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# The Scallop's Amazing Eyes

- \* Scallops can have up to 200 eyes.
- \* When light hits a human eye, it passes through a lens and focuses on the retina (a layer of light sensitive cells).
- \* When light hits a scallop eye, it passes through a lens-like structure, passes through two retinas layered on top of one another, and then hits a curved mirror at the back of the eye, which reflects the light back onto the retinas.

# The Amazing Mirror

- \* It consists of flat, square crystals, each a millionth of a meter wide. The crystals tessellate together into a chessboard-like grid. Between 20 and 30 of these grids then stack on top of each other, with a liquid-filled gap between them.
- \* The layers are arranged so that the squares in each one lie directly beneath the squares in the one above. Each mirror is built very precisely.



\*The mirror is slightly tilted relative to its retinas. It is able to focus light from the center of its visual field onto the upper retina and light from the periphery onto the lower one.

- \* Each eye is about the size of a poppy seed and sits on the end of a tentacle that can be extended beyond the rim of the shell.
- \* The scallops seem to see very well for simple creatures. When food particles drift by that are only 1.5 mm wide, the scallop will open its shell.











