Three symbolic images of Biohistory

Series of 3D paper crafts

Biohistory Mandara*

* A mandala is a symbolic picture of Buddhism that represents the universe appearing as a series of concentric circles.

What's Biohistory?

A new form of knowledge that observes the livingness of many forms of life, including humans, and asks, "How shall we live?"

Biohistory looks at how life has evolved and diversified since the emergence of the first living organisms in the seas 3.8 billion years ago. All living creatures contain DNA (genomes), the history of which can be traced back to that ancient event, making DNA (and genomes) an enormous historical archive. By reading that history, we can learn more about life, humanity and nature, and harness that knowledge toward building our society.

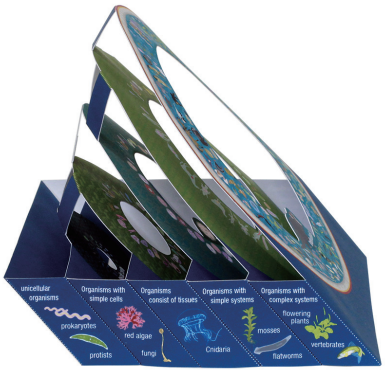
What's Biohistory Mandara?

Illustrated by Manabu Nakagawa, Kanya Ozaki

Biohistory Mandala represents the hierarchy of living creatures by a series of concentric circles. A DNA that means the genome in the cell is placed at the center of the circles. Organelles in the cytoplasm of the cells surround it and form a cell. In the next layer, tissues composed of cells are seen followed by organs which are structural and functional unit of animals and plants composed of some tissues. In the outer layer, you can find all kinds of living creatures that are organized by the organ systems and form ecosystems with abundant nature. The outmost layer shows the history of the evolution of organisms and extinct creatures are drawn like fossils. The processes from a cell to individual also represent the development of organisms. Biohistory Mandala comprehends both evolution and development of creatures.

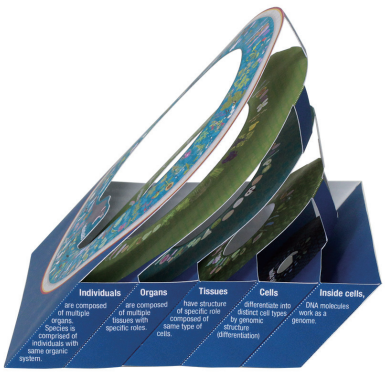
Make your own 3D paper craft of Biohistory Mandara

Complexity level of organisms corresponds to the layer of biological systems on the left side.



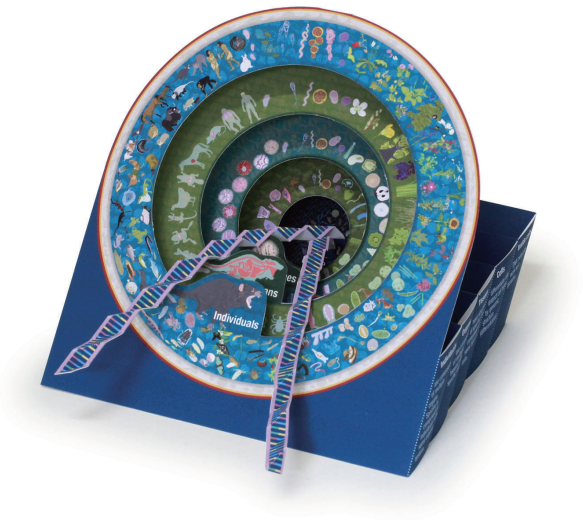
Each layer of Biohistory Mandala is laid one by one therefore, the genome DNA is in the innermost depth of the center.

Description of biological systems corresponds to the Mandala's layer on the right side.



BRH

Biohistory Mandara
assembling instructions



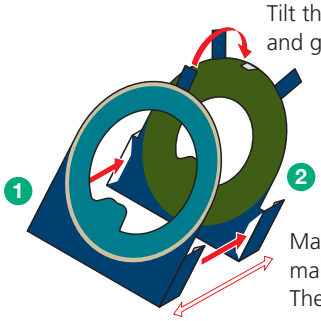
- Cut each part out carefully with a craft knife or scissors. If available, a circle cutter is handy to cut out precise circular arcs.
- Score along the fold lines several times with a stylus (or dried ball-point pen) along a ruler. Scoring helps create a sharp fold.
- Fold parts sufficiently before applying glue.
- White PVA-type craft glue is suited. Put a little glue on a scrap of paper, then apply glue thinly and evenly with a toothpick.
- A pair of tweezers is very handy to build small parts or inner parts into which your fingers cannot reach.

Cut	Hill Fold	Valley Fold
Glue	Cut Out	Center of Circle
*		+

A

Glue 1 to 2.

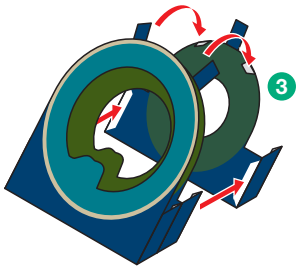
Tilt the reinforcement part and glue.



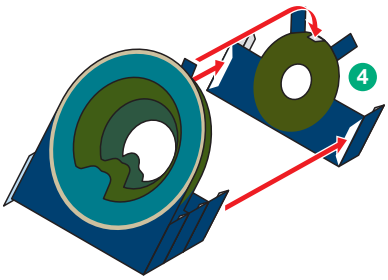
Match the corners to make the side face flat. The same hereinafter.

B

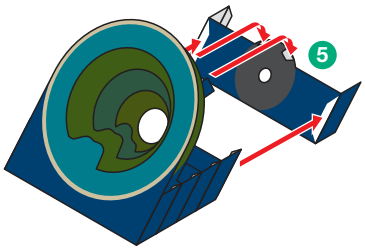
Glue 3 4 and 5 in the same way.



C

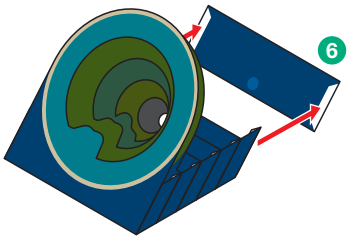


D



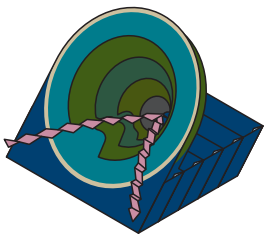
E

Close the back with 6.



F

Fold the genome in zigzags, and introduce it to pierce six layers.



Design : Keisuke Saka

BRH