



THE OCEAN DISCOVERY PARK

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CONTENTS

Océanopolis Brest, an ocean discovery park unique in Europe _____	p. 3
New in 2010 : “Océan de vies” _____	p. 6
Permanent exhibition: “Marine Mammals” _____	p. 7

EXPLORE THE HEART OF THE OCEANS

The Polar Pavilion _____	p.9
The Tropical Pavilion _____	p.11
The Temperate Pavilion _____	p.14
Catering & Shops _____	p.18
Practical information _____	p.19

OBJECTIVES AND POLICIES

Discovering & understanding marine environments _____	p.21
A showcase for French oceanographic research _____	p. 23
The department for marine mammals _____	p.25
Audiovisual production and cultural engineering policies _____	p.27

Information for Journalists

Press kits and photographs are available on the Océanopolis website

<http://www.oceanopolis.com>

Ask for a password on +33 2 98 34 40 42 or at lapresse@oceanopolis.com

OCEANOPOLIS BREST,

An Ocean Discovery Park

Unique in Europe

Océanopolis, Centre for the Scientific and Technical Culture of the Sea, in Brest, shares the natural history of the oceans with the general public as seen through the eyes of scientists. Thanks to three thematic pavilions devoted to the polar, tropical and temperate marine ecosystems, visitors will discover the underwater world along with its fauna and flora.

This ocean discovery park showcases French oceanographic research. Scientific institutes as well as marine professionals contribute to the content of Océanopolis. A **driving force of tourism in Brittany**, Océanopolis has welcomed more than 8 million visitors since it first opened in 1990.

Experience the sea

We strive to meet the highest qualities here at Océanopolis and this is especially the case for the reconstruction of natural underwater environments, which is both a scientific and technical achievement. Visitors are plunged into a faithful reconstruction of nature thanks to the overall atmosphere, the scale of the tanks and the beauty of the underwater settings.

Océanopolis is based on world-class presentation techniques (staging, multimedia shows and videos) but it also uses elaborate scenery in order to create an atmosphere that arouses emotion, surprise and curiosity.

The ethos that forged the reputation of Océanopolis stems from a scientific approach to information and extreme care in handling the fauna and flora. At Océanopolis, emotion, discovery and science are closely linked to help raise general awareness of sustainable ocean management.

Océanopolis, a great tool for exploring the oceans

Specific activities are organised with the help of teachers. Park visits, educational workshops, games and breaks are available to children on site, either on the tour or in specially dedicated rooms. Océanopolis is an accredited museum of the French Ministry of Education.

Brest, the European capital of oceanography

The birth and growth of Océanopolis in the city of Brest is no coincidence. With 60% of the French oceanographic researchers and engineers, Brest is the European capital of oceanography. Scientific institutes as well as marine professionals (such as Ifremer, IRD, Institut Polaire, etc.) consistently participate in developing the content of Océanopolis.

Key facts and figures

A total of 8,000 m² of visiting areas, 50 aquariums (3.7 million litres) accommodate more than a thousand species (10 000 individuals), exhibits, videos, shows, and a complete educational programme for children for all school ages as well as restaurants and shops, for a day full of discovery and emotion.

Organised around a new theme every two years, Océanopolis' cultural programmed is renewed in order to stimulate the visitors' interest and enhance the attractiveness of the site

CULTURAL POLICY

Local authorities entrusted Océanopolis with two main objectives:

- ◆ Attract visitors to the western tip of Brittany
- ◆ Showcase, through educational and entertaining activities, the oceanographic research for which Brest is so famous.

Local, regional and European funding (such as Feder) provide Océanopolis with the resources to establish an extensive programme in order to position its cultural policy on a national, even European scale. This would promote visitors' return on investment and further raise the profile of Océanopolis, thus revitalizing the image of Brest, Finistère and Brittany around the theme of the oceans.

This event policy impacts three main areas:

- ◆ Scientific and technical culture (shows, exhibitions, activities, etc.)
- ◆ Environment (TV shows, coordination of research activities, etc.)
- ◆ Education

Every two years, Océanopolis works around a new theme to organise various events.

◆ **Spring 2010: “ Océan de vies ”** – International year for Biodiversity – 20th anniversary of Océanopolis

- ◆ **Spring 2009: “ Mammifères marins ”**
- ◆ **April 2008 – March 2010: “ Chauds les coraux ! ”**
- ◆ **April 2007 – March 2008: “ Voyages aux pôles ”**
- ◆ **April 2006 – March 2007: “ Fabuleux monstres marins ”**
- ◆ **April 2005 – March 2006: “ Jules Verne et l’océan ”**
- ◆ **April 2004 – March 2005: “ Microcéan, le petit peuple de la mer ”**

New for 2010:

“OCEAN DE VIES”

Biodiversity pavilion 2010 - 2012

In 2010, Océanopolis inaugurates its new temporary exhibition dedicated to marine biodiversity. Displayed in a 700m² area, this new exhibition will run for two years from April 2010, and will illustrate the wonders of marine biodiversity in its most diverse aspects in a fascinating and interactive way.

The major stages of life at all depths in every ocean will be traced from Antiquity to the present day. The exhibition will also examine the various scientific classifications in biology along with the theories related to evolution. Today, biodiversity results from a long diversification of life that first started in the oceans 3.8 billion years ago, and since that date, 5 mass extinctions of species have already occurred! Visitors will embark on a surprising historical journey among recreated sceneries filled with fossils and 3D computer-generated images. Ultimately a better understanding of biodiversity will be reached through this expedition.

“MARINE MAMMALS” Exhibition

Since the Spring of 2009, Océanopolis has been hosting an exhibition dedicated to marine mammals.

Orcas, elephant seals, harp seals, harbour seals, striped dolphins, walruses and fin whales have been just some of the animals explained to visitors. There are more than 120 different species of marine mammal living in the oceans and seas across the world.

This exhibition illustrates the diversity of these marine mammals as well as the way they live through videos, sculptures and live animals. It also comprises a summary of the findings concerning this fauna: origins, evolution, biology, ecology as well as their relationship with humans, with special attention paid to the existing solutions to make up for those activities which put their future at risk.

Explore
the heart of the oceans

THE POLAR PAVILION

To the North of each land, an ocean; to the South of each sea, a continent: the Arctic and the Antarctic. Lands of ice and wind, with a life of their own that are renewed each Spring. The Polar Pavilion features these two ecosystems which are both strikingly different and yet so similar. Visitors are invited to observe life on these extreme territories thanks to the penguin colony representing life on the Sub-Antarctic islands and the exhibit tank dedicated to the Arctic, home to ten seals.

Since February 2003, the panoramic film "ANTARCTICA"

This stunning 12 min. video, filmed in Adélie Land under exceptional circumstances, is broadcast on a panoramic screen (20m long and 3m high). The film includes unique footage representing life throughout the year, on the icy lands of the Antarctic.

The Penguin colony

The Penguin colony, in a 30m long exhibit of 250m³, is made up of 40 penguins from three different species. All of them were born in captivity and come from Switzerland, Scotland and the United States. This colony, the largest in Europe, accurately represents life on the beautiful landscapes of the Sub-Antarctic islands. King, Gentoo and Rockhopper penguins live together in this astonishing recreated scenery: there is water, of course, but also cliffs and snow. Since May 2000, there have been some new births within the colony. And this year, among the baby penguins that were born Océanopolis had the great joy to welcome a little Rockhopper penguin.

The Seal tank

Used to extreme living conditions, these large predators dwell in a 1000 m³ tank with a reconstructed pack-ice. Ringed and harp seals can be seen swimming around an iceberg or lying on the ice, as they enjoy an endless summer with an outside temperature of 4°C and a water temperature of 8°C.

Three aquariums for a total of 15000 litres are home to:

- Japanese spider crabs
- various kinds of starfishes and anemones of impressive sizes
- and very strange fishes (like the Atlantic wolfish).

EXHIBITION AREAS

Around the penguin colony and the seal tank, 1000 m² of exhibitions illustrate the polar ecosystem, the diversity of Antarctic species, life on ice-fields, and much more.

THE TROPICAL PAVILION

Experience a wonderful journey into the tropical oceans and seas in the Tropical Pavilion. Reminiscent of idyllic holidays or paradise on earth, the tropical belt extends on both sides of the Equator, including all waters with a temperature above 20°C at all times. Comprising a total of 1700m³ of aquariums, the Tropical Pavilion illustrates the wide diversity of marine organisms, from sharks to live corals, not to mention numerous species of colourful fishes and invertebrates.

Exhibition: sharks

Exhibition areas around the shark tank feature a wide range of tools to learn more about this fascinating mythical creature: videos, posters, fossils, models, interactive panoramas, etc.

A great diversity of sharks

Welcomed into the pavilion by a model of a 3m long whale shark (an adult being 12m long), the visitor is immediately confronted with information that crushes the myth of the man-eating shark.

The whale shark is the biggest fish on the planet yet it only eats plankton by filtering water... Worlds apart from "Jaws"!

Furthermore, an interactive panorama depicts the wide variety existing among sharks (colour, size, shape, lifestyle) and strange-shaped sharks dwell in three aquariums (Brownbanded bamboo, Nurse and Carpet sharks) as well as their close cousins the rays (like the guitarfish) who are simply "flat" sharks.

There are approximately 400 species of sharks of various sizes, shapes, colours and behaviours all around the globe. Although sharks can be found at every depth of every ocean, many of them live in tropical waters.

A number of different species share the 1000 m³ **shark tank** (17m in diameter): blacktip and whitetip reef sharks, sand tiger shark, saw fish or carpenter shark, but also groupers, schools of caranx and a multitude of other fishes. Recreating part of a French Polynesian atoll, this aquarium can be viewed from four different angles. Right at the entrance of the pavilion, three portholes offer a sneak preview. A glass diving platform, for up to 40 people at a time, slowly descends into a cave that opens on the lagoon. Descending along a 7 meter window, the visitor can observe the ground sharks. Further ahead, (at level 0), the external slope of the coral reef can be seen through a partial shark tunnel revealing a small forum with an exceptional window overlooking the lagoon's meandering reef.

Sharks: anatomical and sensory characteristics.

Exhibition areas are devoted to the shark's extraordinary abilities as well as its reproduction method. An interactive model illustrates the shark's acute senses that make it a super-predator. An area is also dedicated to the shark's reproductive method (video and aquarium). They can either be oviparous, ovoviviparous or viviparous. High-quality fossils are displayed along the whole tour, among which a megalodon tooth, a gigantic 15m-long animal that lived some 20 million years ago.

French Polynesia: atolls, lava and coral islands

All around the shark tank, videos, models and computer-generated images illustrate the way atolls are formed, their life, death and how, thanks to their biological activity, they are true "oases of life" in the "desert" of tropical oceans.

The Indo-Australian archipelago: corals

One-of-a-kind: A "wall" of live corals

The marine biodiversity of New Caledonia and the Great Barrier Reef in Australia is represented by 60 different species of live corals, hard or soft, covering the whole of the 13m long aquarium for a total of 60m³ of water. The corals, some of which have grown from cuttings, can proliferate by colonising their surroundings thanks to the impeccable purity of the sea water, the high intensity of light and the quality of the light spectrum.

The Indian Ocean: fishes need to adapt to the reef and to the changes caused by Man

In a large 20m-long 300m³ aquarium, visitors can discover fauna from the Indian Ocean reef: butterflyfish, angelfish, parrotfish, batfish, damselfish, surgeonfish, wrasse, etc.

A cylinder-shaped aquarium on the opposite side, in addition to four other aquariums further on, illustrates the strategies reef fishes adopt in order to survive in an environment where competition for territory or for food never stops. Parading or hiding (either by blending into the background or by assuming the identity of another species), competitive or group interactions, etc. Thousands of years of evolution have led reef fishes to develop many strategies to ensure the survival of their species and their continuing diversity.

The information area

At the centre of a large open space, visitors will find six interactive terminals on which they can learn more about the various themes presented in the Tropical pavilion.

The Caribbean: endemism and the evolution of species

Within the area dedicated to the Caribbean, a large 180m³ aquarium and two smaller ones introduce endemism, a phenomenon that characterises species (both flora and fauna) for which very slow evolution occurred in a restricted geographical area.

The Mangrove

Where land and sea meet, the mangrove stretches across mudflats, and the mangrove trees, typical of these marshy tropical shores, are predominant. The mangrove tree roots are home to numerous species. In a 100m³ tank, stunning moonfish and garfish swim around the intricate mesh of mangrove tree roots. The shoots were especially imported from Guadeloupe (French West Indies) to be grown in Océanopolis.

The Tropical greenhouse

The 400m² greenhouse recreates a typical Caribbean forest, with, on the tree trunks, epiphytes such as orchids and bromeliads. Different kinds of ferns, particularly tree ferns, complete this reconstruction. Each one of these plants was collected thanks to the help of the French National Forests Office in Guadeloupe. Luxuriant vegetation, explosion of life, this tropical greenhouse comprises a 10m³ freshwater aquarium illustrating life in a section of the Amazon River in which one can find discus, neons, tetras, etc.

An information area also sets the record straight concerning a widespread misconception: the Amazon Rainforest is not the all important oxygen source that many describe, as a primary tropical rainforest consumes just as much oxygen as it produces. The seas and oceans provide more than 50 % of our atmosphere's oxygen. On the other hand, the Amazon Rainforest must be preserved for its biodiversity. The primary tropical rainforests, just as the coral reefs, are vast reservoirs of biodiversity and many species are still waiting to be discovered.

These fragile environments are deeply affected by Man's actions. They must be protected, restored whenever possible, and managed in a sustainable way so as not to endanger future generations.

THE TEMPERATE PAVILION

The Temperate Pavilion is dedicated to the ecosystems of temperate marine climates, from the sea in Brittany to oceanographic phenomena such as tides, currents and waves. In an underwater world, visitors wander the ocean floors, making their way up the continental shelf to arrive on Breton beaches.

The Continental Shelf

The continental shelf, the underwater remnants of the continents, begins 200m below the surface. Although seaweed growth is inhibited at this depth due to a lack of light, there is nonetheless an abundance of fish and invertebrate life, including pollack, gurnard, redfish, starfish, etc.

The Great Mudflats

100m below the surface of the water in southern Brittany, are the great mudflats. This is the kingdom of the langoustines, sometimes called Norway Lobsters which burrow down into the silt and only emerge early in the morning or after dark. In this aquarium the crustaceans are visible within their burrows dug into the seabed.

The Rock Face

Closer to the coast, the rock face provides a base for a rich variety of fixed animal life, such as sea anemones, sponges, ascidians and bryozoa.

The Kelp Forest

Unique in Europe: natural reproduction of kelp

In this 70m³ tank, the public can admire a sight which, in Brittany, is usually reserved for divers: France's biggest seaweed forest. Natural lighting and an artificial swell of fresh sea water (between 10 and 16°C) enable visitors to observe the reproduction and development of kelp in the aquarium. This large seaweed acts as a hiding place for many fish, such as horse mackerel, mullet, wrasse, cuckoo wrasse and small spotted catfish, which use the kelp as a shelter where they can reproduce.

The Food Chain

This exhibition space illustrates the food chain of the Atlantic coast. The different elements of the chain are visible in the aquariums, and an interactive panorama shows the links between the different producers and consumers.

The Ocean Column

A large cylindrical aquarium known as the Ocean Column, reminds us that alongside the species at the seafloor (benthic organisms), there are other pelagic fish who swim through open water in shoals.

Rocky Environment / The great sheer drop

This 7m-long 120m³ tank houses a rocky environment much like those found locally at Ouessant or the Pointe du Raz and is home to a number of species characteristic of the Breton coastline such as: pollack, bream, conger, gurnard, seabass, catshark, etc. Once a day, a diver presents visitors the different species in the aquarium along with its vegetation.

The Iroise Sea / The Shark Tank

Sharks are not only found in tropical waters! Nursehound, ray and smooth-hound can be found along the Breton coast.

The Molène Archipelago / The Seal Tank

The Iroise Sea is located at the most westerly tip of Brittany, between the Île de Sein and Ouessant. In a 300m³ tank with a 20m² diagonal window with simulated waves and ocean currents, you will find our two harbour seals Nikko and Fite living with their baby amongst the seaweed and invertebrates typical of the ecosystem present at the Molène archipelago. Nikko, the female, was born in 1993 and arrived at Océanopolis on 16 June 1995 from the Esbjerg aquarium in Denmark. The male, Fite, was born in 1995 and arrived in Océanopolis on 9th January 1998 from the Duisberg aquarium in Germany. On 14th July 2005, Nikko gave birth to a female pup named Nat, and then on 11th July 2006 to another female pup named Lilou, and finally to a third female pup named Sanna on 8th July 2007.

On 12th December 2007 Nat was transferred to the Anvers Zoo in Belgium in order to avoid inbreeding. When Nat reached sexual maturity, she had to be moved to prevent her from breeding with her father Fite. On 8th January 2008 Océanopolis welcomed a new female harbour seal named Guppy, born on 25th June 2005, in exchange.

The Underwater Science Centre

This 200m² area informs visitors about the way planet Earth functions. The three main themes of this area are: movements of the oceans, satellite observations of the Earth and geophysics. Using models from San Francisco Exploratorium and the C.M.O. (Military Oceanographic Centre), along with films and interactive multimedia systems, visitors can access a wealth of information about wave formation, currents, tides, the Coriolis force, ocean turbulence, etc.

The Intertidal Zone

Rocky or sandy, the intertidal zone is submerged and uncovered by the tide.

The Seagrass Herbarium

On the flat shallow seafloor of our coasts are underwater meadows of flowering plants with long flat leaves, where seahorses, garfish and pipefish hide, camouflaged by the grasses. In mating season, sea stickleback use them to build nests to protect their

young. On the sand, dragonets and sand gobies have adopted the same colour as their surroundings for camouflage.

The Flatfish Nursery

Small flatfish (sole, turbot, plaice, etc.) come to feed on large sandy beaches, throughout spring and summer in order to fatten up before heading to deeper water.

The Rock Pool

As the tide goes out, animals become trapped in rock pools. This is indeed the case for rock fish such as blenny, goby and sculpin. A real oasis for species which fear immersion, these puddles are also host to extreme conditions: they become hot and overly salty in hot weather, desalinated by the rain, and risk freezing in winter.

Tides in the Rocky Intertidal Zone

Reconstructing the phenomenon of tides, this aquarium shows the way in which aquatic life (anemones, limpets, etc.) has adapted in order to survive constant immersion and exposure.

The Bay of Brest

The site of many complex interactions between man and the natural world, the Bay of Brest provides shelter for many animals, each of which have adapted to a specific environment. On the gravel seabed, there are brittle stars and scallops, and on the rocky bed, soft corals, gorgonians, sea urchins, etc.

The Jellyfish Aquarium

Feared by swimmers, jellyfish (here *Aurelia aurita*), are in reality veritable ballerinas, both beautiful and mysterious. Present on Earth for more than 600 million years, they belong to the same family as coral and sea anemones. This species differ from other jellyfish in that they float and swim in open water. A 10m³ cylindrical aquarium with a diameter of nearly 2m presents these beautiful creatures floating in a gentle current. To one side, a smaller aquarium shows the early stages of the life of a jellyfish. Clinging to a rock, these miniscule polyps are like little white anemones which bud, divide, and then release tiny jellyfish which will grow in the open ocean. Adult jellyfish spawn a larva which will in turn become attached to a rock and develop into a new polyp.

THE TOUCH POOL

Designed to resemble a marine laboratory, the touch pool is an opportunity for visitors to touch living organisms such as: starfish, sea urchins and scallops. Aquarium staff are on hand throughout the day to present the different marine flora and fauna with the help of video cameras and microscopes.

CINEMAS:

- **The “Marion Dufresne” Auditorium:** shows films made by Océanopolis, and illustrates the beauty and the functioning of our ecosystems (250 seats).
- **“Yves de Kerguelen” Amphitheatre:** shows films, documentaries, etc. (80 seats).

EXHIBITION: THE BRETON COASTLINE'S MOST POISONOUS ANIMALS:

This exhibition brings together different zoological groups and presents the various poisonous species found in Brittany.

As an introduction, we are reminded that poisonous animals all have the organs necessary to produce both toxins and antivenom. It is also important to note that most of the species presented are not dangerous to humans. Indeed, in Brittany there are very few poisonous species and are either fish or cnidaria (jellyfish and anemones). The exhibition therefore focuses on these two groups, explaining how their venom apparatus functions and houses a few living species (weevers and other stinging fish, common sea anemones). The third aquarium houses an octopus in order to illustrate the other groups of poisonous but innocuous species (molluscs and echinoderms, etc.). The final part of the exhibition presents the different jellyfish present in French waters, and their potential dangers. The only live jellyfish are those in the permanent exhibition.

CATERING & SHOPS

... to continue the journey in the marine environment

More than just a service. The visit continues in the restaurants and shops of Océanopolis.

CATERING

The Brasserie, seats 250: the perfect place for an unforgettable lunch with a view of the yachting harbour and the Bay of Brest or the seal tank in the temperate pavilion.

Self-service cafeteria, seats 200: exceptional view of the Bay of Brest from the terrace.

Take-away: pastries, sandwiches, drinks, etc.

SHOPS

Les Comptoirs d'Océanopolis: a large discovery/shopping area in Océanopolis. Clothes, jewellery, table and home decorations, cuddly toys, games... 300 m² filled with 4000 references for the whole family. You will also find a line of cosmetics especially designed for Océanopolis by Science et Mer, a laboratory dedicated to seaweed products. This company also works on a regular basis with prestigious thalassotherapy and balneotherapy spas. Their products are available in Océanopolis under the brand name OCEANOMER (mail-order also available).

Le Monde de Jonas: bookshop dedicated to the sea. 1000 titles for the whole family, specialists included (books, software, videos and educational games).

PRACTICAL INFORMATION

Tickets are sold at Océanopolis, on the website www.oceanopolis.com but also through networks like France Billet (FNAC, Carrefour, etc.) and Ticket net (Leclerc, Auchan, Virgin etc.) as well as in some tourist information centres and hotels (list available online, www.oceanopolis.com).

1) OPENING TIMES

◆ **From January 17th to april 6th and September 18th to December 31st :**
Océanopolis is opened from Tuesday to Friday, from 10am to 5pm (ticket offices close at 4pm), Closed on Mondays **except during French school holidays.**
Saturdays, Sundays, bank holidays and French school holidays: open from 10 am to 6pm (ticket offices close at 5pm).

◆ **The rest of the year :**

Océanopolis is opened everyday from 9am to 6pm (7pm in July and August).

Closed on December 25th

Maintenance: Océanopolis is closed from January 1st to 16th for maintenance.

2) ADMISSION PRICES 2012 (valid until september 2nd):

- Complete Tour (3 pavilions)

Duration	One day	
	◆ Adults (+18)	16,80 €
	◆ From 3 to 17 / Students	11,70 €
	◆ Free for children under 3	
	◆ Large families (2 adults + 3 children)	63,70 €
	+ additional child	10,70 €

* in addition to the admission price

ASSIGNMENTS AND POLICIES

- **Exploration and interpretation of the marine environment**
- **A showcase for French oceanographic research**
- **The department for marine mammals**
- **Audiovisual production and cultural engineering policies.**

OCEANOPOLIS:

Discovering and understanding the marine environment

Since its creation in 1990, Océanopolis has distinguished itself from other aquariums thanks to its policy to inform and educate the public, and particularly schools.

In 1992, Océanopolis became an accredited Museum of the French Ministry of Education. In the following 17 years, Océanopolis has welcomed over 780,000 children under 18 either for a tour or for educational workshops.

The expansion of the premises further contributed to the development of the latter.

Educational aims

- Raise awareness among children about the world of living things and environmental management.
- Make quality scientific information accessible to young people
- Ensure that the information provided fits the requirements and aims of the various school programmes
- Make educational tools both informative and fun, allowing children to be active
- Secure satisfactory visiting conditions for groups, by providing in-house training for guides and coordinators.

Tools

Océanopolis provides teachers with both human and technical resources:

A vast and competent team

- Permanent staff: a manager and three creative coordinators, with strong scientific and educational skills, are at the heart of this programme. They provide training for guides and coordinators. They also welcome and inform teachers.
- An outside counsel run weekly by two high school biology teachers.
- A vast team (15 to 45 depending on the period) of in-house trained guides and coordinators (education, group management and tour composition).

Technical resources

- Innovative and outstanding equipment. The ocean discovery park, with its three pavilions devoted to temperate, polar and tropical marine ecosystems, tells the story of the life of the oceans by using all available technical means: aquariums, shows, multimedia, displays, etc.

- Buildings dedicated to education and equipped with educational tools adapted to various age-groups.
- Field trips to the seaside: observation of the flora and fauna of the intertidal zone, contribution to releasing a seal back into the wild.

**The Océanopolis educational workshops
can accommodate up to 620 children per day.**

Educational tools

- The teachers' brochure introduces the premises and the different exhibitions.
- The student brochure comprises various worksheets adapted to each activity and to the student's level.

The programme

Océanopolis provides schools with a wide-ranging programme (tour, 14 educational workshops, 2 games, animations throughout the tour, personalised stays: 2 days to one week) specifically adapted for all school ages and renewed with each new exhibition presented at Océanopolis. Activities are also available for teachers: preliminary visits, documents, training sessions, etc.

A SHOWCASE FOR FRENCH OCEANOGRAPHIC RESEARCH

The birth and growth of Océanopolis in the city of Brest is no coincidence.

Brest is home to a unique potential in the European market in terms of researchers and engineers in maritime fields. **60% of French oceanographic research takes place in Brest**, making it the European capital of oceanography.

The contents of the ocean discovery park were designed by the Océanopolis team in partnership with scientists involved in oceanographic research specialising in themes tackled here at Océanopolis.

Some important examples of these partnerships:

The IRD

The IRD (Institute for Research and Development), which has a centre here in Brest, is involved in research and development in tropical climates. For two years, Bertrand GOBERT, an IRD researcher, was in charge of collecting and coordinating the information required in designing the Tropical Pavilion. Océanopolis has also benefited from the scientific advice offered by Bernard SERET, shark specialist at the IRD.

Océanopolis also has access to images from the IRD's Indigo image bank and together the two organisations have coproduced a number of films.

The Museum of Natural History

The Museum organised a number of stuffed polar animals for Océanopolis including one polar bear from northern Canada and ten seabirds from the Sub-Antarctic: albatross with a wingspan of 3.50m, petrels, etc.

IFREMER

Using digital bathymetric data from IFREMER (the French marine research institute), Océanopolis constructed a 4m² interactive 3D model showing the underwater landscape of the continental shelf from England to Spain.

The IPEV

The *Institut Polaire Paul-Emile Victor* (the French Polar Institute), whose headquarters are in Brest, manages the human, technical and logistical resources required for French polar and subpolar research and development. The most spectacular example of the IPEV / Océanopolis partnership is the production of the panoramic film **Antarctica**. Due to the extreme weather conditions while filming this documentary, it would not have been

possible without the IPEV's considerable resources: trips on the Astrolabe (an icebreaker and research vessel), helicopter, etc.

The CNRS (National Centre of Scientific Research)

Many researchers have participated in making Océanopolis what it is today. To name just a few:

Joëlle ROBERT-LAMBLAIN contributed to the polar exhibit by preparing the elements relating to the Inuit.

Sylvie JOUSSAUME and Jean JOUZEL (CNRS/CEA) provided all of the information for the climate exhibit presented in CONCORDIA (Polar Pavilion).

***Le Musée de l'Homme* (The Museum of Man)**

The *Musée de l'Homme* gave Océanopolis access to ethnographic shark artefacts so that we might make copies.

The IUEM (University Institute for Marine Research)

Paul TREGUER, former director of IUEM Brest, an institute with 150 permanent research staff and 320 students, provided information about the carbon cycle in the oceans, and Daniel PRIEUR, who provided information about the history of life in the oceans.

Mourmansk Marine Biological Institute (MMBI)

In partnership with the MMBI, we have conducted research projects into seals, with them researching the northern area and us the southern extremity. We have also coproduced films and finally, within the context of our scientific partnership, they have given us 9 ringed and harp seals. The donation of these seals was organised by training staff at the Institute who helped the team at Océanopolis by transmitting their knowledge about training the animals in order to facilitate handling and veterinary procedures.

EPSHOM

The Principal Establishment of the French Navy's Hydrography and Oceanography Office offered its skills in cartography. The animated models showing the circulation of the oceans were created in partnership with Océanopolis.

The CNES

The French government's Space Agency provided Océanopolis with films on satellite imaging, along with interactive models through which visitors might learn how satellites can retrieve information from distress beacons in less than half an hour, wherever they might be.

THE DEPARTMENT OF MARINE MAMMALS

Océanopolis conducts studies on Brittany's marine mammals. This activity takes place in a laboratory and seal clinic.

Centre for the Study of Marine Mammals

The team at this laboratory has been conducting studies in Brittany since 1990 in the field of cataloguing the area's natural heritage and managing the coastal environment which is home to marine mammals, both on their migration routes at sea and those permanent residents which rely more directly on the shore itself. The results of these surveys lead to a better understanding of the place of these animals in their natural coastal habitats. The aim of these projects is to provide tools that might help in making decisions in terms of both the sustainable development of human activity and the conservation of biodiversity in Brittany.

The activities carried out by Océanopolis' laboratory all revolve around the general theme of the evolution of marine mammal populations in Brittany. Within this context, Océanopolis is responsible for coordinating Brittany's beaching network in the framework of the environmental watch (around 200 marine mammals become stranded on the coasts in the region every year).

Our current studies in progress focus on:

- Monitoring visiting marine mammals along Breton coasts;
- Monitoring those species present on our coastline throughout the year:
 - Grey seals *Halichoerus grypus*;
 - Common bottlenose dolphins *Tursiops truncatus*.

The resident groups of bottlenose dolphins are studied regularly in order to determine the ways they use space, and to analyse the way in which physical, biological and anthropological factors influence their spatial and temporal distribution. The gray seals resident in Brittany are also censused, photographed and studied in their most common habitats. Tracking operations with "Argos" tags have enabled scientists to understand their behaviour at sea, and to follow their movements between the Breton sites and those in the UK.

For migrating species, flyovers around Brittany use the linear transect technique in order to observe the abundance of different species and their seasonal variations. Observations at sea from ferries also began in June 2006 in partnership with Brittany Ferries.

Furthermore, maritime professionals, amateur yachtsmen, and all other frequent visitors to the coast can contribute to the study of the species present along the Breton shoreline. In order to do so, they just need to send their observations on the “Observations de la Mer” sheet which is available on demand from Océanopolis, in numerous organisations in Breton coastal towns and villages, or downloadable from the “mammifères marins” website, the address for which is listed below.

The Seal Clinic

Since 1989, this centre has cared for around twenty seals found along the Breton coast each winter. They are reported, taken in, and treated. Today, more than 90% of them are saved and set free. Not only is the clinic a vital sanitary and scientific research tool, but it is also an important means of informing the public of the difficulties in protecting and preserving these marine species.

With this in mind, Océanopolis has developed educational programmes for schools around this theme. Every year, a dozen classes participate in a variety of activities relating to caring for the seals, and in releasing them back into the wild.

Public Awareness of Marine Mammals in Brittany

Information and awareness campaigns contribute to the promotion of existing natural heritage as well as its conservation.

At the heart of Océanopolis, knowledge of marine mammals is shared with the public through both a permanent exhibition and the two seal tanks.

Other means are also being used: A travelling exhibition and an educational website aimed at young children. This website offers a variety of information about marine mammals and their presence in Brittany along with up-to-date news: beachings, observations, seals at the Océanopolis seal clinic, etc.

You can visit the site using the following addresses www.dauphinbretagne.fr ; www.mammiferes-marins-bretagne.fr ; www.mammiferes-marins-bretagne.com or www.marine-mammals-brittany.com to see the site in English.

AUDIOVISUAL PRODUCTION POLICY

When it was first founded, Océanopolis chose to produce and direct all of the multimedia programmes that could be seen at the aquarium (over 80).

This vast abundance of images quickly became sought after and has regularly been used by television companies.

Today, Océanopolis is working on the production of the a "blockbuster" with a film in 180° called "**Antarctic**", along with previous films like "**Microcéan**", a high definition, kinescoped documentary about the ocean's microscopic ecosystems. In 2005, Océanopolis co-produced "**Monsters of the Abyss**", a 3D computer-generated film.

Other projects are currently in progress. The aim of these new projects is for the latest technological breakthroughs to help visitors explore the oceans.

CULTURAL ENGINEERING POLICY

Faced with the increasing demands from their local communities, other countries also want to create aquariums based on Océanopolis' ethos. A subsidiary company was therefore created to cope with this demand: *Océanopolis Image de Développement* (O.I.D, Developing the Image of Océanopolis).

It is involved in the following fields:

- ◆ To help define detailed programmes, to draw up the specifications and to assist in implementing these projects.
- ◆ O.I.D has already worked in Costa Rica, Crete, Vietnam, Reunion Island, and in Martinique.