving in general.</p> <p>The abstraction of skills to other disciplines.</p>	Maths
<p>a. Empathy and sensitivity – understanding of the human condition.</p> <p>b. Self-knowledge and understanding.</p> <p>c. Appreciation of the poetry, beauty, ornateness and simplicity of language.</p> <p>d. The power of language as a tool of communication.</p> <p>e. Interpretation and challenging established views.</p>	English
<p>This subject helps us understand human behaviour – individual, group and mass</p>	History

behaviour – in the context of its time. It also helps us understand how ideas develop, how institutions function and how cultures evolve. Studying this against a chronological framework is especially useful when trying to understanding causation and change.	
<ul style="list-style-type: none"> <li>a. Understanding of the languages which form the grammatical and linguistic basis of both English and many other languages.</li> <li>b. Reading, in their original text, works of literature which have provided the model for influential works throughout history</li> <li>c. Opportunity to apprehend the entirety of a culture in its linguistic, historical, philosophical, and aesthetic legacy.</li> <li>d. Recognising and evaluating the continuation and development of classical ideals and theories throughout subsequent cultures and civilizations.</li> </ul>	Classics
<ul style="list-style-type: none"> <li>a. Rigorous understanding of a range of academic skills in theory, analysis and instrumental performance skill</li> <li>b. Creative response through performance, composition and listening activities</li> <li>c. The increasing knowledge of how to work with a range of different people and skill levels towards a cohesive common goal.</li> </ul>	Music
<ul style="list-style-type: none"> <li>a. Skills: Problem Solving, social skills, communication, teamwork, perseverance</li> <li>b. Character: Creativity, Sportsmanship, Fair play, sensitivity</li> <li>c. Fitness: Understanding of physical literacy and understanding</li> <li>d. Sport: Competition, Risk, lifelong passion of an activity</li> </ul>	Sport
<ul style="list-style-type: none"> <li>a. understand physical phenomena in the world and throughout the universe;</li> <li>b. analyse and evaluate scientific claims to ensure accuracy and validity; and</li> <li>c. develop practical investigative skills to further explore encountered curiosities.</li> </ul>	Physics
<ul style="list-style-type: none"> <li>a. Linguistic knowledge – deep understanding how language works and the ability to apply it to different languages</li> <li>b. Understanding cultural differences and our place in the global community</li> <li>c. Communicative capabilities – the ability to communicate with people in their native language</li> </ul>	Modern Foreign Languages

**Comments from History teachers:**

*We are not entirely comfortable with this term (Powerful knowledge) because of the fact that our subject knowledge is so often subject to being politicised by governments pursuing a particular agenda. We would certainly not accept that there is a set ‘cannon’ of past events which ‘every child should know’. The idea that there exists certain ‘powerful’ knowledge’ begs the very fraught question of who ‘owns’ or vets that knowledge. In previous eras powerful knowledge has really meant knowledge possessed by the powerful and has been used to bolster oppressive systems.*

**Response:** The History teachers have identified clearly the notion of ‘knowledge of the powerful’, (an idea from Michael Young). ‘Powerful knowledge’ moves beyond this to consider how historical knowledge is ‘made’ within the discipline and therefore the question of whose knowledge and whose perspective forms part of the discourse and something to be questioned and challenged in the classroom.

**Comments from Junior School teachers (of 7 to 11 year olds):**

*We began by discussing the importance of providing a foundation of basic knowledge, across a wide range of subjects. We agreed that powerful knowledge changes as children move through the school, adding to a framework that was created in the early years. We then focused in on mathematics: shape in particular, discussing whether the knowledge gained at each age is powerful. A reception child learning the name of a square, is not powerful in itself, but if they are able to then define a square in terms of its properties, we felt that this was powerful for a five year old:*

*a building block of knowledge to the next step. In later years, this enables an understanding of angles and length, which becomes increasingly powerful as children move through the school.*

*As we discussed, we continually came back to the idea of skills also underpinning the curriculum, in every subject. For example, why do we choose to teach about the Tudors to young children? The children learn key skills, such as how to read and interpret sources, but they also need knowledge to pin their understanding on, such as the chronological place of the Tudor period, and an understanding that the past has an impact on the present day.*

*In English we teach the children what a clause is. This is powerful knowledge which enables the children to understand how to structure sentences, place commas and rearrange sentences. This is not an area that the children would meet in any other subject area. It's application, however, provides a foundation for many subjects later in their schooling. We felt that the definition of powerful knowledge needed consideration, particularly in relation to the age of children that we teach.*

**Response:** The idea of 'powerful disciplinary knowledge' has always been discussed in relation to secondary level education, so to get Junior school teachers to engage with the concept, where lessons are much more interdisciplinary by nature was always going to be interesting. Despite teaching integrated 'topics' the teachers were able to identify what part of each topic was part of a traditional subject, laying foundations for the children to move on to more subject based education at secondary school.