



Curriculum Information

Our next Unit Of Inquiry: Transdisciplinary Theme 'How the world works

An inquiry into the natural world and its laws; the interaction between the natural world (physical and biological) and human societies; how humans use their understanding of scientific principles; the impact of scientific and technological advances on society and on the environment.

The Central Idea:

Our understanding of the natural world can inform human design.

Unit Summary:

Throughout the unit, students will investigate patterns and shape in nature and how they can influence man-made structures. As an introduction to the unit, groups will visit the Central District to explore the connections between Maths and design. Children will collect evidence with cameras and sketch their thinking using labeled diagrams. During the summative task, children will explain how Maths can be used to design a structure that can support a pre-determined load.

Lines of Inquiry	Concepts, Attitudes and Learner Profile	Transdisciplinary Skills
<p>The connections between the arts, math, science, and the natural world.</p> <p>Nature's inspiration for human design.</p> <p>The considerations and consequences of design</p>	<p>Connection Function</p> <p>Thinker Reflective Knowledgeable</p> <p>Creativity Appreciation</p>	<p>Research Skills</p> <p>Observing - during trip to central Formulating questions - as a result of the provocation to central Planning - planning a design - opportunity here for scale and measurement in math Collecting data - gathering information from various sources Recording data - recording field observations during provocation</p>

As part of our curriculum, students will continue to learn develop, use and apply their subject area knowledge and skills. During this unit, children will also be taught to:

Language	Mathematics	Science
<p>Use graphic organisers to plan writing, for example, Mind Maps and storyboards.</p> <p>Organize ideas in a logical sequence; for example, write simple narratives with a beginning, middle and end.</p> <p>Write for a range of purposes, both creative and informative, using different types of structures and styles according to the purpose of the writing.</p> <p>Write an explanation to show their understanding of their structure and what they have designed in relation to the natural world.</p>	<p>Understand that patterns can be analysed and rules identified.</p> <p>Understand that multiplication is repeated addition and that division is repeated subtraction.</p> <p>Sort, describe and label 2D and 3D shapes.</p> <p>Analyse and describe the relationships between 2D and 3D shapes.</p> <p>Understand the relationship between units, for example grams and kilograms.</p>	<p>Create a fair test to test the strength of everyday materials that could be used to build structures such as bridges.</p> <p>Critique the impact of a structure on the natural environment.</p> <p>Identify which would be the most effective materials to use in structures that are built in Hong Kong.</p> <p>Compare the design of structures in various locations in relation to the natural environment.</p> <p>Identify geographical and environmental factors that influence the design of structures in various locations.</p> <p>Investigate why some materials are suited for different purposes.</p>

Action is an important part of the curriculum where children can take the opportunity to extend their learning. This can take many forms, from a discussion initiated by your child, bringing something to school from home or a request to go somewhere in the community to find out more. To support your child at home with this unit of inquiry, you may wish to encourage your child to:

Organise a visit to the Hong Kong History Museum to see how human design has changed the landscape of Hong Kong

Using paper and nets, create 3D shapes.

Use some other materials, e.g. Lego, to design a model of a man made structure. Bring it in to share with your class.

Use Google sketch-up to design a structure.

When you are going on a journey anywhere, even if it's only as far as Central, take a look at the different designs of the mega structures and the shapes that can be seen. Take photos of the most impressive buildings and bring these into share.

Research the tallest or most unusual mega structures in the world today.

Look at the reasons why buildings are made out of different materials in different countries.

Look at patterns found on buildings, and in the environment around them, and see if they can recreate these.

If you want to take some action and offer your expertise in any area, we would love to hear from you!