Into the Wild (Wildlife Sciences)

Warm blood, cold blood, bones or no bones, these Scouts will go into the wild to discover the variety of animals that inhabit our planet.

Scouts will first explore the biomes of this world and then determine which animal calls each biome home. From there, they will get their "gloves dirty" to experience the food chain in person by dissecting an owl pellet and investigate various bird adaptations. Scouts will get to see how long an alligator actually is, discover which amphibian is clear, and end by building an aquatic marine biome ecosystem, also known as a coral reef!

A Flying Fluid (Aerodynamics)

The fluid dynamics of air can be, well, quite the flight! In this module, Scouts will explore fluid dynamics, the study of the flow of liquids and gases. They will learn how fluids exert forces on moving objects. Using the Engineering Design Process to design various prototype wind vehicles, Scouts will be hands-on in the realm of fluid dynamics!

Engineering Solutions (Engineering)

Scouts will explore engineering by learning and applying the engineering design process. From invention to prototype building and from biomedical engineering to water filtration, Scouts will discover engineering fields that might not always come to mind!

Ancient Archaeology (Archaeology sciences)

In this module, Scouts will build on their knowledge of archaeology. From making their own artifacts to mummifying an apple, Scouts will understand that archaeology draws on many scientific practices and will be able to explain why the study of archaeology is an important science. They will end by putting together a time capsule for someone in the future to find and learn about what life was like today.

Bubbleology (Material Science)

Material engineers are people who use their understanding of different materials (such as metals, plastics or wood) to make things that solve problems. In this module, Scouts will experiment with many different materials that can be used to make bubble wands and discover the chemistry behind bubbles!

Using the Scientific Method and the Engineering Design Process, Scouts will become material engineers as they consider which materials are best for making different kinds of bubbles as well as experiment with creating their own bubble solution. They will then use their new skills and knowledge to perform their very own bubble presentation demonstration.

Criminal Case Files (Forensics)

Crime investigators use forensic science to help solve crimes. Scouts will be introduced to the different branches of forensic science and careers in these fields. In this module, Scouts will learn about forensic science as it relates to DNA, fingerprints, graphology, and blood spatter. Meetings 1–3 will equip Scouts to play detective and use forensic techniques and critical thinking skills to identify the No. 1 suspect of a crime.

Microbiology Coming into Focus (Microbiology)

Scouts will take a closer look at what it means to be "alive" and will examine the smallest form of life, the cell. Scouts will assemble and learn how to use a Foldscope – the paper microscope! From onion cells to bacteria, they will explore prokaryotic and eukaryotic cells, and will use their Foldscope to see what is usually too small to be seen. It's microbiology coming into focus!

Reactions in Action (Chemistry)

In this module, Scouts will explore the concept that chemical reactions involve the breaking of bonds between atoms in the reactants, and the rearrangement and rebonding of these atoms to make the products. Scouts will investigate reactions which produce a gas, form a precipitate, and cause a color change!

Human Space Exploration (Astronomy)

Scouts will take a dive into deep space by becoming human space explorers and taking their first mission to the moon in the Human Space Exploration Mission. They will gain knowledge about the engineering behind space suit safety, will engineer a balloon rocket that will take a payload to the moon, and then design a 3D lunar habitat. They will also learn and explore NASA's Artemis Mission to the moon!

MS Science Behind the Sport (Science, Math, Engineering)

In this module, Scouts will discover the science behind some commonly known sports. They will explore the related math, physics, and engineering principles behind archery, zip lining, cycling, and skateboarding and will learn how to apply various math equations along the way. Let's learn more, behind the sport!