

The Machine Inside: Biomechanics



Exhibition Overview

Spider webs stronger than steel? Fish that can bite through bricks? All species—from the long-extinct to the recently-discovered—have evolved specialized ways of adapting to the world. In this engaging traveling exhibition from the Field Museum, discover the marvels of natural engineering—and see how humans can draw inspiration from the innovations of evolution.

Through immersive design, real objects and scientific models, interactives, and media, this exhibition takes visitors past the familiar surface of nature, and deep into its invisible workings. Examples draw from the entire natural world, from ants to microbes to humans.



1

Staying in One Piece: Structures and Materials

The ability to defend against external pressures—like the forces of wind and water and the pull of gravity—is key to survival. Examine the clever shapes and materials that plants and animals have evolved that provide extraordinary strength against the elemental challenges of life on Earth.

2

Going with the Flow: Pumps and Pipes

All living things are in a never-ending race against time to distribute life-sustaining supplies to every cell in our body. Peek under the surface of plants and animals to see how they move air and fluids to where they're needed most using pumps, pipes, and pressure.

3

Surviving the Elements: Insulation and Radiators*

In Earth's most uninviting environments, species are nature's greatest innovators. Explore the extraordinary strategies and mechanisms plants and animals use to keep warm in icy seas or cool in broiling deserts.

*Section is exclusive to 7,500 ft² version.

4

Grabbing a Bite: Jaws and Claws

To succeed, all living things have to feed. Witness how muscles, bones, and joints set internal machinery in motion so animals can create the forces needed to grab and bite their prey.

5

Crossing the Landscape: Legs and Springs

Creatures skitter, hop, and run across Earth's surface on four legs, ten legs—and sometimes just two. Discover the ways that internal springs and momentum redirect the forces that hold animals in place to their advantage.

6

Launching into the Blue: Wings and Fins

Over millions of years living things have adapted to the dizzying heights of the open skies and the crushing pressure of the deepest seas. Journey beyond the firm ground to explore the sleek, aerodynamic forms that propel animals and plants to their destination.



7

Gathering Intelligence: Beyond Eyes and Ears

Go beyond the five familiar senses to explore the tools and techniques living things use to respond to the mysterious world around them. Using heightened sensory equipment, some plants and animal detect forces we can only imagine.

Exhibition Specifications

Size

5,000 ft² (465 m²) and 7,500 ft² (700 m²)

Ceiling height

13 ft (4 m)

Security

Exhibition requires a limited-access, lockable space with security staff during public hours

Shipping

One-way, inbound, paid by host venue (international arrangements may vary)

Language

English and Spanish provided; language may be converted by international host venues

Rental fee

Please inquire

Features

- Specimens, replications, and touchable models
- Mechanical and digital interactives
- Large media elements and live footage videos

Contact

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www.fieldmuseum.org/about/traveling-exhibitions