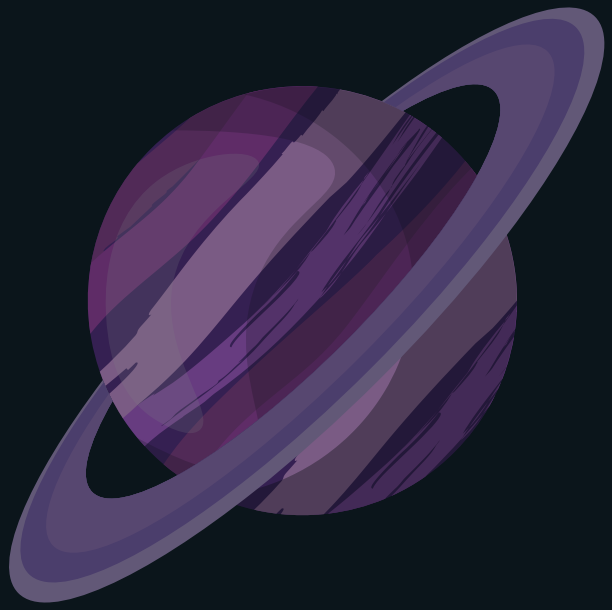
Space Place: Your Guide to Exoplanets and Cosmic Discovery

A DIY journey through exoplanets, the Doppler effect, and spectroscopy.

Discover Distant Worlds!

Welcome to the exciting world of exoplanets! With this kit, you'll create your own planet, learn how scientists explore distant worlds, and uncover the mysteries of the universe. Let's begin our journey beyond!



Make Your Own Exoplanet!

1. Mold the clay into a planet shape.
2. Customize your planet by adding craters, mountains, or rings.
3. Paint or decorate once the clay dries.

Assemble Your Spectroscope

1. Fold the cardboard sheet into a tube.
2. Place the lens at one end.
3. Insert the cardboard circle with a slit on the other end.
4. Point the spectroscope at different light sources and observe the light spectrum!

Doppler Effect with Sound

1. Turn on the buzzer inside the ball.
2. Play catch with the ball and notice how the sound changes.
3. As the ball moves closer, the sound pitch gets higher. As it moves away, the pitch lowers.
4. This simulates how sound waves compress and stretch, just like how light waves behave in space!

SPECTROSCOPY: WHAT CAN LIGHT TELL US

Spectroscopy is a powerful tool that splits light into different colors. Each color corresponds to a different element—like how sodium gives off a yellow light. Scientists use this to study the atmospheres of distant planets!

The Doppler Effect: Detecting Planetary Movements

The Doppler Effect is how light or sound changes when something moves toward or away from us. This shift in waves helps scientists measure the speed and direction of planets around distant stars!

Exoplanets: Worlds Beyond Our Solar System

Exoplanets are planets outside our solar system! Some are gas giants like Jupiter, while others are rocky worlds that might even have water!

For more fun activities, videos, and resources, visit our website: