



Model Engineers

Guidelines for Supervising Teachers

Preparing for Your Visit: It is strongly recommended that supervising staff should arrange a pre-visit to familiarise themselves with facilities at the Museum. Complimentary tickets are available on request in order to assist with planning and risk assessments. A Hazard Identification Sheet is provided in order to help you with your risk assessment.

Practicalities:

- **Where to go and how to get there:** The Model Engineers activity takes place at the Waggonway. To get there, take a bus or tram from the entrance and get off at the Pockerley Old Hall/Waggonway stop. Once off the tram or bus walk along the flat towards The Waggonway Great Shed, where you will be met by a member of staff.
- **Arriving on Time:** Please ensure you arrive at The Waggonway on time. In the event of a late arrival every effort will be made to accommodate the full time of the activity, however, due to other bookings this may not be possible.
- **What to Bring/Where:** Beamish is an open air museum and pupils will need appropriate clothing for the weather. Please make sure children have warm coats, gloves, and hats, rain gear or sun hats and sunscreen, depending on the season. Whatever the time of year, please ensure children wear sturdy shoes.
- **Toilets:** toilets are located at the Waggonway.
- **Health and Safety Information:** A Hazard Identification Sheet is provided with your booking in order to advise you of any possible risks or hazards.
- **Access:** An Access bus is available and can take any members of your group with access needs to the Waggonway. The Waggonway is all on the flat but lighting levels can be low. The train is fully accessible. If there is anyone in your group with access needs please contact our Bookings Officer on 0191 370 4026 or email bookings@beamish.org.uk and they will be able to advise you.

Objectives of Activity:

- To gain an understanding of how and why steam engines were developed.
- To understand how steam engines work.
- To get to know about George Stephenson and his role in the development of the steam engine.
- To appreciate how important the North East of England was in the early development of the railways.

Outline of Activity:

The main focus of this activity is George Stephenson and the early development of the railways. Beamish Museum is home to replicas of three of the very early engines; Locomotion No 1, the Steam Elephant and Puffing Billy. This activity tells the story of how and why these engines developed, introduces children to the different parts of the engine and explains how they work. The activity builds on the story that as a child, George Stephenson used to make clay models of the engines he would one day go on to build. Supported by the Waggonway staff, children will make their own model of an engine from air dry clay to take back to school. In the summer season, children will have the opportunity to ride on the train pulled by the engine. The engine runs from 11.30, so the first group in the day may need to return to the Waggonway after lunch for their train ride.

Curriculum Links:

The activity relates to the topics of transport, steam engines and George Stephenson. It is directly relevant to KS1 History and classes studying the lives of significant individuals in the past who have contributed to national and international achievements.

Resources:

This activity is supported by a resource available via the Beamish Museum website:
<http://www.beamish.org.uk/george-stephenson>

Contact Us: If you have any queries please do not hesitate to contact us at the Museum. Telephone **Simon Woolley** on 0191 370 4011 or email education@beamish.org.uk.



Hazard Identification Sheet – Model Engineers

Location: The Waggonway

Potential Hazard	Who is particularly at risk	Context of hazard and steps to be taken by accompanying adults to prevent accidents	Risk of accident/dangerous occurrence High/medium/low	If high or medium what additional precautions or measures need to be taken to reduce risk to low
Slips and trips – uneven ground surfaces, rails, low lighting levels, furniture and table coverings.	Children and adults	The pathway to the Waggonway is uneven and lighting inside the Great Shed is subdued. There are also train tracks embedded into the flooring and yard. Children should be supervised and instructed to walk at all times. Museum staff will organise furniture and table coverings to minimise trip hazards.	Low	
Fire – risk of burns	Children and adults	A fire is usually lit in the bothy. Children should always be supervised around the fire and advised to remain at a safe distance from it. Only Museum staff are allowed to manage the fire.	Low	
Fire – smoke and dust – risk of asthma attack	Children and adults	A fire will be lit in the bothy which has potential for creating smoke. The area is also potentially dusty. Both of these could trigger asthma attacks. The Museum staff will maintain ventilation, monitor the situation and provide alternative activities if required. School staff should ensure any participants have their medication with them if required.	Low	
Clay – risk of illness and skin reactions	Children and adults	The air dry clay is non toxic but should not be swallowed and care should be taken to avoid getting it into eyes. Shirts will be provided to protect clothing and all participants should wash their hands on completion of the activity. Museum and school staff to supervise children during activity.	Low	

Clay tools	Children and adults	The clay cutting and shaping tools are all age appropriate and should be used with care. Museum and school staff to supervise children when using them to prevent pokes and scrapes.	Low	
Steam engines – hot, oily, moving engine.	Children and adults	The Waggonway is home to running steam engines with the associated risks of burns, crush injuries, oil and dirt. Children will ride on and observe the engines. Caution must be taken to ensure children do not touch the engines and stay in designated visitor areas. Moving engines are closely supervised by Museum staff and the railway line is fenced. Visitors must follow instructions from Beamish staff to ensure safety.	Low	
Fall from the train platform leading to broken bones/ head injuries	Children and adults	There is a significant drop from the platform to the rails. The platform is closely supervised by Beamish staff. When going to ride on the engine, children will be kept well away from the edge of the platform and supervised by adults at all times	Low	
Riding on train – jerks of carriages leading to bumps and bruises	Children and adults	The carriages can judder and jerk, particularly when the train is starting and stopping. Children must remain seated during the ride to prevent bumps and bruises.	Low	
Waggonway tools – heavy and oily – dropping could lead to broken bones, oil and dirt to illness	Children and adults	In The Waggonway there are exhibits including a static engine, work benches and tools, some of which are heavy. Children should be supervised by Museum and school staff in these areas to ensure they move about the area safely and do not pick up heavy/dirty objects.	Low	
General dirt, oil and coal dust	Children and adults	Being home to working engines, there is a children picking up dirt or oil during their visit. This can be minimised by staff supervising the children to ensure they do not touch dirty items such as a static engine or coal. Hand washing facilities are available at the Waggonway at all times and all children should wash their hands before leaving the area.	Low	
Falls into inspection pit	Children	An inspection pit is located in an area of the Great Shed that is cordoned off from visitors. School staff should supervise children to ensure they stay in the visitor areas.	Low	

Climbing – falls leading to broken bones, head injuries	Children	Children must be supervised at all times to ensure they do not climb on exhibits, engines, gates, fences and benches.	Low	
Pig – illness, bites	Children and adults	A pig is kept at the Waggonway. There is a risk of bite injuries if people try to touch the pig and illness from touching the pig or enclosure fencing. Children should be supervised at all times by school staff. They should be told not to put fingers in mouths and must wash their hands at the end of the activity and before eating or drinking.	Low	
Group security	Children and adults	The Waggonway is open to the public so children may not be the only passengers on the train ride or using period areas. Groups must be accompanied by an adult. Beamish admits free supervising places for adults on a ratio of 1:5 for 5s and over and 1:3 for under 5s.	Low	

NB It is advised that all participants wash their hands after the activity.

Date Reviewed: 26th February 2015 **By:** Catherine Rice (Learning Co-ordinator), Tony Twedde (Waggonway Supervisor)