

How will the implementation of a topic vocabulary mat in humanities and science support pupil articulation in KS1?

Hoxton Garden KS1 Phase

Abstract

The purpose of this study was to examine the effectiveness of a child focussed topic vocabulary mat in science and humanities to enhance pupil articulation. It was designed to examine how the topic mats would enhance the children's ability to remember more and make links with prior learning. *If nothing has been altered in long-term memory, nothing has been learned.*" (Kirschner, Sweller and Clarke, 2006). In Ofsted's 2019 review, the importance of knowing more and remembering more was identified as a core component of evaluation and is now an integral part of their new framework. A topic vocabulary mat, often referred to as a knowledge organiser, sets out the important, useful, and powerful knowledge on a topic on a single page, (Kirby, 2015). The children selected for the research study were in the KS1 phase at Hoxton Garden, in Year 1 and 2. Each year group was provided with a topic mat for their science and humanities topic in spring 1 and spring 2, (Appendix 1 and 2).

The mat was split into three sections; key vocabulary, what I've already learnt and key knowledge. In the study, children were interviewed as part of pupil voice at 3 different stages across the research process; at the start and end of spring 1, and the end of spring 2. The effectiveness of the mats was measured against the children's responses to questions and their ability to make links with prior learning. Teacher feedback was also considered to assess the effectiveness of pupil responses in each science and humanities lesson.

Introduction

Hoxton Garden Primary School is a multi-cultural primary school situated in the borough of Hackney, London. It is part of a federation of schools which all share a curriculum map, written by internal curriculum specialists and designed with a cyclical, layered approach to ensure understanding is scaffolded and deepened. To build on and nurture children's prior learning and experiences, the curriculum is structured through a progression of skills: across units of work, year groups and Key Stages. At Hoxton Garden, each subject is monitored and supported by a subject leader. The leaders will carry out onsite planning and work scrutinises, which include a discussion with children during pupil interviews, to assess children's understanding and the effectiveness of the learning sequences. Through feedback with subject leaders on pupil articulation during in house deep dives, this was an identified area of weakness within the KS1 phase. The rationale behind this research was also chosen in line with priorities on the school improvement plan. Under the quality of education priorities, an area of focus was to ensure systematic application of strategies for recalling prior learning to enable pupils to remember more in the longer term. The mats were implemented as a strategy to support children to remember key knowledge and prior knowledge, to answer questions about their learning. *We need to recognise that new learning is fragile and usually forgotten unless explicit steps are taken over time to revisit and refresh it (Davies, 2018).*

Research Process

The research process was co-ordinated by the KS1 phase leader and undertaken by the year 1 and 2 teachers. The phase leader designed the topic vocabulary mats, shared with teachers and modelled at phase meetings. The intention was for teachers to finish each science and humanities lesson with a slide, displaying three key questions, (Appendix 3). The questions were taken from subject leader interviews with the aim of exposing children to these style questions. *Having regular conversations with children about different subjects can have enormous benefits for both the teacher and child, and if it becomes part of the typical learning behaviours, then talking to an outsider about their learning will not be as daunting for the children, (M. Miller, 2018).* To support children to answer the questions, the topic vocabulary mats would be used. There was no expectation, and it would up to the class teacher to decide how they would be utilised to support discussion. *You should encourage teachers to allow time for discussions with the children about what they are learning and what they know, (M. Miller, 2018).* All children in the class had access to the topic mats, but there were identified and monitored focus children to allow the impact to be easier to track. Two focus groups were set up, one from year 1 and one from year 2. Five focus children were chosen from each year group, including a child from the lowest 20% and a PPG child. *A frequently encountered outcome is the tendency for the class to delegate responsibility for addressing these tasks to children who can be relied upon to produce the 'right answers' (M. Miller, 2018).* However, it was also insured that PPG children were included in each focus group as inspection guidance indicates that, *we're especially keen not to see disadvantaged and pupils with SEND receiving a thinner or less ambitious curriculum.*

Findings

Findings support the use of topic vocabulary mats as a strategy to assist pupil articulation, during lessons and pupil voice interviews, (Appendix 4). Exposing children to this style of questioning and supporting their articulation through the mats was reflected as a success as their responses included key facts they had learnt, and there was strong evidence of new vocabulary being applied in the correct context (appendix 4). Observations and teacher feedback show that children felt more confident with using the topic vocabulary mats to support their answers after clear modelling from the adults in the study.

A recent school CPD on humanities on supporting children to remember key knowledge also supports the purpose of the vocabulary mats. Teachers within the school are now writing down 4 pieces of key knowledge they want the children to learn throughout the half term. This co-insides with the 'key knowledge' section of the mat. If children are aware and confident in articulating the statements, this could improve their responses during pupil voice questionnaires. This section of the mat also supports teachers with identifying the key knowledge that the children need to be able to articulate successfully. *The process of creating knowledge organisers in a specific subject then leads to a consideration of pedagogical content knowledge, the integration of subject expertise and an understanding of how that subject should be taught (Ball et al., 2008).*

Impact and Conclusion

The data presented indicates that the topic vocabulary mats were a successful tool to support pupils to articulate and recall their learning. The focus children's confidence grew in each deep dive interview and they were more comfortable when asked questions, through regular exposure to them.

All adults taking part in the research agreed that articulation improved week on week and evidenced through discussion of the deep dive slide. A key pattern that did emerge was the need to adapt the layout of the mat, moving forward. Teacher feedback indicated that the lowest 20% children were not as confident in accessing the mat and suggested that there was too much information on there. Equally, without proper guidance, some teachers can become overly reliant on knowledge organisers and this would be an important factor to consider. Overall, knowledge organisers can be a valuable starting point for effective curriculum design and a useful primer for those new to the topic.

References

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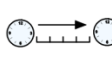



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







Appendix

Appendix 1 – year 1 topic vocabulary mats

 significant	 important	 Mary Seacole	 Florence Nightingale
 evidence	 Victorian era	 timeline	 Crimean war
 nurse	 history		

Subject Specific Vocabulary	What I've already learnt	Key knowledge
significant great or important, worthy of attention	I have looked at images of the past	<ul style="list-style-type: none"> Florence Nightingale was born in 1820
nurse a person who is trained to care for sick and injured people	I have looked at toys from the Victorian Era	<ul style="list-style-type: none"> Mary Seacole was born in 1805
hygiene the practice of keeping clean to stay healthy and stop disease		<ul style="list-style-type: none"> They both lived during the Victorian Era
solider a person who serves in the army		<ul style="list-style-type: none"> They both moved to London
role model a person who sets a good example by influencing others		<ul style="list-style-type: none"> Florence Nightingale's father did not want her to be a nurse
injury damage that causes physical pain		<ul style="list-style-type: none"> Mary Seacole helped her mother look after sick people
disease a condition that causes harm to the health of a person, animal, plant, illness, or sickness		<ul style="list-style-type: none"> 1860 Florence Nightingale set up the Nightingale School for Nurses
patient a person or animal that is getting medical treatment		<ul style="list-style-type: none"> Mary Seacole improved the lives of soldiers by opening a hospital
Crimean War The Crimean War (1853-1856), also called the Eastern War, was a war fought between Russia on one side and France, the UK and the Kingdom of Sardinia and the Ottoman Empire on the other side		<ul style="list-style-type: none"> Florence Nightingale was known as 'The Lady with the Lamp'

Appendix 2 – year 2 topic vocabulary mats

 continent	 globe	 ocean	<p>Useful links</p>  
 atlas	 species	 tourists	
 population	 suburb		

Subject Specific Vocabulary	What I've already learnt	Key knowledge
continent A large solid area of land	I have explored my local environment in year 1	<ul style="list-style-type: none"> There are 7 continents on Earth
ocean A continuous body of salt water	I know the UK is made up of 4 countries: England, Northern Ireland, Scotland and Wales	<ul style="list-style-type: none"> There are 5 oceans on Earth
globe A 3D sphere, that is used to represent the whole earth		<ul style="list-style-type: none"> We live in the UK which is part of the continent of Europe
atlas A collection of maps	I can name features found in a city and rural areas	<ul style="list-style-type: none"> The UK is next to the Atlantic Ocean
species A group of similar organisms that can reproduce	I have located human and physical features on a map	<ul style="list-style-type: none"> Seas are smaller than oceans
tourists A person who is travelling for pleasure		<ul style="list-style-type: none"> Antarctica is the least popular continent
population The number of people living in a certain place	I have looked at maps of the world	<ul style="list-style-type: none"> More than 4.6 billion people live in Asia The highest mountain on Earth is Mount Everest and is located in Asia The longest river on Earth is the River Nile and is in Africa

Appendix 3 – Slide displaying questions

What do we already know about ___?
What did we learn last week?
What have we learnt today?

Appendix 4 – pupil responses

Year 1

HUMANITIES	Start of spring 1 <i>Our local area</i>	End of spring 1 <i>Florence Nightingale and Mary Seacole</i>	End of spring 2 <i>Town to country</i>
Pupil 1	We learnt more about where we live. We live in London in Hackney	Florence and Mary were similar because they were both nurses and helped people	We went for a walk around Hackney in year 1 and in reception
Pupil 2	We live in Hackney and we went to the market on a walk	Florence Nightingale and Mary Seacole. They helped people in the Victorian Era	Urban and rural areas are different because you can do more things in urban areas
Pupil 3	We looked at maps and London and Hackney	They are from the past, and they helped soldiers in the war	Hackney is an urban area, we live in an urban area
Pupil 4	We went for a walk in Hackney and we made a map of the playground	Florence Nightingale and Mary Seacole. They were nurses and role models because they helped people	A city is bigger than a town and a town is bigger than a village. Animals live on farms and they are in rural areas
Pupil 5	Human features have been made by humans like a building	We looked at toys from the Victorian times at the start of year 1	---

SCIENCE	Start of spring 1 <i>Light</i>	End of spring 1 <i>Materials</i>	End of spring 2 <i>Plants</i>
Pupil 1	We learnt about mammals and fish	We sorted materials by their properties. Wood and metal and hard and fabric is soft	We looked at different parts of plants, the roots are in the ground and soak up water for the plant to live
Pupil 2	Some animals eat meat and some eat grass	The best material for an umbrella is plastic because water runs off it	We eat some plants. Plants are living. We looked at the different parts of a plant on our table
Pupil 3	We are mammals	---	In reception we looked after plans and gave them water to stay alive
Pupil 4	Some animals have tails and some have wings	In reception we used materials to junk model	We predicted that all plants look the same but some plants do not have petals
Pupil 5	We found animals, fish and birds	We put materials into different groups. Some materials are absorbent and some are not	Plants can live for a very long time

Year 2

HUMANITIES	Start of spring 1 <i>All around the UK</i>	End of spring 1 <i>Explorers and pioneers</i>	End of spring 2 <i>Continents and oceans</i>
Pupil 1	The four countries of the UK are Scotland, England, Wales and Northern Ireland	Explores go to new areas that no one has been before. Columbus went to America but he thought he was going to India	There are 5 oceans and 7 continents in the world. Asia is the biggest continent. We live in Europe
Pupil 2	We looked at different countries in the UK and cities.	Neil Armstrong is significant because he was the first man on the moon	There are 5 oceans. Oceans are bigger than seas and lakes
Pupil 3	We had a workshop and looked at Barnaby bear and went around the different cities in the UK	Captain Scott went on a journey to Antarctica but another group beat him to it. He was significant because nobody else from the UK had been there before	Kenya is in Africa and we live in Europe. No one lives in Antarctica
Pupil 4	We labelled the four countries and cities in the UK	Mae Jemison is similar to Neil Armstrong because she was also an astronaut who went to the moon	The River Nile is the longest river in the world
Pupil 5	The UK is in Europe	We looked at different significant people who went on journeys to different places	We live in Europe and we speak English, in China they speak Mandarin. China is in Asia, they have a much bigger population

SCIENCE	Start of spring 1 <i>Sound</i>	End of spring 1 <i>Plants</i>	End of spring 2 <i>Materials</i>
Pupil 1	You hear with your ears	In year 1 we looked at the different parts of a plant	We looked at different materials in year 1
Pupil 2	We made pan pipes and some sounds were high and some were low	Plants get their nutrients and water from the soil	Reduce, reuse, recycle is when you use something again after you put it in the recycling bin
Pupil 3	We walked around the school and heard different sounds	We investigated what a plant needs to survive and grow. The cress seeds grew best in the window sill because they had sunlight. The cress seeds in the cupboard were trying to find the light	We classified different materials into different groups. We looked at natural and man-made materials
Pupil 4	For our investigation we stood further away from a bell and measured the sound	Plants are living like us, they need water and sunlight and nutrients to grow	If something is durable it can last a long time. Denim is durable, it was invented by someone called Levi
Pupil 5	The further away you were the quieter the sound	If a plant does not have water and sunlight it will die. We looked at bulbs and the different parts of a bulb	We looked at different materials and completed a table. Some materials you can bend and twist and scratch. You can't change the shape of all materials