

Ohio Science Standards

Cosmic Colors

This production excellently showcases the electromagnetic spectrum and how different types of waves are all around us, visible and unseen to our eyes, and how they can not only help us function in the modern world but explore the vastness of the universe itself. Cosmic Colors covers these Ohio Education Standards:

High School

Physical Science

STUDY OF MATTER

- ✓ Atoms
 - Models of the atom (components)
- ✓ Reactions of matter
 - Chemical reactions [Iron Oxide]

ENERGY AND WAVES

- ✓ Waves
 - Refraction, reflection, diffraction, absorption, superposition
 - **Radiant energy and the electromagnetic spectrum** (Cosmic Colors explores this topic in depth!)

Physics

WAVES

- ✓ Wave properties
 - Conservation of energy
 - Reflection
 - Refraction
- ✓ Light phenomena
 - Visible spectrum and color

6th Grade

Physical Science (PS)

- ✓ **All matter is made up of small particles called atoms.**
 - Each atom takes up space, has mass and is in constant motion. Mass is the amount of matter in an object. Elements are a class of substances composed of a single kind of atom. Molecules are the combination of two or more atoms that are joined together chemically. Compounds are composed of two or more different elements. Each element and compound has properties, which are independent of the amount of the sample.

5th Grade

PHYSICAL SCIENCE (PS)

- ✓ **Light and sound are forms of energy that behave in predictable ways.**
 - travels and maintains its direction until it interacts with an object or moves from one medium to another and then it can be reflected, refracted or absorbed. Sound is produced by vibrating objects and requires a medium through which to travel. The rate of vibration is related to the pitch of the sound.