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.

Y4 Unit Overview
How the World Works

In our fifth Unit of Inquiry the Year 4 children will develop their understanding that **'Simple machines help people do work'**. We want the children to understand that simple machines make work easier for us by changing the force (pushing or pulling) needed to do certain kinds of work. Students will not only gain an understanding of forces and simple machines but they will also be able to identify how simple machines are used in our everyday lives. Over the next 6 weeks we want the students to become more **knowledgeable** about the world around them and as a result become better **thinkers** as they engage with the unit related tasks. **Curiosity** and **creativity** will also be dispositions we hope students will develop as they begin to ask questions, find out how things work and try their hand at creating their own machine. Along with these dispositions students will continue to develop life skills with a particular focus on **formulating questions**, **metacognition** (as we ask them to make plans and follow them) and **application** when they take what they've learned and apply it to the creation of their own machine.

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

Developing vocabulary:

Key vocabulary used in this unit will be:
force, push, pull, pulley, lever, inclined plane, wheel, axle, screw, compound machine, simple machine, work, direction, motion, position, friction, variables, experiment, testing, prediction, system, measure
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**. We will be exploring the concept of form as we find out about the 6 types of simple machines and investigate how we can describe them. The concept of function will be understood as we begin to experiment with simple machines and measure the amount of work they do and how they make work easier for people. Connection will be explored as we investigate simple machines used in our everyday lives and how these machines can be combined to make work easier for people.*

Fun things to do:

Explore simple machines around your home and discuss how they are used to make work easier. Do you have any lego at home? Try creating a catapult, pulley or wheelbarrow. Can you make a vehicle that moves using simple machines found around your home? Simple machines can be found everywhere. Try putting them together to create a compound machine that performs a task. For example: create a machine that helps pour milk, open a door or turns the pages of a book.

Look for 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.

Alongside the key concepts, attitudes, learner profile attributes and action elements of the Primary Years Programme there is a body of knowledge that will be taught during the course of each unit. The main learning outcomes are outlined below for your reference. The children's understanding of each objective is assessed before each planned learning experience in order for us to pitch the work according to your child's ability and needs:

ENGLISH:

Students will have an opportunity to develop their knowledge and skills with regards to viewing and presenting as they learn how to create detailed plans of their machines. They will learn new skills of design such as how to create plans from bird's eye view and side view and how to label different parts of a diagram to add in details. In reading students will work on the strategy of summarising which involves being able to pick out key words from a text and identify the main idea. Students will continue their work on the reading strategy asking questions and summarising. In writing students will focus on writing explanations to explain how simple and compound machines work and when they are conducting scientific investigations they will be introduced to how this can be written up in a more formal way. We will continue to work on our speaking and listening skills through watching videos and recording new information learned as well as when students are asked to present their compound machine to the class.

MATHS

Throughout the unit students will have opportunities to measure using a variety of tools. They will estimate, compare and measure objects using standard units which include length, mass, capacity, volume and temperature. Students will be introduced to vocabulary involving probability. They will describe and order likelihood of events using appropriate vocabulary e.g. likely, unlikely, certain, impossible. We will continue our number work as we apply place value to partition and rename five-digit numbers, recognise, represent and order five-digit numbers, round numbers to the nearest 10, 100, 1000, recall multiplication facts up to 10 × 10 and related division facts and read, write, compare and order fractions.

SCIENCE and SOCIAL STUDIES

This unit will be explored through the science strand: Forces and Energy
The following outcomes will be addressed:

- Design and explain the components of a compound machine, using many simple machines (form/function)
- Understands that forces can be exerted by one object on another through direct contact. (function)
- Knows that forces cause change in speed or direction of motion. (function)
- Knows that forces cause changes in position and shape of an object. (function)
- Understands that there is a relationship between the strength of a force and its effect on an object (e.g. the greater the force, the greater the change in motion; the more massive the object, the smaller the effect on a given force). (connection)
- Friction causes changes in the speed or direction of an object's motion. (function)

CHINESE

This term, we will explore and inquire into the pictographic character system and look at the formation and evolution of character writing. Students' prior knowledge about radicals or root words, structure, sound and meaning of characters will be further strengthened as a result.

Your child will learn best of all when school and home work as a team. If you have any questions at all please do not hesitate to contact us.