Figure S1. Templates for the construction of cone.

(A) A thin transparent plastic plate of the illustrated shape was made frosted using polisher, then soften by heat and rolled to form a cone. Slits were cut opened at the locations of the solid blank line for attaching the distant plane. Metal strips were inserted at the positions of small circle to hold the lens.

(B) A translucent plastic was adopted as the distant plane, where printed gratings on another paper were adhered. Three extended parts can be fitted to the slits on the cone. Slits were cut opened at the locations of the solid blank line for attaching the near plane.

(C) A thin transparent plastic film constructed the near plane. It supports a stationary label paper where gratings were printed and transparent areas were cut. Three extended parts can be fitted to the slits on the distant plane.
Figure S2. The lens-cone device applied on a chick

(Left panel) Chicks were able to support the weight of the cone and walked normally after short period of adaptation.

(Upper-right panel) The lens-cone device with the target planes removed. The photo showed a chick opened its treatment eye behind the lens-cone device.

(Lower-right panel) Photos taken from the back of the chick. A Velcro band behind the head secured the hood in position