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The A. Paul and Carol C. Schaap Celebration of
Undergraduate Research and Creative Activity

4-12-2024

ExploreHope Summer Camps: Amazing Animal Abilities

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Recommended Citation

Repository citation: Sturgeon, Hannah; Archer, Alyssa; and Lauraine, Ashley, "ExploreHope Summer Camps: Amazing Animal Abilities" (2024). *23rd Annual A. Paul and Carol C. Schaap Celebration of Undergraduate Research and Creative Activity (2024)*. Paper 80.

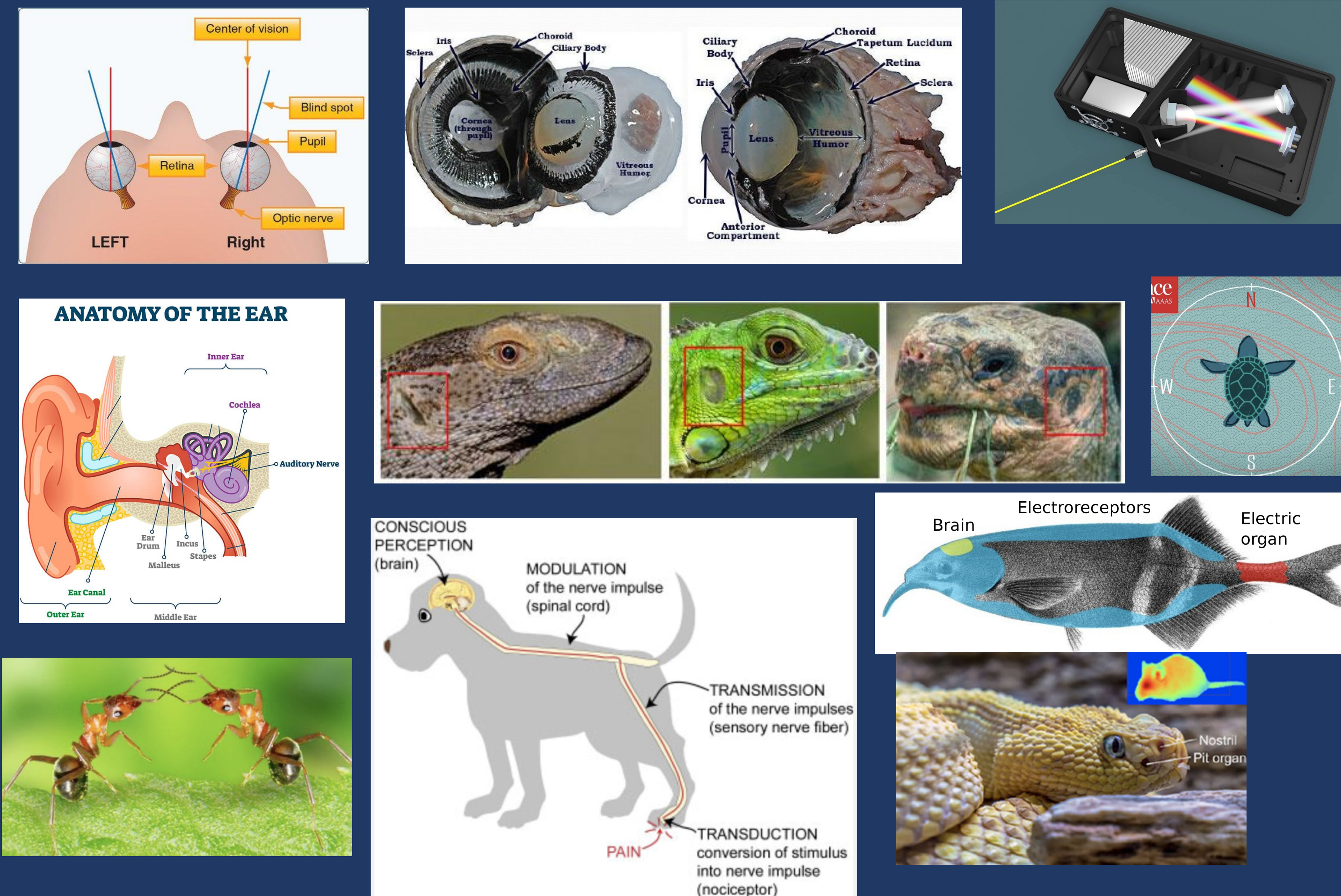
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What is ExploreHope?

- ExploreHope offers innovative programming for K–12 students and teachers to experience hands-on activities in STEM and the arts. These programs expand learning opportunities and complement in-classroom goals.
- ExploreHope engages Hope students in these innovative experiential learning programs to provide unique pre-professional experiences to their education.
- What does ExploreHope offer?
 - Community Programs: Girls Day, Scout Programs, Brain Day
 - School Programs: Equipment Loans, School Visits, Teacher Training, Tours
 - Summer Science Camps



Amazing Animals Abilities

- This camp will teach participants about the variety of sensory systems observed across the animal kingdom including:
 - 'Typical' systems: visual, auditory, and olfactory systems, mechanoreception and kinesthetics, and
 - 'Unique' systems: the detection of electric fields—performed by sharks to detect their prey—and magnetic fields—conducted by birds to navigate during migration.
- Camp participants have the opportunity for hands-on learning through dissections, working with live animals, and using technologies like spectroscopy. These skills are important to biologists and allow us to explore realms that are unknown to us.
- The camp activities will also equip participants with an understanding of how animals make sense of their surroundings by piecing together the clues gathered by their collective senses. This immersive and educational experience will inspire a new generation of young scientists to explore the world around them.
- Camp participants will be presented with full scholarships provided by the National Science Foundation (NSF), whose priorities lie especially in increasing the broader impact of supported projects. This corroborates ExploreHope's mission to have a broad outreach that will invite and welcome young scientists from diverse backgrounds.

Day 1: Visual Systems



- Anatomy
- Cow eye dissection
- Animal Vision Glasses
- Colors and Camouflage with Spectrometer

Day 2: Auditory Systems



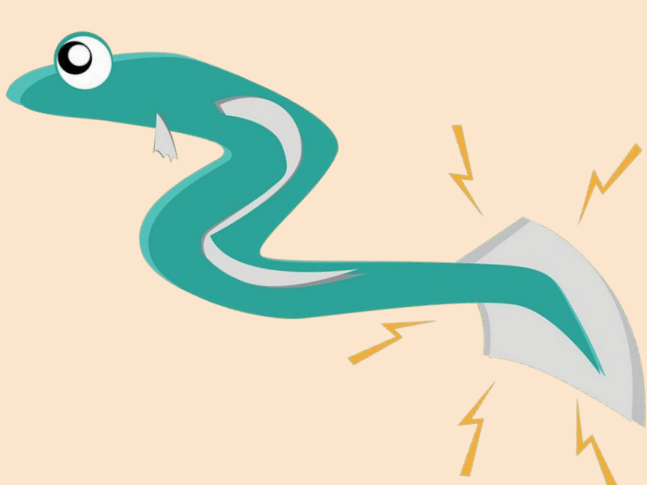
- Anatomy
- Environmental Filtering
- Animal Sound Production
- Ultrasonic Sounds
- Echolocation

Day 3: Touch, Pain, & Chemical Sensations



- How do animals communicate through touch?
- How do animals feel pain?
- Proprioception
- Balance

Day 4: Unique Sensory Systems of Animals



- Magnetoreception
- Electroreception
- Infrared Detection (Snakes)