UKS2 – Lesson Plan 2

How do planets orbit the Sun?

Aim:	**Key Words:**	**Preparation:**
To understand planetary orbits and the solar system's structure.	Orbits, planets, solar system, gravity, revolution	• Solar system model or diagram • Plastic balls (to represent planets) • String • Measuring tape • Worksheet for calculations

Prior Learning: *basic understanding of the solar system and planets.*

Warm-up:
Start with a brief discussion on the solar system. Have children recall and list the planets in order from the Sun. Use a diagram to visually reinforce their understanding.

Main Teach:

1. **Explain Planetary Orbits:** *describe how planets orbit the Sun due to the force of gravity. Highlight how gravity pulls planets towards the Sun but their forward motion keeps them in orbit.*
2. **Model Demonstration:** *use a solar system model or diagram to show how each planet follows an elliptical orbit around the Sun.*
3. **Revolution vs. Rotation:** *define and compare the terms 'revolution' (orbiting the Sun) and 'rotation' (spinning on its axis). Show how the Earth's rotation causes day and night.*

Activity:
Create a Scaled Model: *children use plastic balls to represent planets and string to create orbits around a central ball (the Sun). They measure and calculate scaled distances and sizes of planets to create their model. Encourage children to visualise the distance between planets relative to each other.*

Extension Challenge:
Gravitational Influence Research: *children research how the gravitational pull of various planets affects their orbital paths and present their findings to the class. They can use online resources or books to gather information.*

Plenary:
Review the key points on planetary orbits. Discuss what factors, like gravity and distance from the Sun, influence the planets' paths. Encourage children to reflect on how this knowledge helps us understand our solar system.

ART	**Art:** Create a 3D model of the solar system using craft materials.
D.T.	**DT:** Design and build a rotating model of a planet's orbit.