

CAST OFF!

FULL STEAM AHEAD FOR
SCIENCE YEAR 2016*17



An Initiative of the Federal Ministry
of Education and Research

Science Year 2016*17

SEAS
AND OCEANS



A lot of images immediately come to mind when we think of the sea: we recall last summer's holiday, the fascination of the strength and beauty of this elemental force, the animals and plants that are to be discovered in the sea and the alien world of the ocean deep.

Although the seas and oceans are of tremendous importance for life on our planet, large areas still remain undiscovered. Science Year 2016*17 invites you to find out more about the Earth's largest habitat. The motto of the Science Year 2016*17 'Discover. Use. Protect.' shows how science contributes towards understanding the seas and oceans and to protecting this source of life for us and future generations. But it is not only science that is called upon – everyone can help to protect the seas and their inhabitants. Sustainability begins by paying attention to the little things: important issues in this context are waste prevention and environmentally compatible tourism.

The Science Year 2016*17 invites you to take part in a wide range of activities, including a relay swim in the river Elbe, a research mission on the North Sea coast or a virtual diving tour in your own living room, to name only three examples.

I wish you exciting insights and impressive experiences during the Science Year 2016*17 – not only on the coast but also inland!

A handwritten signature in black ink, reading 'Johanna Wanka'.

Professor Johanna Wanka
Federal Minister of Education and Research

The sea begins ... in **Bad Schandau**



25 years ago, the Elbe was considered one of the most polluted rivers in Europe – nobody would have thought of going swimming in it. But this has changed thanks to the joint efforts of politicians, public authorities, the science community and the general public. On June 24, we will sound the horn for the start of Germany's biggest open-water relay swim in the river Elbe in the town of Bad Schandau. 200 swimmers will cover 575 kilometres in 19 legs to arrive in Geesthacht on July 12.

Professional open-water swimmers will take on the difficult sections but you and other keen swimmers are invited to do the rest! Learn everything you need to know about requirements to become a relay swimmer and register at www.elbschwimmstaffel.de

And if you do not want to get into the water yourself, the relay swim also provides a unique research opportunity: scientists will be conducting research on an escort boat while spectators will be doing the same in selected locations on the river bank. Read more on our website.





24.4

8.10

The sea comes to you

MS Wissenschaft

The MS Wissenschaft exhibition ship will be inviting people to explore the fascinating world of the seas and oceans during its tour of some 40 German and Austrian towns and cities in 2017. Come aboard and discover more about the history, study and protection of the seas and oceans as well as their importance for us human beings. For details on all the ports of call see

www.ms-wissenschaft.de



3.5

28.9

Marine research

at the railway station

The ScienceStation

Anyone who would like to dive into marine science for a few minutes can experience sea and ocean research at first hand at the ScienceStation interactive exhibition, which will be shown at various railway stations. In 2017, this travelling exhibition will stop in Potsdam, Frankfurt am Main, Lübeck and Berlin. For details see

www.sciencestation.de



13.5

13.8

Frost alert

Visit the South Pole in your city

Where do researchers sleep during a polar expedition? How do I look in clothing designed to keep me warm at minus 50 degrees centigrade? What do you see when you look out of the window in Antarctica? The new travelling exhibition of the Alfred Wegener Institute provides all the answers to these questions. It will be visiting 13 towns and cities this summer and include a live link to Germany's *Neumayer III* research station in Antarctica. Read more at

www.awi.de/polarcamp



starting
on
18.5

Far out at sea

The oceans are alive!

No land in sight: you often see nothing but water for days, travelling aboard large research ships. However, the scientists on board these vessels know that the world beneath their feet is teeming with life: delicate sponges grow on precious polymetallic nodules and tube worms live around hot sea-floor vents. If you would like to find out more about high-tech research in the ocean depths, visit the new exhibition at the Federal Research Ministry. It is open daily from 10 a.m. to 6 p.m. and only a five-minute walk from Berlin's Central Station.

Address: Kapelle-Ufer 1, 10117 Berlin, Germany

starting
on
11.4

New at the Meeresmuseum

Black smokers and white whales

It is cold and dark in the two new rooms at the German Oceanographic Museum: a 'black smoker' is fuming in the darkness of the deep ocean floor. Right next to it, two life-size beluga whales are swimming in the Arctic Ocean. How can we use these unique habitats without jeopardising them at the same time? Find the answer to this question at the MEERESMUSEUM in Stralsund which is open daily from 10 a.m. to 5 p.m.

www.meeresmuseum.de



Plastic Pirates

The citizen science campaign for young people

Our seas and oceans are heavily polluted with plastic waste. Much of it reaches them via our rivers. What are the most frequent types of plastic waste and what effects do they have on our seas and oceans? In early summer 2017, young people aged between ten and sixteen will find the answers to these questions in a large-scale citizen science campaign for school classes and youth groups. Order the materials now if you would like to participate.

www.plasticpirates.scienceyear.de

Biodiversity in the North Sea and Baltic Sea



It is exciting to discover and study the many different animals and plants living along our coasts. The 'My mobile coastal laboratory' campaign provides children with a bag containing a magnifying cup, fishing net and creative ideas for discovering life along the coast. Equipped like this they can conduct research at the North Sea and Baltic Sea. More information is available at

www.wissenschaftsjahr.de/kuestenlabor



11.5

12.7

Then and now

Marine research put on stage

Thousands of spectators lined the harbour wall when the original *METEOR* set to sea in the spring of 1925. For two and a half years, the research vessel went back and forth between the American and African continents studying the ocean currents. Today, the third generation of the *RV METEOR* is cruising the seven seas. *METEOR*, a play produced by the German Maritime Museum in cooperation with the *Das letzte Kleinod* theatre collective presents life and work aboard the ship then and now. More information and tickets are available at

www.das-letzte-kleinod.de



Sign up

now

Join in

Trace the origin of the fish you eat

Where does the fish on your plate come from? Fish detectives aged between ten and sixteen can take samples of freshly caught, deep-frozen or fried fish and send them to Kiel where researchers at the *GEOMAR* Helmholtz Centre for Ocean Research will identify the genetic fingerprint, or rather 'fin print', of the fish and find out where it came from, whether it was labelled correctly and if it was old enough to be caught. Have we whetted your appetite to know more? Read more at

www.fischdetektive.de



Sign up

now

Wet labs in the classroom

The research exchange platform

Forschungsbörse

Almost every single school subject can be linked in some way to the topic of the seas and oceans. Teachers can use the *Forschungsbörse* to invite the suitable scientists and researchers on board and 'set out to sea' with their classes without even leaving the school building. Visit us at

www.forschungsboerse.de

The sea begins here

The seas and oceans are important for a surprisingly large number of aspects of our daily life: we use them as sources of food, raw materials and energy. We discover and protect them as nature's treasure troves. We need them as shipping lanes and are turning them into rubbish tips. We are gradually understanding their role as a weather kitchen and climate machine. We value them as places where we can relax and recuperate, and we have great respect for their tremendous force and dimensions.

The seas and oceans do not only cover the entire planet from the Arctic to the Antarctic, but also reach from the highest wave to the deepest trench. Only state-of-the-art research can bring to light what would otherwise remain hidden in the depths.

www.scienceyear.de

Dive in
Researcher ahoy!

forscher
ahoi!

forscher, the free science magazine for eight to twelve year-olds, is diving down deep: together with scientists and researchers, our young readers will explore the deep seas, follow migrating eels and learn what turtles have in common with the International Space Station. Issue three of the *forscher* will be released on May 9 and include a large-format poster of the deep sea! Order individual copies or batches of copies for school classes at

www.forscher-online.de

No need for the shipping news
Our newsletter

The Science Year's newsletter provides information on topics, dates and events. Subscriptions at

www.scienceyear.de

**Sign up
now**



Welcome on board

Be our partner in the Science Year 2016*17

The Science Year 'Seas and Oceans' thrives on the initiative of its partners in science, industry and civil society. We therefore cordially invite you to participate with your own events and campaigns. We would be delighted to help you in the field of public relations. Become a partner in the Science Year 2016*17.

www.wissenschaftsjahr.de

Contact

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