

English



National Museum of Emerging Science  
and Innovation (Miraikan)

## Outline

The National Museum of Emerging Science and Innovation (Miraikan) strives to become a place where visitors can feel closely connected to science as a part of enriched human culture through innovative hands-on exhibits that allow visitors to interact with science and through interactions with researchers/engineers, Science Communicators, and volunteers. Also, as a departure point for transmitting information related to cutting-edge science and technology, we present various activities as we expand our domestic and international network.



Mamoru Mohri, Chief Executive Director

## Founding Principle

We believe that science and technology are part of our culture. We provide an open forum for all to ponder and discuss and future roles of science and technology.

## History of Miraikan

Miraikan was opened in 2001. It was built within the Tokyo Academic Park as a center for deepening an understanding of science and technology based on the “Basic Plan for Science and Technology” which aims for the establishment of a scientifically and technologically creative nation.

- November 1995      Enactment of the Basic Law on Science and Technology
- July 1996            Formulation of the Basic Plan for Science and Technology
- December 1999     Construction begins.
- March 2000         Implementation of the exhibition plan and action policies, and preparation of the museum
- March 2001         Completion of Miraikan building
- July 9, 2001        Miraikan opened.



## The Engagement of Miraikan

Miraikan engages in the following three activities as a way of linking people to cutting-edge science and technology.

### 1 Communicating science — Conveying cutting-edge science through new methods

Miraikan conveys cutting-edge science and technology as “state-of-the-art knowledge and innovation” employing a variety of techniques while continually developing new communication tools and methods.

### 2 Fostering personnel — Development of Science Communicators

Miraikan engages in the fostering of “Science Communicators” who act as a bridge between the general public and scientists/engineers.

### 3 Creating a link — Network with 8 stakeholders

We engage in network building as we consider the “8 stakeholders” which are researchers/engineers, schools, science museums around the world, volunteers, Member’s Club/visitors, industries, media, and legislative body/government offices as the interface that links society and Miraikan activities.

# Facility Guide

## Permanent Exhibition [3・5F] ■ EX2 ■ EX3 ■ EX4 ■ EX5

Based on the general exhibit theme: "Dreams for the 21st Century," the four themes of "The Earth Environment and Frontiers," "Innovation and the Future," "Information Science and Technology for Society," and "Life Science" are designed to provide a detailed examination of science and technology, and presented to link the concepts of Space, Earth and Society with that of Humans.

## Dome Theater GAIA [6F]

GAIA

You can enjoy dramatic panoramic images and planetariums. Amazing visuals are presented as the hemisphere is shown on the viewing screen. (Entrance 6F: 112 seats)

\* Reservations are necessary (first-come-first-served basis). Pick up a reservation ticket at the Dome reservation ticket machine on the 1F after purchasing your admission ticket.



## Science Library [3F]

SCL

This is a free visual library for visitors. Various contents on science can be accessed.



## Symbol Zone, Exhibition Space [1F] SBZ EX1

The symbol exhibit Geo-Cosmos floats in a six-story open zone (Symbol Zone). A 1,500 m<sup>2</sup> open space (Exhibition Space) next to the Symbol Zone can be divided or segmented and holds various large scale events and Special Exhibitions.



## Facilities for Exchange [7F] HAL CR1-2-3 INH LNG

The facilities for exchanges, starting with MIRAICAN Hall, can be used for symposiums and conferences related to the promotion of science and technology.



## Orientation Room 1, 2 [1F]

OR1-2

This multi-purpose space can be used on a 30-minute basis for eating and/or resting at the convenience of visitor groups. (Reservation in advance is necessary: each room can hold approximately 120 people.)



## Museum Shop [1F]



In addition to Miraikan's original goods, other goods such as experiment kits for all ages are sold. Also, the shop carries a wide variety of science-themed books. TEL: 03-3529-5781



## Restaurant, Cafe' [1・5・7F]

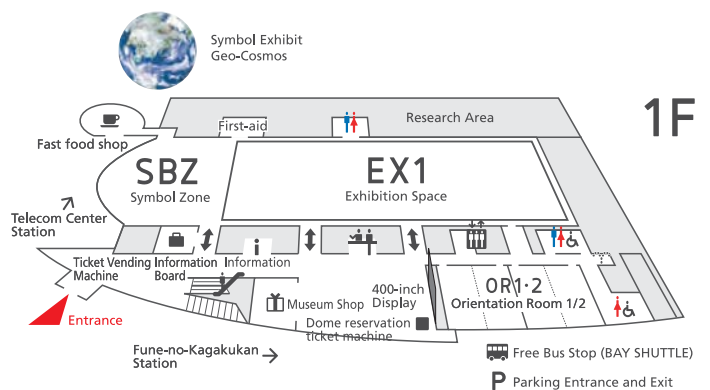
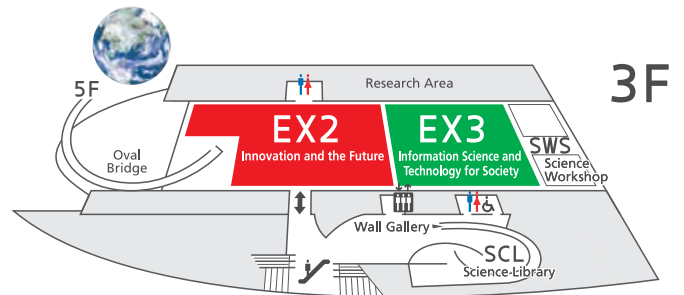
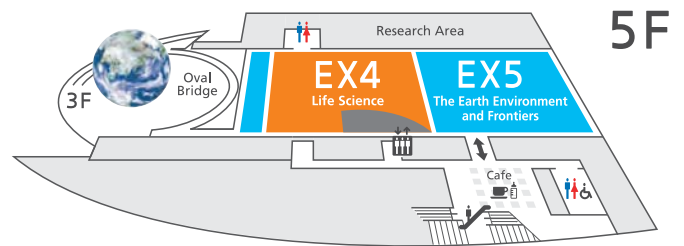
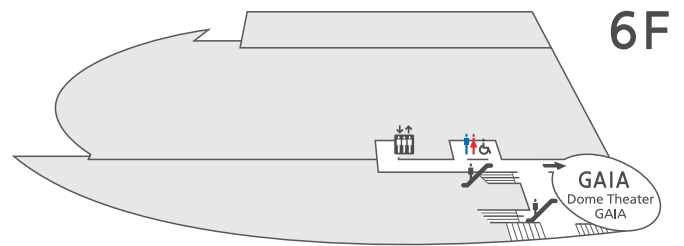
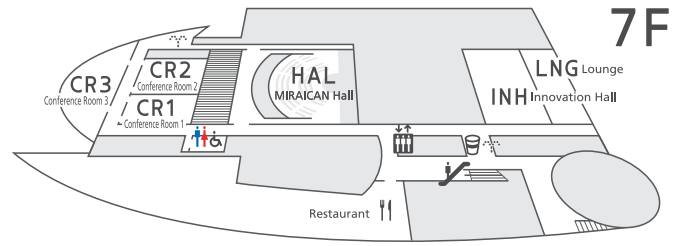


7F Restaurant 11:00 - 18:00 (last order 17:30)

TEL: 03-3599-7555

5F Cafe' (Nursing room available) 10:00 - 17:00

1F Fast food shop 09:00 - 19:00



For ease of viewing, we recommend proceeding from 5F to 3F.

\* The entire facility is freely accessible to visitors with physical disabilities.

\* The hours of the shops, restaurant, cafe, etc., are subject to change based on necessity.

## EX2 Innovation and the Future

New technology essential to the development of society and culture has progressed with the desire of people (imagination) and their power to realize it (creativity). On this floor, we introduce in a visible manner the cutting-edge technologies integrated into daily life through demonstrations by robots, a future city model, and much more. The exhibits also focus on the process of how innovative technology is created and its influence on society, as we look at technological advancement from Edison's inventions to the quantum computer.



The Drive Force of Innovation  
ASIMO demonstration  
Therapeutic Robot "Paro"

Lifestyle 2050  
An exhibition that looks at the lifestyle that contributes to the creation of a sustainable society and science and technology necessary to achieve this.

## EX3 Information Science and Technology for Society

Through the digitization of information and the spread of the Internet and mobile communication, we can now "connect" with literally "anyone," "anytime," "anywhere." Here as you operate the interactive and playful hands-on exhibits, you can gain an understanding of the mechanism of information science and technology and the possibilities of diverse innovations (social transformation) based on this mechanism.



A Hands-on Model of the Internet  
Laboratory for New Media  
Tearoom of Zero/One  
- Device Art Collection

Songs of ANAGURA – Missing Researchers & Their Remaining Devices  
A hands-on exhibit where you can encounter your own information that will become an important resource in the coming information society.

## Symbol Exhibit

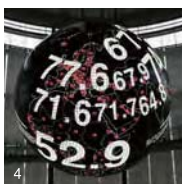
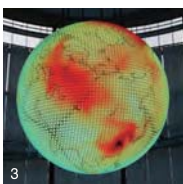
### Geo-Cosmos

The Geo-Cosmos is the symbol exhibit of Miraikan that produces a rendition of our Earth shining brightly in space with a super high precision exceeding 10 million pixels. It is the world's first "Globe-like display" using organic EL panels and was born out of Miraikan's Chief Executive Director Mamoru Mohri's desire to "share with people the sight of our beautiful Earth as seen from space." Image data captured by weather satellites as well as various scientific observation data and simulation images are displayed on the surface of a six-meter wide sphere.



1: The Earth  
Data provided by: University of Wisconsin SSEC

2: Forest Fire  
Data provided by: Wataru Takeuchi, Institute of Industrial Science, University of Tokyo



3: CO<sub>2</sub> Concentration Past and Present  
Data provided by: Japan Meteorological Agency

4: Art Content  
Produced by: INGO GÜNTHER

\*The renovation of the Geo-Cosmos was completed in June 2011.

## Special Exhibition / Event / Science Workshop

**Special Exhibition** In this Special Exhibition held several times a year, we focus on images of the new world and the changes created by science and technology. Based on themes, which closely relate to our daily lives, we will focus on the joy and resonance of science and technology from various perspectives.

**Event** Talk sessions and symposiums which allow visitors to hear actual voices of researchers are held periodically.

**Science Workshop** The Science Workshop is a place for people of all generations to come and participate in experiment classes with our Science Communicators. (Mainly held on Saturdays, Sundays, and Holidays: Reservation required.)



Top: "DORAEMON's Scientific Future" (6-9/2010), "Making of Tokyo Sky Tree®" (6-10/2011)  
Bottom: Experiment Class "Robotics Course (Sensors: tasting)", "Primary Biology Course (DNA)"

## EX4 Life Science

Here, you can familiarize yourself with the forefront of Life Science from the perspectives of the Genome, the Brain and Medicine. In addition to learning Bioethics and the technology of Genome analysis, etc., visitors can observe chromosomes and DNA using a microscope and can also understand the mechanism of the body using a model at the Life Science Laboratory and can joyfully learn about the wonders of life. This is the floor where you can review the relationship between life science and our society by placing humanity in the center.



Brain Machine Interface (BMI)  
What is the genome?  
Life Science Laboratory



Robot Assisted Surgery  
Visitors can experience patient-friendly interperitoneal surgery which utilizes the most modern robot technology.

## Dome Theater GAIA

### Main Programs Showing (As of September 2011)

3D Planetarium Presentation

"BIRTHDAY - What Links the Universe and Me -" Run time: 25 min.

Planetarium Presentation

"Tender is The Night" Run time: 25 min.

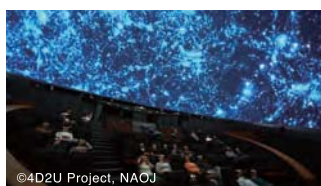
3D Large Scale Image Program

"FURUSATO - World Heritage Sites Viewed From Space -" Run time: 37 min.

3D Large Scale Image Program

"Young Alive! - iPS Cells for a New Future -" Run time: 28 min.

Please visit our website for the program schedule.



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Top: "BIRTHDAY", "Tender is The Night"  
Bottom: "FURUSATO", "Young Alive!"

## EX5 The Earth Environment and Frontiers

While modern life becomes more convenient by the creative use of science and technology, environmental destruction is progressing on a world-wide scale. This area allows us to consider what we have to do for Earth's environment. Furthermore, this area introduces research aimed at exploring the frontiers of space, the depths of the sea and the planets of the solar system, allowing visitors to think from a far greater perspective about the concept of our Earth and the people who inhabit it.



Lunar and Planetary Explorations  
This is ISS, go ahead (ISS)  
Shinkai 6500



Earth Environment and Me  
We will think of the ongoing process of "material cycle" which supports the activities of all life on Earth.

## Staff

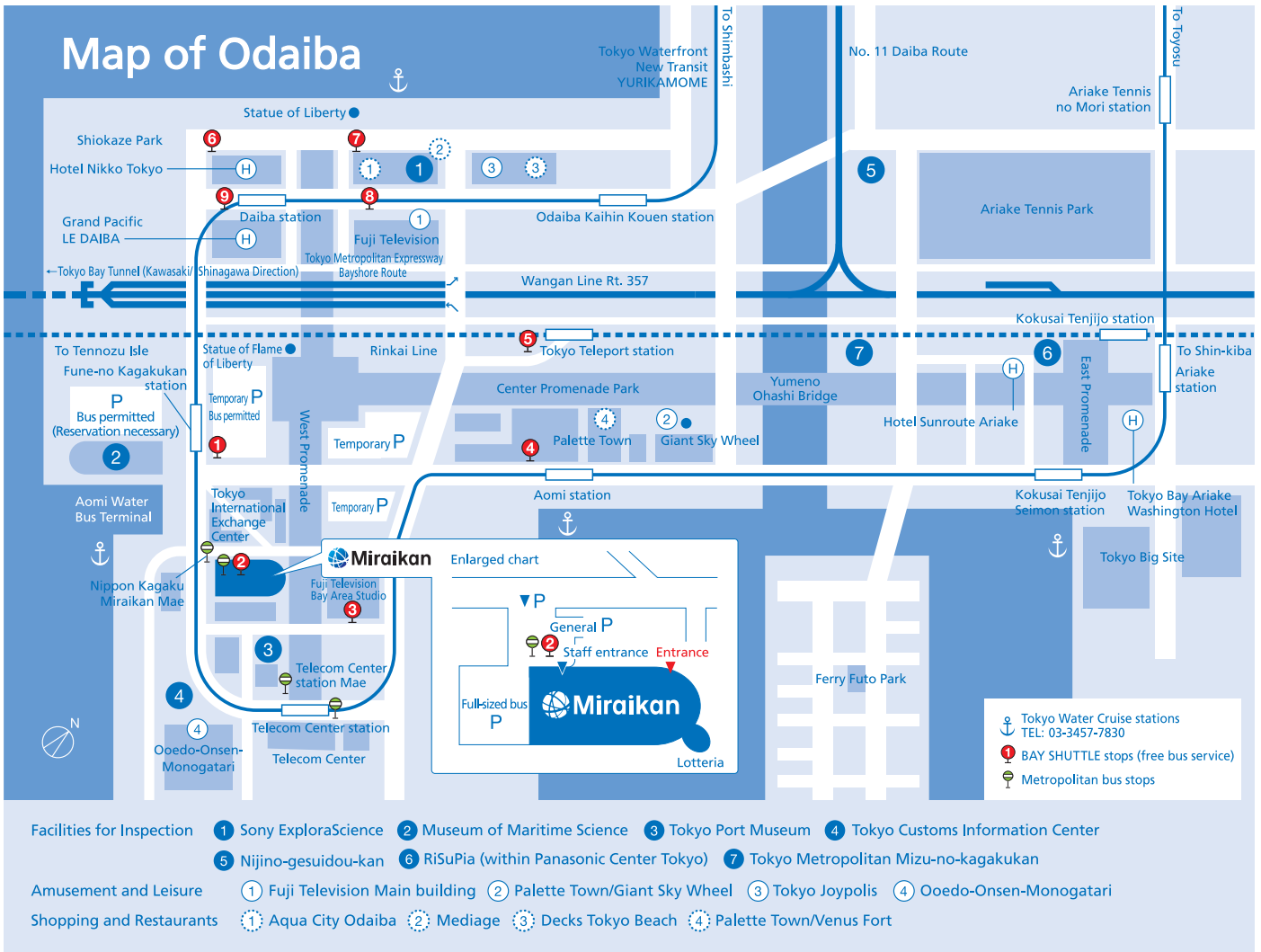
**Science Communicators** They occupy the critical role of linking the general public to cutting-edge science and technology. They conduct demonstrations and explanations on exhibition floors and are in charge of the planning and development of events and exhibits.

**Volunteers** Volunteers spanning a wide range of ages, from high school students to senior citizens, are very active. They offer explanations along with the Science Communicators.

**Attendants** Attendants provide general information and guidance for visitors.



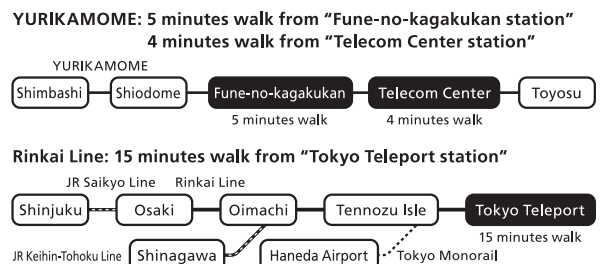
# Map of Odaiba



## Visitor & User Guide

<b>Opening Hours</b>	<b>10:00 - 17:00 (Please enter by 16:30)</b> *There are situations where museum hours may be extended during special terms (Golden Week, Summer Vacation, and New Year's holiday). For further information, please contact us.
<b>Closed</b>	<b>Tuesday (Open on Tuesdays that fall on holidays and in spring, summer, winter vacation periods), December 28 - January 1</b> *Opening days are subject to change according to the terms.
<b>Admission Fees</b>	<b>Adults: 600 yen,</b> <b>18 years old and under: 200 yen</b> <b>Groups (8 or more people) Adults: 480 yen,</b> <b>18 years old and under: 160 yen</b> *Free for those age 6 and under and not in school *Free admission for those 18 years old and under on Saturdays *Free admission for those in possession of a Disability Book and one accompanying person *Special fees may apply for Special Exhibitions.
<b>Parking</b>	<b>Standard-sized / 175 cars</b> (300 yen for the first hour and 100 yen for every 30 minutes after the first hour) <b>Full-sized Buses / 20 buses</b> (3,000 yen / during visit: advance reservations not available)
<b>Group Reception</b>	For group reservations, preliminary inspection, and reference materials, please contact the following: <b>TEL: +81-3-3570-9188</b> <b>E-mail: reservation@miraikan.jst.go.jp</b>

## Transportation



## Member's Club "Friends of Miraikan"

Members can receive various privileges such as an annual free pass, participation in events exclusively for members and discounts for shops in the museum.

**Individual: 1,200 yen**  
**Family: 2,400 yen (All family members living in the same household may enroll as a Family Member.)**



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2-41 Aomi, Koto-ku, Tokyo 135-0064, Japan  
TEL: 03-3570-9151 FAX: 03-3570-9150  
URL: <http://www.miraikan.jst.go.jp/>