COLCHESTER ZOOLOGICAL SOCIETY Home Education Sessions 2024-2025

Sessions for age 11-16

	Topic	Session Description	Key Points Covered
Sept Mon 2nd Tues 3rd Wed 4th	Classification	Discovery why classification of living things is important, and the characteristics scientists use today to sort animals (and other organisms) into different groups. The session covers from Domain to Species with a particular focus on the five main vertebrate groups.	Biological classification (taxonomy); the five major vertebrate groups (birds, mammals, reptiles, amphibians, fish)
Oct Mon 7th Tues 8th Wed 9th	Ecosystems	Investigate the complexities of food webs, ecosystems, bioaccumulations and biomagnification to discover just the connections between every living thing. This is then related to the issue of plastic litter in the world's oceans and the surprising and deadly link between ocean plastics and persistent organic pollutants. The session ends with a look at what can be done to solves this complex environmental problem.	Ecosystems; food webs; bioaccumulation & biomagnification; ocean plastics
Nov Mon 4th Tues 5th Wed 6th	STEM @ the Zoo	From the secret science of zookeeping, to amazing advances in conservation tech, and building new animal enclosures, there is lots of STEM at the zoo! This session includes career pathways into zookeeping, as well as some of the STEM skills used by zookeepers.	Zookeeper job roles; STEM design thinking; conservation technology.
Dec Mon 2nd Tues 3rd Wed 4th	Climate Change: Fact or Fiction	Human caused climate change is a global threat to humans and many animal species. This is a vastly complex issue that requires critical thinking to sort the facts from opinions and the myths from the evidence. We'll walk through five steps of critical thinking and how they apply to a range of environmental issues. From plastics to palm oil, and food waste to the ozone hole participants will learn how to apply critical thinking skills to assess and understand these issues as well as how they relate to the big picture problem of climate change.	Critical thinking skills; climate change
Jan Mon 6th Tues 7th Wed 8th	Zoo Visitor Social Science	Psychology and sociology in a real-world context. Discover how these social science concepts are applied in practice at Colchester Zoo to help us meet our mission statement goals. This session references various peer-reviewed scientific studies as well as real-world studies conducted at Colchester Zoo.	Introduction to social science; environmental, social, cognitive, and conservation psychology; scientific visitor studies and research methods
Feb Mon 3rd Tues 4th Wed 5th	Evolutionary Biology	After an introduction to evolution (based on Darwin's work and the Galapagos Finches) and variation, get the change to examine real scientific study skins. Using observations of these specimens, create evolutionary hypotheses based on real historical data from natural history collections around the world.	Evolution; variations; scientific thinking; data analysis
Mar Mon 10th Tues 11th Wed 12th	Cures or Conservation	What is the future and history of animals in Traditional Medicine? Human cultures around the world and historically have used and continue to use animals and part of animals as medicine. We will explore the history and current research surrounding medicines based on chemicals and compounds found in animals, including the step-by-step process scientists use to create new medicines. Through this, we discuss the threats to endangered animals used in medicine and how these needs can be balanced with human health.	History of European medicine (with reference to animals used as medicine); process of medicine development; endangered species
Apr Mon 28th Tues 29th Wed 30th	Animal Careers	This session provides information about a wide range of jobs in the animal industry (not just being a zoo keeper). Specific job tasks as well as requirements will be discussed as well as various career paths.	Role of a zoo keeper; career pathways; course requirements; non-academic routes
May Mon 12th Tues 13th Wed 14th	Aquatic Invertebrates	Learn about what aquatic invertebrates (and vertebrates) live in local ponds. Using classification keys we'll identify the organisms we've caught. We'll then discuss what types of animals they are and what this says about the water quality, and the ecosystem of the nature area in general.	Habitat assessments; aquatic invertebrate identification; ID keys and guides