

# The unique abilities of the chameleons eye research paper

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The Chameleon has one of the unique eyes among the reptiles. This makes it one of the highly visual- oriented reptiles. The eye of the chameleon has a 360-degree arc view. The eyes are unique in that they allow the animal to see in more than one direction at any given time without the chameleon turning its head (Kirmse and Schaeffel 320). A chameleon's eyes can move independently of each other which allows the animal to focus on one object while scanning the surrounding environment simultaneously. The eyes have separated nodal and center points which allow them to have a unique focus. The chameleon has a panoramic view that is achieved by having an eye that protrudes laterally from the head. The eye is also unique in that the eyelids are fused together and cover the entire eye leaving only a small space for the pupil. When the chameleon wants to focus on one direction, it does so by rotating its eyes, resulting in sharp stereoscopic vision and depth perception. The eye has a negative feature lens, which increases image size and supports near sight. The eye also has a positive cornea, which increases sight resolution and gives a narrower field of vision (James et al. 926). The chameleon's eye also has a smooth ciliary muscle which allows for rapid focusing. The chameleon zooms in effectively to get large and bright images of the target. Finally, the chameleon can achieve binocular vision by turning its head to face the target. This is unique for an animal with eyes on the sides of their head. It allows the chameleon to point both his eyes in the same direction effortlessly (Matthias 174).

### **Works Cited.**

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