



DINOSAUR ISLE

TEACHERS' GUIDE



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Produced by: Trevor Price Community Learning Officer, Dinosaur Isle.

Front cover picture: Children collecting fossils on a guided fossil walk at Yaverland.

About this guide

This guide replaces the former printed A5 Teachers' Guide booklet. It provides information on the Education provision at Dinosaur Isle. Much of the information in this booklet can also be found on pages on the Dinosaur Isle website www.dinosaurisle.com

About us

The Isle of Wight is the most important site in Europe for dinosaur fossils. The Island is also of international importance for its geology and fossils from the Caenozoic.

Dinosaur Isle is the showcase for Isle of Wight fossils, from the tiniest insects and shells right up to the largest dinosaur. It is home to one of Europe's finest collections of dinosaur remains. Our mission is **"to be a national centre of excellence in the acquisition, conservation, display and interpretation of the Island's dinosaurs and diverse geological heritage"**.

Dinosaur Isle Museum was opened in August 2001 with joint funding from the Isle of Wight Council and the Millennium Commission. Dinosaur Isle is operated by the Isle of Wight Council.



The geological collections originally came from a museum in Newport founded in 1819 by the Isle of Wight Philosophical Society. The geological specimens from this collection were transferred in 1913 to the Sandown Free Library which opened to the public in 1923 as the Museum of Isle of Wight Geology. In 2001 the collection moved up the road to Dinosaur Isle at Yaverland. In a few years time our historically-important collection will celebrate its bicentenary.



Picture above
Neovenator salerii looking out of its packing case in 2001.

Picture below
Children examining a reconstruction of the skull of a new species of pterosaur (*Caulkicephalus trimicrodon*) found at Yaverland.



Educational Service

We provide a programme of school visits which extends throughout the year. School children can experience real fossils in our displays, in a handling session, and in the field on guided fossil hunts.

At Dinosaur Isle we can support the teaching of the National Curriculum, we can also provide support for GCSE, A-level, college and university student groups.

In addition to formal education we encourage community learning through the provision of lectures, field-trips and other activities for adults and families, youth and special interest groups.

The museum is staffed by a professional curatorial and education team who have many years experience of the Island's fossils and geological heritage. Profiles of our staff are available on our website at www.dinosaurisle.com/meet_the_team.aspx

Schools who visited the old Museum of Isle of Wight Geology continue to visit us today in our new building; and our educational visitor base is steadily growing.

Dinosaur Isle is a member of ESTA, the Earth Science Teachers' Association.

A-level project work on sedimentology, fossils and palaeo-environment



Picture above
Fieldwork on the Barnes High Sandstone Member.

Recording the water-rippled upper surface of this former sandy river delta from the Early Cretaceous Vectis Formation at Yaverland.



Pictures to the right
Fieldwork on Palaeogene sediments at Whitecliff Bay

followed by cleaning, identifying and classifying fossils in our Education Room.



School field-trips at St. Catherine's and Yaverland



Picture above
Children at St. Catherine's, collecting ammonites



Picture to the right
Children at Yaverland; measuring a large, partially buried fossil tree trunk.

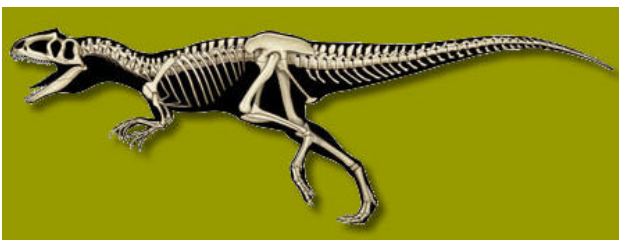


Picture above
Collecting fossils on the foreshore at Yaverland.

At Yaverland the beach changes each week we visit it. The tide moves the sand around, and in the autumn and winter months it can sometimes be stripped bare of sand. This exposes many of the larger fossils, like the natural foot-casts left behind by the large herbivorous dinosaur *Iguanodon* (Seen below).



Picture to the left
The skeleton of the large meat-eating dinosaur *Neovenator salerii* - found only on the Isle of Wight.



Adult Learning



Picture to the left

A combined trip with the Geological Society of the Isle of Wight (GSIW) to Bembridge Forelands to look at Palaeogene fossils and the Quaternary raised-beach. (Photo supplied by Val Munt.)

Standard activities

Visit Dinosaur Isle

If you wish to arrange an unguided visit, you simply need to phone and book a time: this requirement is so that we can welcome you, and also to separate groups. Your period of stay is determined by your needs and whether we have any other parties booked in. There is an admission charge to Dinosaur Isle. Activity sheets, clipboards and pencils are normally available.

Museum Talk and fossil handling session

In the context of Earth Sciences within the National Curriculum, the Museum staff give talks introducing the study of geology. Topics covered include rocks, fossils, dinosaurs and landscape, with an opportunity to handle fossils. This talk lasts approximately 30 minutes, and can be extended by the use of worksheets. A charge is made for talks. In order to ensure that all pupils can handle the fossils we normally restrict a talk to a maximum of 40 pupils. Larger groups are split into two (and sometimes three when the school group is very large, for example when we get over 100 pupils in a group). If your group is going to St. Catherine's for its field-trip we may be able to give you a talk focused on the site and its fossils instead of the standard talk. We would need to know this when you make your booking.

Field-trip

This is a visit to one of a number of sites on the island known to be particularly rich in fossils. The children are able to collect rocks, minerals and fossils for their school or themselves. This we hope will be a memorable experience for you and them. You should allow a total of 3 hours for a trip to St. Catherine's and 1.5 hours for a trip to Yaverland. For this service a charge is made. A safety talk is given to groups before they go onto a site.

Wet Weather Alternative:

If you were booked with us for a field-trip but bad weather prevented your trip, we will do our best to offer an alternative. You may be able to extend your stay with Museum based activities, using worksheets or sketching sets of fossils.

Times

A talk and fossil-handling session lasts about 30 minutes.

A visit to see the exhibitions typically takes about an hour, but you should allow longer if you have a very large group.

A field-trip to Yaverland takes about 1.5 hours, allowing an hour for fossil hunting, and about 5 minutes for a safety briefing. The walk to the site takes about 10-12 minutes depending on how far along the beach you go. Remember that younger children travel much more slowly. For small groups pick-up is possible from the bus-stop near Yaverland car-park for your onward journey.

A trip to St. Catherine's takes much longer, allow 40 minutes for the coach drive to the site, about 15 minutes to walk to the beach, an hour on the beach and about 20 minutes to walk back up to the coach. Allow extra time for large groups to disembark, embark, put on waterproofs if necessary, and generally mill about.

The typical school activity includes talks, a visit, and a field-trip to Yaverland for which an overall time of 3 hours should be allowed (longer if it is a very young group, or very large). For groups using St Catherine's allow about 5 hours if you are coming back to the Sandown area afterwards, and about 4.5 hours if you are going on to another activity.

Activity Sequence

The normal sequence of activities is Talk --> Visit exhibitions --> Field-trip. However, due to tide times at Yaverland and Shanklin it may be necessary to start with the field-trip. In this case we would still recommend starting at the Museum .

Where your group size exceeds 40 children we would recommend splitting the group down into smaller groups of less than 40 (although if your group slightly exceeded this we would normally keep it together). These smaller groups would then do all of the activities but in a different order.

If you are having a field-trip we would normally take the whole group out together unless you wished to split the group and take one part out on a field-trip first. If you wish your group to be split please make this clear when you book. We will advise you on the sequence of events when we confirm your booking. Groups who are not having field-trips are not affected by tide times.

Guides

We aim to provide a guide who will stay with you for your visit, although you will probably not require assistance when going around the Museum, other than when you first go in to see the displays and pick up the activity sheets. Guides work for Dinosaur Isle, and are all employees of the Isle of Wight Council. The member of staff who provides the talk should also be the same guide on your field-trip, although for large groups it will usually be necessary to bring along a further guide (and sometimes for operational reasons we may have to use a different guide). Sometimes we also bring along students on work-experience or trainee teachers. If we do, we will introduce them to you and the pupils. All of our guides are experienced in the field-trip localities, its geology and palaeontology.

Eating Area

If your visit overlaps your lunch break you may wish to use the grass area in front of the Museum to eat your food. Bench seating (and an ammonite-shaped seat) has recently been installed on the grass. We would ask all groups to ensure that their rubbish is collected, securely bagged and brought back into the museum. There is a fence between this area and the main road.

The area is adjacent to the former Sandown Canoe Lake which is rich in wildlife, including a pair of resident swans who nest during April to May. If you are lucky you may arrive when the young swans and ducklings are swimming about the lake. There are also coots, moorhens, mallards and various other species of ducks and seagulls to be seen. The lake is home to spiral tassel-weed and other unusual plants. At the back of the museum, in the evening, the grassed area is a playground for young rabbits.

During the winter months it may be possible for your group to use our Education Room for lunch, but this will depend upon whether the room is in use for other activities. We can advise you when you arrive.

Children will need to be supervised at all times during their lunch. Schools visiting St Catherine's as their field-trip site may wish to take their packed lunches there, but all rubbish must be collected and taken away.

Coaches

There is a large coach car-park in Fort Street nearby (about 5 minutes walk away) for which a fee is charged. Alternatively there is space for 4 coaches on the tarmac road (cul-de-sac) along side Dinosaur Isle. This coach parking area is free only for visiting schools, please ensure your coach is not left in the large gravel car-park without a valid ticket.

Minibuses may park in the large gravel car-park, or the tarmac car-park behind the building, please ensure a valid ticket or permit is clearly displayed.

Non-standard activities

We can provide additional support for schools and other education providers by setting up tailored activities or on-site support for local schools. We currently assist for, example, with A-level geology field work and Art projects, GCSE Biology (Evolution theory) and an Extinction activity day for Year 5. We support first-year undergraduate visits to the Island (Geology, Palaeontology and Oceanography) and provide resources and guidance for undergraduate and post-graduate project work.

Field-trip localities

A field-trip offers an opportunity for pupils to use their investigative skills .

We currently use a number of sites on the Island. At present these are all coastal which offers additional opportunities to learn about coastlines, including cliffs and foreshore environments. We are currently in the process of looking at additional sites to add to our portfolio.

The tidal conditions for the time of your booking will affect your field-trip location. Please call us to find the best time to come if you want to visit Yaverland or Shanklin beaches. The beach we use at St.Catherines' is above high tide and can be used at any time, except when there are severe storm conditions.

For convenience, coaches are recommended for all trips except Yaverland Beach. Risk Assessments are available for all of the field-trip sites.

The three main sites we use are listed below –

Yaverland beach

The coast between Yaverland and Culver Cliff forms the northern end of Sandown Bay. The cliffs expose a sequence of Cretaceous strata (123 to 90 million years old) containing many different fossils, which are washed out onto the beach. These include occasional pieces of dinosaur, crocodile and turtle bone, fossilized oyster shells, water snails and fossilized wood. You will find most types of sedimentary rock on this beach, including clay, mudstone, sandstone, limestone and chalk. Unfortunately we cannot use this beach if the tide is in. This sandy beach is easy to walk on, but access is via a short set of steps.



The site is just 15 minutes walk away from Dinosaur Isle. There are public toilets nearby in the car-park

St. Catherine's (Watershoot Bay)

This beach at the southern tip of the Island is composed of sandstone, chalk and chert boulders (110 to 90 million years old) which are rich in fossils, including ammonites, shells, sponges and fossil worm cases . Formed during ancient landslips, it is a very beautiful area to collect fossils from, and can be accessed even at high tide. St Catherine's is located approximately 40 minutes away by coach. The beach itself is approximately 15 minutes walk downhill from the drop-off point at The Buddle Inn. At least 20 minutes should be allowed for the climb back. There are no public toilets at St. Catherine's.



Picture above is Watershoot Bay , showing boulders of greensand and chalk with the land-slipped terrain beyond.



Picture to the left *Schloenbachia varians* is a common variety of ammonite that can be found on the beach at St. Catherine's.

Shanklin beach

This beach is approximately 15 minutes away by coach. Like Yaverland, it can only be used on a falling tide. Sandstone boulders on the beach contain fossilised shells and fossilised wood is common. The fossil wood often shows prominent tree rings and borings from shellfish that lived in the dead wood as it floated in the water.



Activity sheets

We have produced an activity worksheet which is aimed at Key Stage 2/3 children. It provides a means of focusing attention on the displays, whilst also making it fun to find the answers. The sheet is provided free of charge to visiting schools (and the public) in A4 double-sided format. Alternatively it can be downloaded as an Acrobat pdf file from the "Useful Information" page of our website. Clipboards and pencils are available to borrow; to be returned at the end of the visit.

Side 1 of the sheet focuses on the first exhibition, which deals with the Island's geology and fossils from the time of the last Ice-Age to that of the dinosaurs. Questions are themed and based on specific display cases and poster panels. The title of each theme is the name of a display case or wall panel. The sheet progresses through the exhibition, although groups of children may wish to tackle questions out-of-sequence.

Side 2 is completed within the second exhibition. It does not follow a sequence, some questions focus on particular specimens, whilst others may require the pupil to examine a number of displays to complete the task.

In order to cope with a range of ability the tasks vary in difficulty and include some drawing. All children should be able to complete most of the sheet. Some younger children may find it easier to work in pairs with a shared activity sheet. For those pupils who can finish the sheet quickly other activity sheets are available at the Museum, and a popular "Word Search" sheet is available as well. The Word Search is available as an Acrobat pdf file on the "Useful Information" page of our website. During the summer and winter we plan to put on a themed exhibition which adds to the existing displays in the Museum, for which we look to provide an additional activity sheet.

Safety

We suggest that if the school is going on a field-trip that each child and adult be equipped with:

- Sturdy footwear, preferably boots or old trainers.
- Waterproofs, if rain is anticipated.
- Clothing that does not matter if it gets dirty.
- Warm clothing (eg woolly hats and gloves) during cold weather.
- Sun-block and sun hats during hot weather.
- Bottled drinks during long trips in hot weather.
- Small plastic bags for finds - pockets never quite hold enough!
- One teacher should carry a first-aid kit and whistle.



We have a few sensible safety guidelines:

- Teachers and adult helpers must remain with the group at all times.
- Please do not allow your students to climb cliffs. There may be a danger of rock falls.
- Keep students in a group and do not allow them to wander off on their own.
- Keep them away from the sea and any slippery rocks.
- Do not bring hammers. Extraction of fossils can be dangerous and will be done for you by museum staff.
- Do not touch any suspicious objects that may be washed up on the beach: alert your trip leader immediately.

Risk Assessments

Risk assessments have been produced for the Museum, and for the three main field-trip sites we use. Acrobat pdf versions of these can be downloaded from the “Useful Information” page of our website.

Suitability for the National Curriculum

Ages 5 – 14

Direct

Science:

Scientific enquiry	Sc1
Life processes and living things	Sc2
Materials and their properties	Sc3
Physical processes	Sc4

Indirect

Geography:

Geographical enquiry and skills
 Knowledge and understanding of places

We are able to provide direct support for the Science theme – ‘Materials and their properties’ through hands-on activities and beach work. If you are interested please contact the Community Learning Officer.

A museum visit will create that 'wow' factor that is essential for later study. Handling real rocks and fossils gives children direct experiences of their weight, texture and scale that they cannot get from paper or IT based resources. The visit will be an opportunity to handle materials that will supplement classroom based work, and provide an opportunity to ask questions of local experts. Similarly the field-trip creates an idea of the real scale of cliffs and foreshore; and an understanding that coastlines are dynamic environments, as the Earth has been in the geological past. For many children this will be their first fossil collecting experience or chance to look at the many types of rock to be found on a beach. The visit will provide opportunities for follow-up activities in the classroom. The variety, and depth of questioning we get from children visiting our Museum never ceases to amaze us.

At GCSE and Advanced level

Geology: e.g. palaeontology, sedimentology, folding and faulting, fossilization processes.
Biology : e.g. evolution, classification of organisms.
Geography: e.g. coastal landforms and processes.

Undergraduate and post-graduate

Staff expertise can support study and field-work on most aspects of the Island's geology and palaeontology from the Cretaceous, Palaeogene (Late Palaeocene, Eocene and Early Oligocene) and Pleistocene.

Examples include ;-

Early Cretaceous vertebrates, including dinosaurs and their palaeo-environment.

Molluscs, specifically non-marine species from the Lower Cretaceous and Palaeogene.

Geodiversity: Conservation and interpretation of geological sites.

Sedimentology.

The collections cover all aspects of the Island's geological heritage. Access is via the Curator Martin Munt, who can be contacted on (01983) 404344 or by email at martin.munt@iow.gov.uk

Obtaining information from our website

Our website: www.dinosaurisle.com contains much of the information in this booklet. The pages can be printed directly. Some information, for example the Risk Assessments can be downloaded as Acrobat pdf files. In addition we provide a downloadable pdf file for students studying Heritage and Tourism, which provides additional information relating to Dinosaur Isle.

Enquiries

You can telephone us seven days a week, between 10am and 4pm at any time of the year, and up to 6pm from April 1st to October 31st. Outside of these times there should be an answer-phone on which you can leave a message. Alternatively you can email us or send a Fax; or if visiting the Island, just drop in. Teachers wishing to make a pre-visit are admitted free, please let us know when you are coming.

Booking

We accept provisional bookings at any time and try to provide the date and time you ask for. In most cases there is no problem. However tide-times affect when you can safely visit our local beach and we may need to reschedule the sequence in which you have your activities. We normally obtain tide-times in October of the previous year so can advise from then onwards. We can still take bookings and confirm them, prior to that date if you do not have a field-trip or are visiting the non-tide-dependent site at St. Catherine's.

Please note: if you had no prior booking, we may still be able to provide you with a talk or visit, subject to availability.

Costs

The costs for school visits include a group discount where there are more than ten children. One adult is admitted free of charge for every ten paying children, and carers for children with a disability are admitted free.

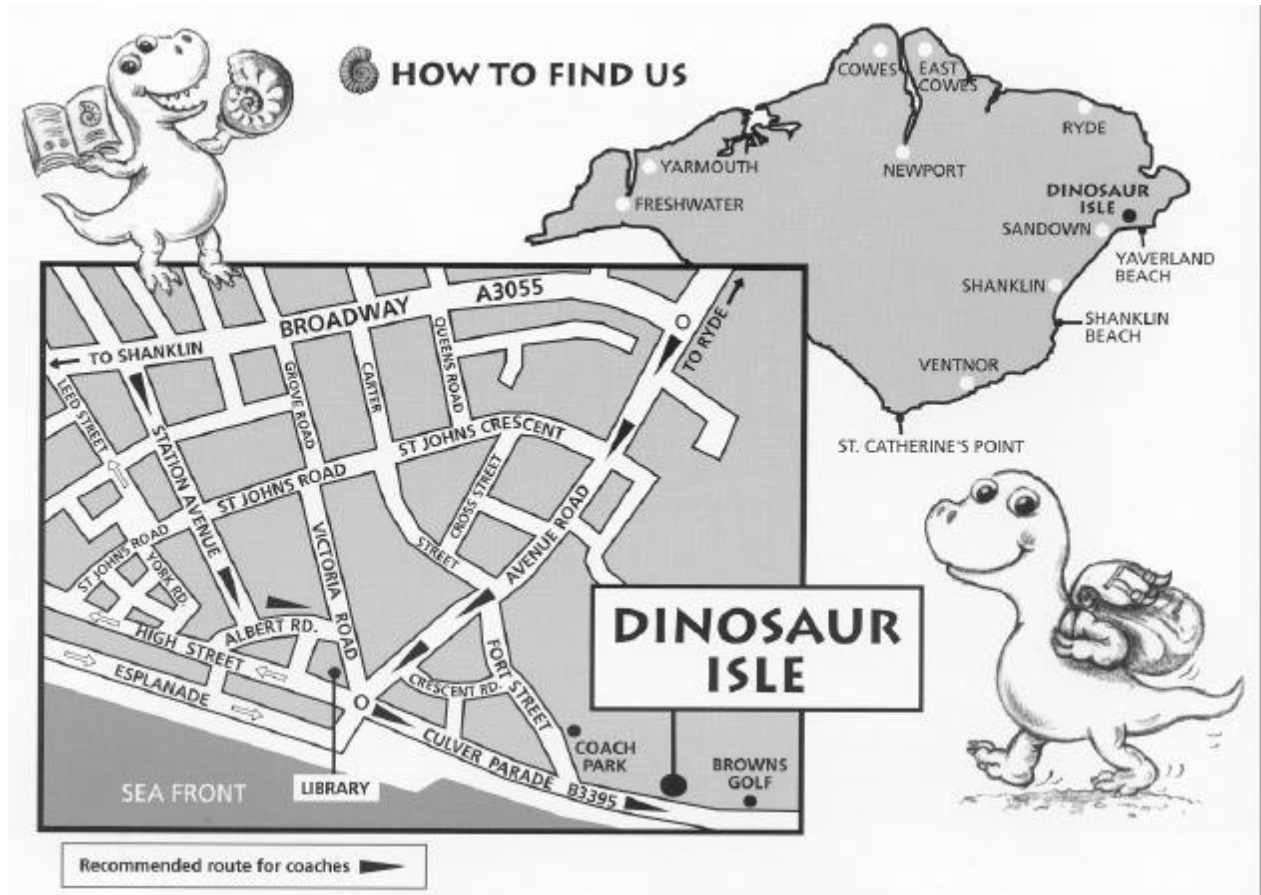
There are separate charges for the varying activities and services we provide. Schools may select from our standard choice, or if we have enough notice we may be able to provide a tailored service. Most schools opt for our standard package which consists of a three hour session comprising – a talk and fossil handling session, visit to the museum galleries (with activity sheets) and a fossil walk.

Costs are advertised on our website, on the page www.dinosaurisle.com/visiting.aspx

Should an activity have to be cancelled, for example due to bad weather, then you will not be charged for that component. Payment can be made during your visit or by invoice afterwards.

How to get here

If your school has never visited the Isle of Wight before then guidance can be obtained on routes from our webpage www.dinosaurisle.com. Click on **VISITING** or **ABOUT US** and follow the link to **How to get here**.



There are regular Car and Coach Ferries running from Lymington to Yarmouth; Southampton to East Cowes; and Portsmouth to Fishbourne. Fast passenger crossings run from Southampton to West Cowes, and from Portsmouth to Ryde Pier. In addition there is a Hovercraft service from Southsea to Ryde. Regular trains run from Ryde to Sandown, these are complimented by Island bus services. Motorway access to Southampton and Portsmouth is good [M27, M271, M275, M3, A3(M) & A34] as are the national train network links. Timetables for trains, ferries, hovercraft and Island buses are available from links on our website.

Shop



We have a competitively-priced shop that caters for all tastes and budgets. We stock literature ranging from professional geology books to educational children's books on prehistoric life, rocks and minerals, models, toys, stationery and jewellery that make excellent gifts, mostly priced with children in mind.

Obtaining a copy of this guide

Please ask us for a copy of this guide (the **Teachers' Guide**), or download it as an Acrobat pdf file from our website (look at www.dinosaurisle.com/info.aspx).



“ Look Sir, I don't care who you are... you can't just walk in here and feed our dinosaurs! Clarence is very particular about his food, aren't you Clarence... “

Contacting us

We can be contacted by;-

Mail:	DINOSAUR ISLE Culver Parade Sandown Isle of Wight PO36 8QA
Telephone:	(01983) 404344
Fax:	(01983) 407502
Email admin at:	dinosaur@iow.gov.uk
Email education enquiries to:	trevor.price@iow.gov.uk
Email curatorial enquiries to:	martin.munt@iow.gov.uk

Provisional Booking form

We have included a provisional booking form with this guide if you wish to complete it and mail, fax or email it (after scanning) to us.

If you wish to have a WORD copy of the file please provide us with an email address to send it to.

A downloadable Acrobat pdf version of the booking form is available from our website Education page www.dinosaurisle.com/info.aspx

Alternatively telephone us and we can take your details. If you wish to be invoiced after your visit please let us know.

We will send you a confirmation letter, detailing the booking you have made on receipt of a letter, fax or email from you. Please be aware that tide times may affect the timing of your visit if you require a field trip to Yaverland or Shanklin. We can advise you on this after September of the previous year.

Dinosaur Isle – Provisional School Booking Form

Name and address of school

.....
.....

..... **Telephone no**.....

email Fax no.

Name of trip leader Mobile no.....

Address during stay on Isle of Wight (if applicable)

.....
.....Telephone no.....

Date of visit..... **Arrival time**

We would like to (please tick):

Visit the display

Have a talk and fossil handling session

Have a field-trip to Yaverland / St Catherine's Point / Shanklin (please circle/delete)

Do you have a coach/ minibus?.....

Do you want to be invoiced?

(If so, then we need the
address to invoice to.)

Number of children in group.....

Number of adults in group.....

Ages of children.....

Special needs

Any specific learning outcomes.....

Date: **Teachers' Guide** Provisional Booking Form