

Bottles and oceanography

General Description

Authors :

Antoine Rousseau, Maëlle Nodet, Sebastian Minjeaud (scientific authors),
Pierre-Olivier Gaumin (film director)

License :

Creative Commons BY-NC-ND

Short Description

Beneath the sea surface, there exists a vast network of ocean currents, which, like gigantic conveyor belts, transport huge water volumes. Although the real map of these currents is extremely complex, a couple of simple physical processes explain most of the large scale features.

We will look at the basic process leading to the displacement of huge water volumes. This process relies on the density difference between water masses. Computer experiments can help to grasp the concept, but we will see that a simple experiment can help too, which you can do at home with plastic bottles, straws and fruit syrup...