

National Marine Aquarium School Visits Guide KS3, KS4 & KS5+

2023-2024

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The OCT Learning Programme

Hello and welcome to the Ocean Conservation Trust (OCT) Learning Programme for Secondary Schools

OCT is a UK based conservation charity established to restore and protect the Ocean. Our work is centred around people and positive action, focusing on inspiring Ocean advocacy through connections with nature. Since 1998 we have owned and operated the National Marine Aquarium (NMA): the UK's largest aquarium, located in Britain's Ocean City, Plymouth, on the shores of the UK's first National Marine Park - Plymouth Sound. We are home to over 4,000 marine animals and are visited by around 300,000 people per year.

We believe that everyone, everywhere, is connected to the Ocean. It is our hope that you will find the activities described in this document to be valuable tools in your role as an educator, whatever subject you teach or age of your students, and look forward to working with you soon.

Sincerely,

The OCT Learning Team

'Ocean Literacy' for all

The Ocean is the largest living space on the planet and sustains countless plants and animals in a wide variety of habitats. Scientists all over the world are increasingly beginning to understand the role that the Ocean plays in keeping our planet, and its inhabitants alive and healthy. In fact, it is considered so important to the health of the planet that the United Nations have declared 2021 – 2030 as the 'Decade of Ocean Science for Sustainable Development'.

Did you know:

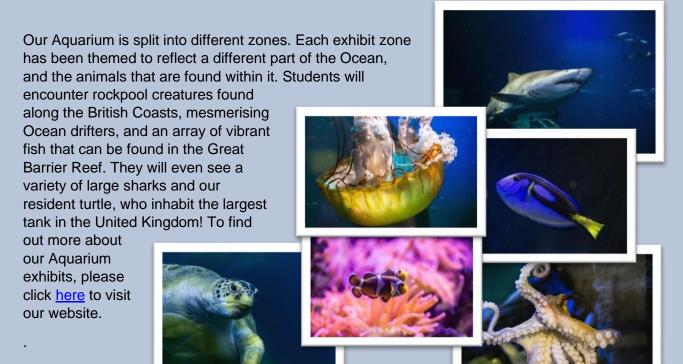
- 1. The Earth has one big Ocean with many features?
- 2. The Ocean and life in the Ocean shape the features of Earth?
- 3. The Ocean is a major influence on weather and climate?
- 4. The Ocean makes the Earth habitable?
- 5. The Ocean supports a great diversity of life and ecosystems?
- 6. The Ocean and humans are inextricably interconnected?
- 7. The Ocean is largely unexplored?

The seven statements above are known as the 'Ocean Literacy Principles'. These seven principles, along with the more detailed breakdowns of each are considered the foundation of an...

"Understanding of the Ocean's influence on us, and our influence on the Ocean"

Aquarium Exhibits & Learning Spaces

The Exhibits



The Learning Centre

Our OCT Learning Programme operates from a dedicated Learning Centre within the Aquarium, capable of accommodating up to 200 students at any one time. The Learning Centre is split into several sub-spaces each with a specific function and set of resources. All spaces are available for private hire. Contact our team for costs and details!

Aqualab:

The Aqualab is a fully seated science classroom that can accommodate groups of up to 33 students at a time. It includes an Audio-Visual suite, video projection, and is home to our science experiments and lab-based investigations.





Aqua Theatre:

The Aqua Theatre boasts three levels of tiered seating for audiences of up to 75 students at a time. It is home to our STEM shows, formal presentations and live broadcasts.

Reef Room:

The Reef Room is a self-contained classroom which can seat up to 35 people at a time. With a single wall mounted screen, this versatile space is used for cross-curricular workshops, our Meet the Mermaid session, and live broadcasts. It is also used for bag storage and as a lunch space.



Deck 5:

The largest, open plan space in the Learning Centre, colour coded table-based seating can accommodate up to 120 at one time. Deck 5 features open views over Plymouth Sound and is suitable for functions and events as well as large scale lunches and STEM workshops.

The Sea-cret Garden: Our Sea-cret Garden is one of the National Marine Aquarium's hidden gems.

An outdoor picnic area with tabled seating for 100 students and a small grassy area to relax in over lunch, or simply to take a moment to sit quietly and reflect on the lessons and wonders of the day.

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Designing Your Day: Entry Options

Entrance to the Aquarium

£5.50 per student

If you choose to have a self-led visit to the National Marine Aquarium, your students will be able to discover the wonders of the Ocean for themselves and focus on seeing their favourite animals as they explore the exhibits.



Included in your experience:

- Entry from 10:00am.
- Full access to all aquarium exhibit areas. We have a team of Ocean Discovery Rangers around the building who are happy to educate and engage your pupils during your visit.
- Optional bag storage facilities and lunch space in our Sea-cret garden.

Optional Extra: Tour (1.5 hours)

£1.00 per student



There are many tours to choose from, all of which are linked to the National Curriculum and can be tailored to meet the needs of your students. If there is a topic you are learning about in school – whether its science or geography - our Schools Officers can ensure that your tour is themed around your chosen topics. Some of our tours even involve exploring the behind-the-scenes areas of the National Marine Aquarium!

Included in your experience:

- Entry from 10:00am.
- Full access to all aquarium exhibit areas.
- Dedicated lunch space and bag storage facilities.
- A choice of 90-minute tour (see page 8 onwards for choices)
- Opportunity for self-led exploration after your tour has finished (time-permitting)
- You own Schools Officer guide, who will be on hand to help with all aspects of your visit.

Optional Extra: Workshop (1.5 hours)

£1.50 per student

We have a variety of workshops to choose from, all of which are linked to the National Curriculum and cover a range of subjects including science, geography, art and English. Outdoor Learning workshops are also available, which can be delivered on a local beach or even on a boat!



Included in your experience:

- Entry from 10:00am.
- Full access to all aquarium exhibit areas.
- Dedicated lunch space and bag storage facilities.
- A choice of 90-minute workshop (see page 11 onwards for choices)
- Opportunity for self-led exploration after your tour has finished (time-permitting)
- You own Schools Officer guide, who will be on hand to help with all aspects of your visit.

DID YOU KNOW?

You can add both a tour and workshop onto your visit!

This will mean you have dedicated Schools Officer with you for the entire day to help you with all aspects of your visit. This package is what we recommend to schools wishing to make the most out of their visit to the Aquarium.

Structuring your day

Timings and order of activities will depend on your arrival/departure times, and availability of our Learning Centre spaces. Please see an example timetable below:

	10:00	10:30 – 12:00	12:00 – 12:30	12:45 – 14:15
Class 1	Arrival & Introduction	Tour	Lunch	Workshop
Class 2	Arrival & Introduction	Tour	Lunch	Workshop
Class 3	Arrival & Introduction	Workshop	Lunch	Tour

Back of House Tour (KS3+)







Art

Maths

Humanities

O.L. Principle

Session Overview:

During this tour, students will get a fascinating insight into life behind the scenes at the Aquarium. They will discover many of the intricate procedures and protocols followed by our engineers and biologists and come to understand the detail and focus required to keep the beautiful aquarium running smoothly. The tour will cover fascinating facts about unique diets, target training, and our brilliant enrichment programme. They will meet our back of house resident animals, hear about our research projects, and see some of our biologists in action as they go about their daily responsibilities.



Common Topics and Themes:

- STEM
- Breeding Programmes
- Animal Care
- Marine Biology
- Water Chemistry
- Veterinary Science
- Aquaculture
- Training
- Enrichment

This tour is subject to an additional fee. See pricing on page 16 for details

Business, Leisure & Tourism Tour (KS3+)

Science

Tech

English

Art

Maths

Humanities

O.L. Principle

Session Overview:

Our Business, Leisure and Tourism tour gives your students the opportunity to use the National Marine Aquarium, owned by the Ocean Conservation Trust, as a unique case study for their learning. A Schools Officer will meet your group and explain how we operate not only as a business, but also as an ocean conservation charity. As students are guided through the building, our Schools Officer will cover topics such as demographics, customer service, marketing, funding, ownership, education, research, and conservation projects and more.



Common Topics and Themes:

- Marketing
- SWOT Analysis
- Funding

- Dwell time
- PEST Analysis
- Functions & events
- Customer Care
- Ownership
- Conservation

Careers Tour (KS3+)

Science

Tech

English

Art

Maths

Humanities

O.L. Principle

Session Overview:

This tour focuses on the range of job roles available at the Aquarium, inspiring students to consider their future career options. One of our Schools Officers will take your students on a fully guided tour of the working areas of the Aquarium, including the top of some of our most impressive exhibits and the offices of our CEO, finance, and marketing departments. Along the way, students will have the chance to hear directly from marine biologists, science communicators, retail and catering professionals, heads of department and seasonal staff to build a comprehensive picture of the many roles and skillsets found within this vibrant and dynamic STEM facility.



Common Topics and Themes:

- STEM
- Careers
- Animal Care
- Marketing
- Skillsets
- Marine Biology
- Engineering
- Finance
- Environmentalism

Fisheries Tour (KS3+)

Science

Tech

English

Art

Maths

Humanities

O.L. Principle

Session Overview:

During this tour, students will be taken on a journey around our Plymouth Sound and British Coasts exhibits to observe commercial fish species that can be found in our local waters. A variety of topics will be covered, including fishing policies and legislation, fishing techniques and sustainable fish eating. Following this, students will have a short visit to the local fish market located just behind the Aquarium. Here, students will get a close-up look at a variety of fishing equipment including beam trawls, scallop dredges, otter boards and rockhoppers, along with a range of different fishing boats.



Common Topics and Themes:

- Commercial fishing techniques
- Fisheries legislation
- Sustainability
- Marine Protected Areas
- Environmentalism
- Habitat Restoration

Please note that students will be visiting the fish market outside of operating hours.

Interactive Tour (KS3+)



Session Overview:

Take your pupils on an immersive under-water adventure as they journey across the world's Oceans! Your own personal tour guide will reveal a range of fascinating, weird and wonderful facts about our Ocean creatures, answering any questions your students might have along the way. Students will practise self-led learning as they work together to complete fun challenges whilst exploring the exhibits, before gathering round for curriculum-linked discussions about their observations. Our Interactive Tours can be tailored to cover a range of topics to suit the learning needs of your students.



Common Topics and Themes:

- Ecosystems
- Adaptations
- Evolution

- Classification
- Species ID
- Food Webs
- Marine Protected Areas
- Pollution
- Climate Change

Observational Drawing Tour (KS3+)



Session Overview:

Our Observational Drawing tour will give your students the opportunity to practice a range of observational drawing techniques as they are guided through the Aquarium exhibits by one of our dedicated Schools Officers. Your students will have access to a range of media throughout their tour and will be challenged to use a different technique at each exhibit, from contour drawing to continuous line drawing and shading. This hands-on observational drawing tour allows students to make full practical use of their sketchbooks as they immerse themselves in the inspiring world of Aquatic life.



Common Topics and Themes:

- Depth Representation
- Shading Techniques
- Contour Drawing

- Repeating Patterns
- Colour Extraction
- Fine Focus Work

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Climate Conundrum (KS3+)

Science Tech English Art Maths Humanities O.L. Principle

Session Overview:

Students will begin by examining real coral colony skeletons, identifying their key features, and sharing their observations. Students will move onto learning about coral reproduction before grouping the coral skeletons using a classification key. Following this, students will locate on a map where corals can be found and learn about the impact of Ocean acidification through conducting some practical experiments. The session will conclude with a sensitive discussion on how we can reduce our carbon footprints, leaving pupils feeling inspired to make a difference.



Learning Outcomes: (Following this session your students will be able to...)

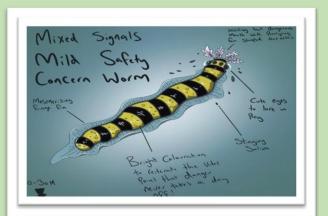
- 1. Classify coral skeletons by using a dichotomous key.
- 2. Understand how carbon dioxide affects coral reefs.
- 3. Explain how we can impact climate change through our actions at home.

Inventafish (KS3+)



Session Overview:

Students will begin this immersive workshop by exploring the adaptations of a variety of sea creatures, examining a variety of Ocean artefacts such as turtle shells, baleen plates and shark jaws. Students will then be challenged to design their own perfectly adapted sea-creatures! They will use an array of recycled materials to bring their design to life and will be encouraged to annotate their work to explain their thought processes. The session will end with the students presenting their work to their peers.



Learning Outcomes: (Following this session your students will be able to...)

- 1. Describe challenges of living in the marine environment.
- 2. Explain how animals are adapted to their environment using scientific terminology.
- 3. Creatively apply their knowledge to design their own imaginary sea creature.

Ocean Orator (KS3+)



Session Overview:

This interactive literacy workshop begins with pupils taking part in creative activities to help them develop their presentation and public speaking skills. They will then be presented with a wardrobe of props and costumes before being challenged to come up with conservation themed presentations, news broadcasts, music videos and interviews, with the aim of performing them in our Aqua theatre. Their performances will be filmed, and a private live-stream link will be made available to your school!



Learning Outcomes: (Following this session your students will be able to...)

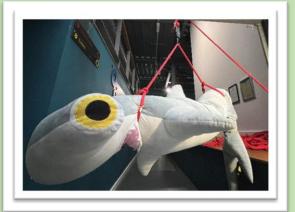
- 1. Identify key aspects of effective science communication and public speaking.
- 2. Talk confidently about the relationship between the Ocean and the climate.
- 3. Describe at least one pro-Ocean behaviour that can have a positive effect on Ocean health.

Shark Hoist (KS3+)



Session Overview:

Your students will begin by discussing the important roles and responsibilities of Aquarium engineers and marine biologists. The challenge that follows is to create stretchers suitable for a hammerhead shark, using a range of building materials and a winch. Their aim is to design a system that can safely hoist the weighted hammerhead shark toy two meters off the ground! Once finalised, each group will have the opportunity to investigate each other's designs and offer constructive feedback, before putting their hoists to the test!



Learning Outcomes: (Following this session your students will be able to...)

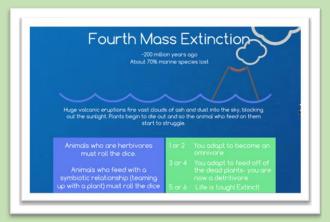
- 1. Identify the roles & responsibilities of Aquarium Engineers and Marine Biologists.
- 2. Work as a team to respond to a design brief.
- 3. Examine peers' designs and discuss strengths and weakness of their own and others work.

Underwater Evolution (KS3+)



Session Overview:

The best learning is fun learning, and this workshop is one of our most enjoyable for teachers and students alike. The session begins with a simple introduction to essential evolution-linked terminology, including adaptation, inheritance, variation, and natural selection. Participants will then be taken on a journey from the origins of life on earth all the way through to the modern age. Pencils and dice in hand, students will track and document the evolution of their own single celled organisms, but who will make it to the modern age, and what new challenges await in an uncertain future?



Learning Outcomes: (Following this session your students will be able to...)

- 1. Define key terminology used in the study of evolution.
- 2. Explain the process of natural selection and how it drives evolution.
- 3. Talk about how environmental change poses a threat to species in the Ocean.

Under the Knife (KS3+)



Session Overview:

This guided dissection workshop gives students an opportunity to gain an in depth understanding of the biology, anatomy, and behaviour of a squid. The students will begin by discussing what they know about squid, before identifying the key parts of the body and what they are used for. Through a process of sequential dissection, observation and comparison, students will identify organs widely found across the animal kingdom and explore the role and function of a range of features unique to cephalopods.



Learning Outcomes: (Following this session your students will be able to...)

- 4. Recognise the moral implications of carrying out a dissection.
- 5. Identify key anatomical features of a squid and compare to humans.
- 6. Locate and explain the function of the respiratory, circulatory, and digestive systems.

Beach Art (KS3+)

Science Tech English Art Maths Humanities O.L. Principle

Session Overview:

This session begins with students getting stuck into an immersive 'beach combing' activity, during which they will search for hidden treasures on the beach such as cuttlebone, mermaid's purses, and shells. The students will record their findings in their sketchbooks using a variety of media, before using the items as inspiration for two different pieces of artwork. Firstly, they will observe, measure, and draw a chosen item with the aim of creating an accurate scientific illustration. Following this, students will have the opportunity to use their imagination and creativity to design their own sculpture using natural and manmade items found on the beach.



Learning Outcomes: (Following this session your students will be able to...)

- 1. Record observations of the natural world in sketchbooks using a variety of media.
- 2. Complete a scientific illustration using a variety of techniques.
- 3. Understand how different types of art can be used to serve different purposes.

Marine Park Adventures (KS3+)

Science Tech English Art Maths Humanities O.L. Principle

Session Overview:

In Partnership with Silverline boat tour operators, the group will take a one-hour trip around the National Marine Park onboard Silver Crest. The tour includes spectacular views back towards the city of Plymouth and visits to Jennycliff, the breakwater, and even historic Drake's Island. Along the way, students will use scientific equipment to conduct citizen science research about Plymouth Sound, the UKs first ever National Marine Park. Students will also haul up one of our pre-set crab pots, giving them the opportunity to get a close-up look at the amazing marine life living on the seafloor!



Learning Outcomes: (Following this session your students will be able to...)

- 1. Understand the value of the first National Marine Park.
- 2. Use a selection of scientific equipment appropriately, to collect data and record findings.
- 3. Explain the important role plankton plays within food chains/webs.

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Rockpool Safari (KS3+)

Science Tech English Art Maths Humanities O.L. Principle

Session Overview:

This immersive workshop is a fantastic way for students to discover the many plants and animals that can be found in the rock pools along the shoreline. Taking place at Mount Batten beach, students will learn all about how to rock pool creatures are suited to living in a constantly changing environment. All participants will learn the best spots to look out for crabs, shrimp, and starfish in their natural habitat, whilst gaining an understanding of the rock pool code. No trip to the beach would be complete without a short beach clean, and a discussion on the importance of looking after our Ocean.



Learning Outcomes: (Following this session your students will be able to...)

- 1. Understand and apply the Rockpool Code.
- 2. Safely navigate rockpool environments.
- 3. Find, identify, and appropriately handle a range of rockpool animals.

Rockpool Survey (KS3+)

Science Tech English Art Maths Humanities O.L. Principle

Session Overview:

Intertidal organisms make fascinating subjects in a constantly changing environment with fluctuating water temperatures, shifting oxygen levels and exposure to sunlight. This workshop will detail some of the more intricate elements of shoreline exploration, employing scientific methods to explore species distribution, frequency, and abundance alongside techniques to investigate the intertidal organisms and habitats themselves. After conducting their own shoreline survey, students will have breadth of knowledge on the intertidal regions and a data set that can be analysed and presented following their visit.



Learning Outcomes: (Following this session your students will be able to...)

- 1. Apply the use of survey techniques in the intertidal zone ecosystem.
- 2. Discuss species and adaptations and deduct their role within the ecosystem.
- 3. Demonstrate an understanding of the interconnected nature of marine environments.

Book now: Tel: 01752 275 233 | Email: learning@oceanconservationtrust.org

Programme Prices

This price list is correct as of February 2023 and reflects the programme prices for the academic year 2023-2024. Please check our website (www.national-aquarium.co.uk) for the latest prices, deals and special offers available for schools.

Activity option	Cost
Explorer Visit Aquarium entry only	£5.50 per student Free adults in ratio (see below) £6.50 Additional adults
Interactive Visit Includes Aquarium entry, 1 tour and 1 workshop. Choose from: +1 Tour • Back of House Tour* • Business, Leisure & Tourism Tour • Careers Tour* • Fisheries Tour* • Interactive Tour • Observational Drawing Tour +1 Workshop • Indoor • Climate Conundrum • Inventafish • Shark Hoist • Ocean Orator • Under the Knife • Underwater Evolution • Outdoor (April-September) • Beach Art (Mount Batten Beach. Own transport required) • Marine Park Adventures** • Rockpool Safari (Mount Batten Beach. Own transport required) • Rockpool Survey (Mount Batten Beach. Own transport required)	£8 per student Free adult-student ratio: 1:10 £6.50 Additional adults
*Premium Tour	+ £1.50 per student
**Premium Workshop with Silverline Boat Trips (Subject to tide & visit times)	+ £115 per class (for up to 40 pupils and staff)

Please note that we have a minimum spend policy we must adhere to. All educational groups will be charged for the equivalent of 12 pupils taking part.

Planning your visit

- **Opening Times:** The Aquarium is open from 10am-5pm (last entry is at 4pm). School visitors are welcome to arrive and depart any time within this daily window. However, most schools plan to arrive around 10am, and depart 4 hours later, at 2 30pm.
- **Seasonal visits:** The Aquarium is open to school visitors all year, including school holidays (however some interactive elements are only available on weekdays during term time). As a rule of thumb, the summer term (May July) is our peak period.
- Payment: If paying by invoice, it will be sent out from our Finance Office after your visit. If paying on
 the day we take cash, cards (in person) or cheques. Cheques should be made payable to the Ocean
 Conservation Trust Ltd. Students with Aquarium Membership or Day Plus Passes will still be required
 to pay the fee for an educational visit. This is to cover Aquarium staff time and to pay for resources
 used by the students.

· Getting here & parking:

- Coach Parking: There is a coach drop off point at the back of the building. Coaches should only use this space for dropping and picking up. Please make sure your coach company is aware that they are unable to park at the back of the building. If you need any information on where coaches can park in the local area, please email us and we will be happy to help.
- Disabled Parking: We have 3 disabled parking spaces at the back of the aquarium that can hold minibuses (satnav postcode PL40DX). These are available on a first come first served basis, but users must display a valid disabled badge.
- Parking Cars & Minibuses: Please note the Aquarium does not have its own car park. The nearest car parks are the Harbour multi story car park at Coxside (height restrictions apply), and the Lockyer's Quay pub car park (no height restrictions apply). Please check directly with Premier Inn to confirm permission for Lockyer's Quay car park (phone number: 0333 321 1392). Both are directly behind the National Marine Aquarium with a 2-minute walk to the entrance.

Premier Inn: Up to 3 hours - £2.00. Up to 4 hours - £4.00. Up to 5 hours - £5.50. Up to 6 hours - £7.00. Payment to be made at kiosk on exit. Pay by Phone options available.

Harbour: Up to 3 hours - £5.50. Up to 6 hours - £8.50. Up to 12 hours - £10.00. Pay at machine on arrival. Pay by Phone options available.



- Arrival: The entrance is located at the front of the building. If parking at the rear, please follow signs
 to the main doors and ticketing area. Please report the front desk and inform them of how many
 students/adults are in your group. A member of staff will greet you and talk you through your day.
- Photography: We welcome cameras in the Aquarium. However, flash photography is not permitted.
- **Gift Shop:** You are welcome to visit the gift shop in small, supervised groups. Please ask members of staff for guidance should you wish to enter the shop during your visit.
- **Risk Management:** Our generic Risk Assessment is available for download on our website. It will also be emailed to you as part of the booking process.

- Accessibility: The Aquarium has ramps/lifts for individuals using wheelchairs, and accessible toilets
 at a variety of locations. Please note that we do not have hoists in any of our toilet facilities. If you
 wish to book a workshop that takes place on a boat or beach, there will not be wheelchair access.
- What to bring: We recommend you bring your own lunches, although refreshments are available in
 our café for smaller groups. As your visit will involve a walk from your transport to the Aquarium
 entrance, and some groups are seated in our garden for lunch, we recommend you come prepared
 for all types of weather (suncream, raincoats etc). If you have booked a Rockpooling session, please
 bring sensible, sturdy footwear. First aid kits will be available, but you may wish to bring your own.

DID YOU KNOW?

We offer a Free Teacher Pre-Visit to familiarise yourself with our fabulous Aquarium!

To arrange, please get in touch with us via email or give us a call and we'll make sure someone is available to show you around!

Booking your visit

To book, just call us on 01752 275233 or email us at learning@oceanconservationtrust.org.

Our Schools Administrator will talk you through your options and answer any questions you may have. You will need to let us know:

- Your preferred visit option (Explorer Visit or Interactive Visit)
- Your preferred date.
- Estimated time of arrival/departure.
- No. of students/adults attending.
- Year Group of students.

Once this information is confirmed, you will receive an Enquiry Form, which will outline the details of your visit. You will need to check this through and complete the relevant sections before returning it to us. Once we have received your completed forms, your booking will be confirmed.

Amending and cancelling your visit

Booking Amendments: If you would like to make any amendments to your booking, such as arrival time or workshop choice, please tell us as far in advance as possible. If it is a small adjustment, such as 2 or 3 fewer or additional pupils, this can be communicated to NMA staff on arrival.

Booking Cancelation: Please let us know as soon as you can if you wish to cancel your booking. We require 7 days' notice of cancellation or significant alteration to the agreed programme. A £50 cancellation fee may be charged if insufficient notice is provided.