



“Success for Every Child”



How The World Works

This document is designed to inform you of the learning planned for your child's next unit of inquiry. In addition we offer you some optional ideas for supporting your child at home.

In their fifth unit, the year 4 students are inquiring into the Science Strand “*Forces and Energy*.” The students will investigate the concept of work through the central idea, “**Simple machines help people do work.**” During this inquiry students will explore what simple machines are, and investigate their observable features. Through science investigations students will discover how work can be measured and what makes machines suitable for a particular task. Throughout the entire unit we will be making connections to the real world and finding out how machines help us do work. Along with the development of these concepts students will become more **knowledgeable** as they gain understanding about simple machines, how they work and make work easier for us, and how we can measure that work. Thinking and research skills will be our focus for this unit. Students will be supported in their **acquisition of knowledge** by **formulating questions** that are compelling and relevant to their learning. Through research, they will be able to answer those questions, deepening their knowledge about simple machines.

You may wish to support your child at home in the following ways:

Developing vocabulary



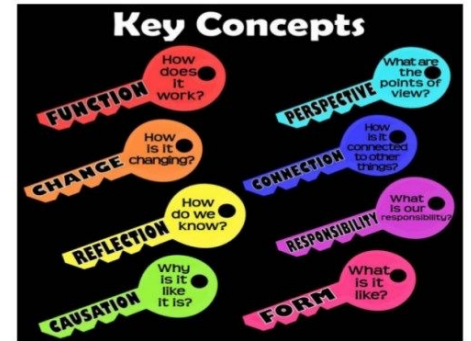
Key vocabulary used in this unit will be:

simple machines, work, lever, pulley, wheel, axle, screw, wedge, fulcrum, inclined plane, work, mechanical advantage, newtons, design, engineering, hypothesis, test, predict, measure, force, friction, load, pull, push, torque, tool, spring, curiosity, experiment, distance, knowledgeable, variables

Please consider using your Mother Tongue to develop your child's understanding of these words.

Conceptual Questions

This unit will be addressed through the lens of **form**, **function** and **connection**. To develop the concept of **form**, talk with your child about the simple machines that can be found around your house. How can those machines be described? What are they like? To develop the concept of **function**, talk with your child about the science behind simple machines, like gravity, friction and force. How does force overcome gravity and friction in a simple machine? Finally, to develop the concept of **connection** talk about how these machines are used in our everyday lives and how they are the basis for building complex machines. We also use them to make our work more efficient and easier.



Fun things to do together



Do a simple machines hunt around your home and around your neighbourhood. Can you identify simple machines? How are these machines making it easier for people to do work? Challenge your child to use their Lego pieces to construct the simple machines. Can he/she make all 6? Take a look at some Rube Goldberg challenges on youtube. Pick one of the challenges and try and incorporate simple machines into your design. Here is one that might inspire your young engineers: <https://youtu.be/0uDDEEHdf1Y>

Taking Action!

ACTION is a key element of the Primary Years Programme. We are always looking to see how children take their learning and apply it independently. This can take many forms - from a discussion about the Unit of Inquiry at home initiated by your child, role-play or even a request to



bring a book or artifact in to school because it relates to the work we have been doing in school. Now that you know what the unit is all about please keep your eyes open for evidence of action and let us know! Any action that you tell us about will be kept as part of your child's records.