

Altrincham C of E Aided Primary School
Year 5 White Rose Science Subject Overview

Autumn term Year 5	<u>Forces</u> (6 weeks)	<u>Space</u> (5 weeks)	<u>Global warming</u> (1 weeks)
<u>Lessons</u>	Lesson 1 - Friction and Air resistance (steps 1&2) Lesson 2 - Plan- Parachute experiment (step 3) Lesson 3 - Investigate and Evaluate- parachute experiment (steps 4&5) Lesson 4 - Plan and Investigate- water resistance (steps 6&7) Lesson 5 - Explore gravity (step 8) Lesson 6 - Use small forces for greater effect (step 9)	Lesson 1 - The solar system and The planets (steps 1&2) Lesson 2 - Modelling (step 3) Lesson 3 - Motions of the Earths and planets and The solar system- ideas of time (steps 4&5) Lesson 4 - Planet Earth and Night and day (steps 6&7) Lesson 5 - The moon (step 8)	Lesson 1 - What is global warming and what are the impacts of global warming on living things. (steps 1&2)
<u>End points</u>	-Explain how a stationary object will only move when the force applied is greater than the friction, which acts in the opposite direction of the movement. -Describe how air resistance is a friction force between the air and a moving object. -Explain how you can make an investigation more accurate. -Understand that objects with a different mass fall at the same rate. -Explain how pulleys use a rope or cable through a wheel to allow lifting of heavy objects.	-Know that the solar system is a collection of planets, moons and the sun. -Know that there are eight planets that orbit the sun. -Explain how models can be created in different ways to represent the solar system and planets. -Explain that planets take different amounts of time to complete a full orbit around the sun depending on their distance from the sun. -Research how difference scientists and mathematicians have contributed to our understanding of the solar system over time. -Explain how the four seasons occur on planet Earth because the Earth's axis is tilted. -Describe how long it takes for Earth to spin on its axis and complete one full rotation. -Know that without the Earths gravitational pull, the Moon would float into space.	-Explain how the greenhouse effect is caused by greenhouse gases trapping heat from the sun which then leads to global warming. -Describe how global warming can affect humans, animals and plants.
<u>Vocabulary</u>	Force, contact force, frictional force, motion, air resistance, parachute, independent variable, dependent variable, controlled variables, repeatability, precision, surface area, anomalous result, water resistance, streamlined, gravitational force, weight, non-contact force, lever, gear, pulley, machine.	Solar system, planet, orbit, Sun, Pluto, celestial body, model, gravity, heliocentric model, geocentric model, rotate, North Pole, South Pole, axis, Earth, night, day, moon, gravitational force, satellite.	Global warming, greenhouse gases, fossil fuels, climate change, glacier, habitat, carbon footprint.
<u>Relevant prior learning</u>	Attract and repel materials, Movement on different materials, magnetic properties.	Changes across seasons, light and shadows,	Sun safety, habitats.
<u>Key questions and practical activities</u>	Y5 Autumn Block 1 Forces SOL.pdf	Y5 Autumn Block 2 Space SOL.pdf	Y5 Autumn Block 3 Global warming SOL.pdf