Migrating Eye

**Purpose**
To show how an adult flatfish develops to live on the ocean floor.

**Materials**
Lemon-size piece of modelling clay
2 pinto beans
Sheet of white copy paper

**Procedure**
1. Model the clay into the shape of a fish with a slightly rounded body.
2. Place a bean on each side of the fish’s head.
3. Place the paper on a table and stand the fish belly side down on the paper.
4. Observe the location of the beans and the shape of the fish’s body.
5. Move the left-eye bean to the top of the fish’s head.
6. Lean the fish onto its left side and slightly flatten its body and head.
7. Again observe the location of the beans and the shape of the fish’s body.
8. Move the left-eye bean again, nearer the right-eye bean.
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9. Press the fish’s body and head flat as shown.
10. Observe the final location of the beans and the shape of the fish’s body.

Results The bean on the left side of the fish’s head is moved around the head in stages until both beans are located on one side the right side of the head. The fish’s body gradually changes from a round form to a flat form.

Why? The beans represent the eyes of a flatfish, such as a flounder. All young flatfish have the general shape of other fish: a rounded body with eyes on either side of their head. The clay model in this experiment does not change in size, but in nature the young flatfish starts to grow larger and its body starts changing. One eye slowly starts to move over the top of the head. At this point, the fish moves to the ocean floor and lies on its blind side. In a short time, the body is greatly flattened from side to side and the two eyes are close together on the upper, sighted side of the head. About three-fourths of flatfish lie on their left side.