

# Bishops Wood Centre

Crossway Green  
Stourport-on-Severn  
Worcestershire  
DY13 9SE

Tel: 01299 250513

Fax: 01299 250131

[www.bishopswoodcentre.org.uk](http://www.bishopswoodcentre.org.uk)

[bishopswoodcentre@worcestershire.gov.uk](mailto:bishopswoodcentre@worcestershire.gov.uk)

## PRE VISIT INFORMATION

The following pack will help your school get the most out of your visit. It contains:

- Keeping Your Class Safe When Visiting Bishops Wood
- Information for Coach Drivers
- A Trip to Bishops Wood Centre – Thinking Skills
- The Waste Free Lunch
- A Checklist
- Involving your Students in Preparing for Their Visit and The Sub-Station
- Post-visit Evaluation Forms in advance for information
- What do you want your pupils to get from their visit to Bishops Wood – **to be completed and returned 2 weeks before visit.**

You may also find the following information useful:

### Website

You may like to keep in touch with developments at Bishops Wood on our web-site [www.bishopswoodcentre.org.uk](http://www.bishopswoodcentre.org.uk) You can take a virtual tour of the building and site and meet the staff who will be teaching your group. There is also a PowerPoint presentation for the children and one for the parents explaining the waste free lunch and also PowerPoint presentations explaining certain of our programmes.

### Resources

#### SCHOOLS LIBRARY SERVICE

Need help with resources? Saxons, Vikings, Settlements, Habitats, Healthy Eating or improving the environment– Contact the schools library service for a loan box 01905 420273. [Sslib1@worcestershire.gov.uk](mailto:Sslib1@worcestershire.gov.uk)

### Cameras

If you do not have access to a school camera, please bring a 35mm film with you and one of our staff will be happy to lend you the centre's camera. We also have a digital camera, which may be available, if you book it in advance. Please bring some floppy disks.

### Coaches

It is always worth getting at least three quotes for coaches as prices vary greatly between companies and a company that gives a low quote at certain times of year might be the most expensive at other times. Companies that currently are giving competitive quotes include Mawley Oak (01299 270207), Yarranton's (01584 881229) and Woodstones (01562 823073).

Shopping around for the best quote can significantly reduce the cost of your visit. Some companies (such as Astons 01905 820201) also offer double deckers, which is often a cheaper alternative.



Investing in the future  
Bishops Wood is part of National Grid's network of environmental education centres based on substation sites. The centres are run in partnership with environmental organisations, local authorities and others.







## *Keeping Your Class Safe When Visiting Bishops Wood.*

*Health and Safety Notes for Teachers and Adult Helpers*



## **Keeping your class safe when visiting Bishops Wood.**

It is recommended that at least one member of staff has visited Bishops Wood before. This will ensure that you know the location of:

- Bishops Wood
- The main building
- Reception Office
- Toilets
- Lunch areas etc.

We are always happy to receive staff for pre-visits by appointment.

Adult helpers should be briefed about the visit and given a copy of this sheet. They could be given the opportunity to see the Bishops Wood video "Message for Tomorrow". A copy was sent to all schools in Worcestershire. They can also be directed to our web-site at [www.bishopswoodcentre.org.uk](http://www.bishopswoodcentre.org.uk), which will help familiarize them with the venue and programme.

**Safety** is a high priority for our staff who will lead your programme for the day. Accompanying teachers from the school have the ultimate responsibility for the safety of their classes and should inform our teaching staff if they have any concerns. Visiting staff should be particularly vigilant when arriving and departing and at lunch-times when they will be taking full responsibility for safety of their class.

### **Child : Adult ratios.**

A child : adult ratio no greater than 10 : 1 is recommended. For Key Stage 1 and lower Key Stage 2 we suggest 6 : 1 and for Foundation Stage 4 : 1 is even better. We cannot run programmes without adult helpers.

### **Special needs and disabilities.**

Please notify us well before the visit if any members of your party have any special needs or requirements or any behaviour difficulties of which we should be aware. This will enable us to prepare and plan for your visit so that all members of the class have a rewarding and worthwhile day. Please have a word with your programme leader when you arrive if any issues or concerns have arisen that morning.

### **Class list.**

Please bring a list of all members of your group including pupils, adult helpers and yourself. Please give it to your programme leader on arrival so that it can be placed in our visitor's book in case of fire. It is helpful for one of your party to have a mobile phone with them. The phone number should be written on the class list in case we need to contact the group in an emergency. The phone should be left switched on but set to silent/vibrate to avoid disturbing the class.

### **Arrival.**

Please ask your coach driver to park in the designated coach parking area. Keep the class on board and send an adult to the main Centre building to notify your programme leader of your arrival. When disembarking, the coach door will be facing the entrance path reducing any risk to the disembarking children and adults from cars entering the car park. A responsible adult

should supervise the children alighting from the coach. In poor weather keep the children on the coach until our programme leader arrives to lead the children up the path.

### **Walking.**

We expect the children to walk at all times (except when running forms part of an activity in which case we will tell them!). This applies both in the buildings and outside.

### **Toilets.**

We suggest that for safety reasons Key Stage 1 children are supervised while using the toilets, the layout of which will be unfamiliar to them. There should not be more than six children in the toilets at one time. Step-ups are available for small boys who cannot reach the urinals but some supervision is necessary. Females supervising the male toilets should be made aware that adult visitors may also be using these toilets so they should be careful of whom they attempt to supervise! Adults may use the disabled toilet when it is not needed by people with physical disabilities.

On arriving in the building children may be directed first to the toilets or to the room where they will start the programme. Directions will be given using the footprints on the floor. Adult helpers should distribute themselves in the rooms as appropriate so groups of children are not left alone. Do not worry if your class is not directed to the toilets first. This will be part of our cunning plan to stagger visits to the toilets to ease congestion.

### **Coach Drivers.**

We provide as part of our previsit pack a letter for coach drivers. This includes a map of how to get to Bishops Wood and directions for garages, cafes etc. Please send a copy to your coach company before the visit and have a spare copy to give the driver on the day in case the company has not passed it on to him/her. You may wish to invite your driver to join the class on their activities (they like to be asked even though they will probably decline in favour of a nap). Drivers are also welcome to visit the centre provided they sign in and get a visitors badge. We would rather invite them to make themselves a hot drink and sit in our staff room rather than sit in their coach with the engine running, which is not allowed!!

### **Cold weather.**

We do not have a cafeteria so please encourage adult helpers to bring a flask with a hot drink if they wish one. In cases of distress adults are welcome to make themselves a hot drink from our staff supplies and make a donation. However please understand that our teaching staff will be spending most of their short lunch break preparing equipment for the afternoon and do not have time to make drinks for helpers who have forgotten to bring their flasks!

Please make sure that children (and adults) dress in clothing appropriate for any weather they might encounter. A dry start at school does not guarantee no rain at Bishops Wood though we do our best! We are hardy types so programmes will continue in all weathers. We do have a small stock of waterproof clothing to lend mainly accumulated from lost property but it is much better and saves time if pupils are well prepared.

### **Hot weather.**

Our teaching staff will be mindful of the physical comfort of the group and may modify the programme to restrict the time spent in full sunlight. In summer children should be asked to bring sun hats and an appropriate sun cream.

## **Emergencies.**

The first aid point is in the workroom leading off the foyer. It is clearly signed. There is a fully equipped kit in a wall cabinet. Other First Aid kits are located in each building and all teaching staff carry a kit when away from the centre. Please immediately inform our staff member leading your programme if there is an accident. If they are not available notify our receptionist. Many of our staff are fully qualified First Aiders. Photographs of our First Aiders are displayed in the foyer of the main building for easy identification.

## **Handwashing.**

Handling natural materials on the site is often an important part of the visit experience and there will always be an opportunity to wash hands before eating.

## **Lunch Times.**

School staff are responsible for supervision of classes through lunch break. Care should be taken to supervise young children when picnicking outside particularly near the pond. There are toilets available near the demonstration garden for use by groups lunching outside.

## **Drinks**

Children need adequate supplies of cold water to keep their bodies and particularly their brains working efficiently. We recommend that each child brings a reusable water bottle clearly marked with their name. A bum bag is the most efficient way of carrying this at all times in hot weather. At other times bottles can be left in day sacks. There will be an opportunity to refill bottles at lunchtime. Please encourage children to drink water at lunchtime rather than sugary coloured drinks which are not effective in quenching thirst and which lead to disruptive behaviour.

## **Car park and departure.**

Adults should distribute themselves evenly through the group when crossing the car park. There should always be a responsible adult at the front of the group. There are warning signs and speed bumps to slow vehicles down. Nevertheless we always take care when crossing the car park and entrance drives. Classes must always be supervised when queuing to get back on the coach. Lines should be formed close to the side of the coach to minimize danger from cars entering the car park. There has never been a traffic accident on site. Please help us keep this record unblemished.

## **Risk Assessments.**

Risk assessments are carried out on all programmes and regularly reviewed by our education team and Health and Safety Coordinator.

## **Valuables.**

Please note that we cannot accept liability for loss or damage to valuables, mobile phones etc. If these are brought onto the site, they must be kept with you at all times.

Dear Driver

### **Visits to Bishops Wood Centre.**

We have to be careful of the safety of children using the site and we are asking all visitors to follow some simple guidelines.

***We ask any visitors unaccompanied by a course leader or Bishops Wood member of staff to kindly observe the following:***

- ***Do not approach groups of children***
- ***If you see a class working on site, remain at a distance and find an alternative route to avoid disturbance.***
- ***Please do not enter the Forest School site, this is signposted and clearly fenced***
- ***Please wear visitors badges in a prominent position.***
- ***Please be mindful of the wildlife on the site and avoid disturbance to the plants and animals wherever possible***
- ***Please refrain from smoking except in the designated area.***
- ***Please remember to sign out before leaving the site***

***In cases of emergency please contact the centre reception on 01299 250513***

In addition we ask you to follow the following guidance:

On arrival, please park in the car park. There is usually a place reserved for coaches on the left just inside the entrance. If the car park is full, then there is room for a coach along the drive just before the car park.

Teachers often bring bags of spare clothing with them in case of emergencies. It is helpful to us if you will allow them to be left on the coach and be available should they be needed at lunchtime.

As part of our environmental code and for health reasons **we ask you not to leave the coach engine running** for longer than necessary. This is important, as one of the lessons we teach the children is not to waste energy. We do not want to give conflicting messages.

You are very welcome to spend the day in our centre, rather than waiting in the coach. Our staff room is often free and you can make yourself a cup of tea or coffee with our compliments. Otherwise our receptionist will show you where to make yourself a drink. In good weather you may prefer to make use of our picnic area. If you wish to go to the picnic area or take a walk around our woodland please follow the guidelines above. Please note that our teaching staff have been asked to report to the police any unauthorised adults found on site.

The nearest place to purchase food, papers etc is the Esso Service Station at the Hartlebury roundabout. They serve a variety of hot and cold food to eat in or take away and have their own bakery. To get there, turn right out of the sub-station drive onto the A4025. Turn left at the roundabout onto the A449 towards Kidderminster and the Esso station is left off the next roundabout (total distance is under 2 miles). As you return to the centre you will also pass a Little Chef on the left of the dual carriageway.

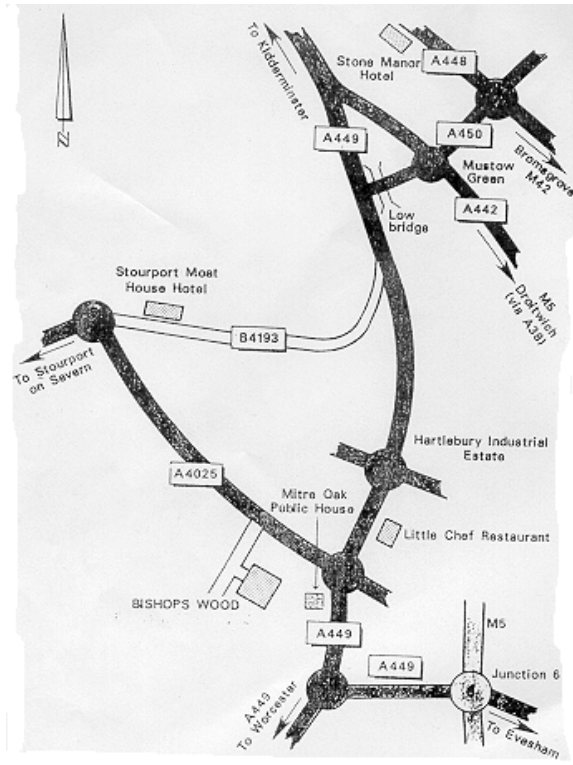
We hope that you enjoy your visit to Bishops Wood. The children spend a significant part of their day aboard your coach and depend on you for their safety. Your comfort is important to us.

# Bishops Wood Centre

Telephone: 01299 250513 Fax: 01299 250131  
email: [bishopswoodcentre@worcestershire.gov.uk](mailto:bishopswoodcentre@worcestershire.gov.uk)

## From Kidderminster

Take the A449 towards Worcester. Continue along the dual carriageway. After the Hartlebury roundabout you will pass a 'Little Chef' on your left. At the next roundabout turn right onto the A4025 (dir. Stourport). Take the first left at the top of the hill (400 yards) into Bishops Wood Lane (signed Bishops Wood, Lineholt and Ombersley Golf Course). After 150 yards, turn left into the National Grid substation drive. Park in the car-park which is to the left near the end of the drive. The path to Bishops Wood Centre is on the left from the car park. Follow the yellow brick road!



## From Worcester

Take the A449 towards Kidderminster. After 6 miles of dual carriageway, turn left at the Crossway Green roundabout (Mitre Oak Public House on left) onto the A4025 (dir. Stourport). Take the first left at the top of the hill (400 yards) into Bishops Wood Lane (signed Bishops Wood, Lineholt and Ombersley Golf Course). After 150 yards, turn left into the National Grid substation drive. Park in the car-park which is to the left near the end of the drive. The path to Bishops Wood Centre is on the left from the car park. Follow the yellow brick road!

## From South along M5

Exit at Junction 6. Follow the signs for A449 Kidderminster. After 3 miles of dual carriageway take the third exit off, still following the A449. Then follow the same direction as from Worcester.

## From North along M5 (Junction 4), M42 (Junction 1) and Redditch.

Follow the signs for Bromsgrove town centre, then take the A448 towards Kidderminster. After 6 miles turn left at the Mustow Green roundabout. After 2 miles (over one small roundabout) turn left at the T junction onto A449 towards Worcester. The directions are now as from Kidderminster.

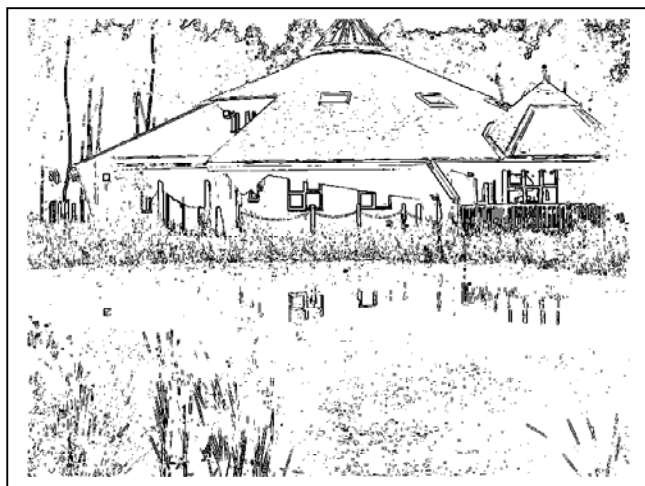
## From Stourport

Follow the one way system through Stourport town centre following signs for Worcester (A4025). After 3 miles, you will pass Countryside Nurseries Shop and PYO. Then turn right into Bishops Wood Lane (signed Bishops Wood and Lineholt) after 150 yards, turn left into the National Grid substation drive. Park in the car park, which is to the left near the end of the drive. The path to Bishops Wood Centre is on the left from the car park. Follow the yellow brick road!

## A trip to Bishops Wood – thinking skills.

Preparation for a visit to Bishops Wood can be used to develop thinking skills. Pupils can explore the Bishops Wood website where there are virtual tours of the site and of the building. With younger pupils the teacher can copy some of the photographs and put them into a PowerPoint presentation to show the class to aid discussion. ([www.bishopswoodcentre.org.uk](http://www.bishopswoodcentre.org.uk))

Alternatively show the video “Bishops Wood - a message for tomorrow” which all Worcestershire schools were sent several years ago. Additional copies can be purchased for £6 from the Centre.



### Enquiry skills.

- Before showing the children the photographs, video or website use questions to find out what they already know.
- What do you know about woodlands?
- Who might go to a woodland?
- What might live in a woodland?
- What would you like to find out about the woodland at Bishops Wood?
- What do you know about buildings?
- What might the Bishops Wood Centre building be made of?
- How might the building be “environmentally friendly”?
- What activities might go on - in the woods?  
- at the centre?

### Information processing skills.

- Organise the class into small groups and give each group some photographs of Bishops Wood. Ask them to write down what they can see; e.g. buildings, trees, other plants, people etc. What are people doing in the pictures?
- Ask the groups to discuss the differences and similarities between the pictures and their own school and school grounds. What can they see in the pictures, which is not in their school? What is in their school? What is not in their school? What is in both?
- Ask the children to make a plan of their school indicating all the main features, e.g. buildings, playgrounds, seating, wildlife areas, trees etc.

## Reasoning and information processing skills.

Extend the children's observations by asking questions such as

- Do you think the building is suitable for children? Adults? Families?
- Do you think the site is suitable for children? Adults? People in wheelchairs? Wildlife? Why?
- How could you find out about what Bishops Wood offers for all these groups?
- How would you record the information?
- How could the site be made better?
- How could the building be made more environmentally friendly?

## Reasoning and creative thinking skills

- Ask the children to have another close look at the photographs and plans. Hold a plenary session to elicit what they have found out about the main features of the Bishops Wood building and site. What do these features tell them about who uses the centre and why, how it is used and how the environment is cared for? Can they suggest reasons for the similarities and the differences between Bishops Wood and their own school?
- Ask them to draw a picture of how they would improve Bishops Wood.



## The Waste Free Lunch

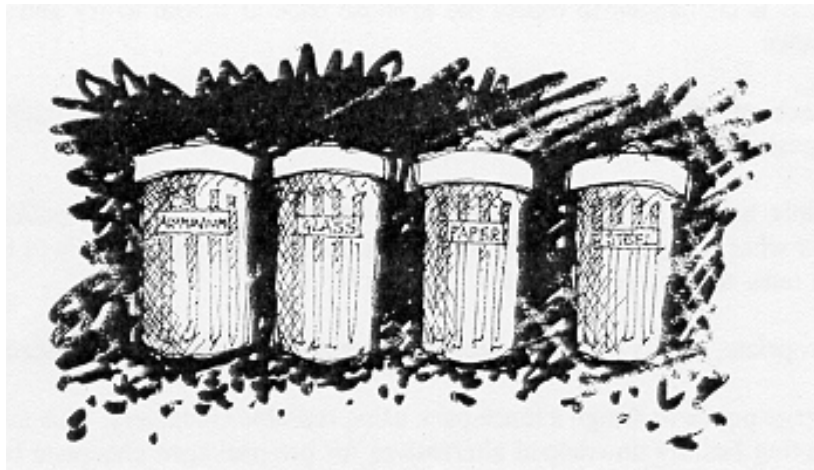
Can your group produce a rubbish free lunch? We weigh all the waste wrappers and discarded containers and each group is issued a certificate, indicating how little waste they have produced. Instead of competing with other groups the challenge is to repeat the exercise and try and improve on their performance.

We hope that groups will involve their children in reducing the waste in their packed lunches. Here is a suggested strategy:

1. Sometime before the trip ask each child to examine their usual packed lunches. Discuss what materials are used to wrap the food. Which materials will biodegrade? Which ones can be recycled? How can this be done?
2. If appropriate, children could research how various materials are produced.
3. Encourage children to design a lunch pack using reusable containers. This might require substituting healthy unwrapped alternatives for pre-packaged chocolate bars.

Here is a suggested way to pack a rubbish-free lunch:

- Use a plastic lunch box or 2 litre ice-cream box.
  - Inside, pack two smaller boxes, one for sandwiches, the other for cake or biscuits. Alternatively use heavy-duty reusable polythene bags.
  - Fresh fruit will require no wrapping.
  - Drinks can be carried in plastic reusable bottles or flasks. Fruit juice or squash is healthier than fizzy drinks.
  - If a napkin is required, use cloth rather than paper.
  - Do not re-package items like crisps into small boxes. The wrappers will still be thrown away at home!
4. Contact children to explain the project to them and enlist their co-operation.
  5. During lunch at Bishops Wood, collect all the waste wrapping material in one bucket. Food scraps including orange peel and banana skins are placed in another bucket. The buckets will be weighed. The food is recycled through the worm compost bin or fed to the birds.
  6. For more information see our web site ([www.bishopswoodcentre.org.uk](http://www.bishopswoodcentre.org.uk)) coming to Bishops Wood section





<i>CHECK LIST – FOR EACH CHILD TO BRING</i>	<b>REMEMBERED!</b>
Morning snack (fruit is ideal)	
Waste Free Packed Lunch	
Waterproof Clothing	
Warm Jumpers	
Wellington Boots or suitable sturdy footwear for woods and fields	
Old clothing suitable for getting grubby in	
Sun hats and sun cream when appropriate	

<i>CHECK LIST – FOR TEACHER TO BRING</i>	<b>REMEMBERED!</b>
First Aid Kit, sick bucket, bags for use on coach	
List of adult and children's names and school phone number	
Name labels for children	
Name labels for adults	
Spare set of children's clothes in case of accident	
School camera or 35mm film	

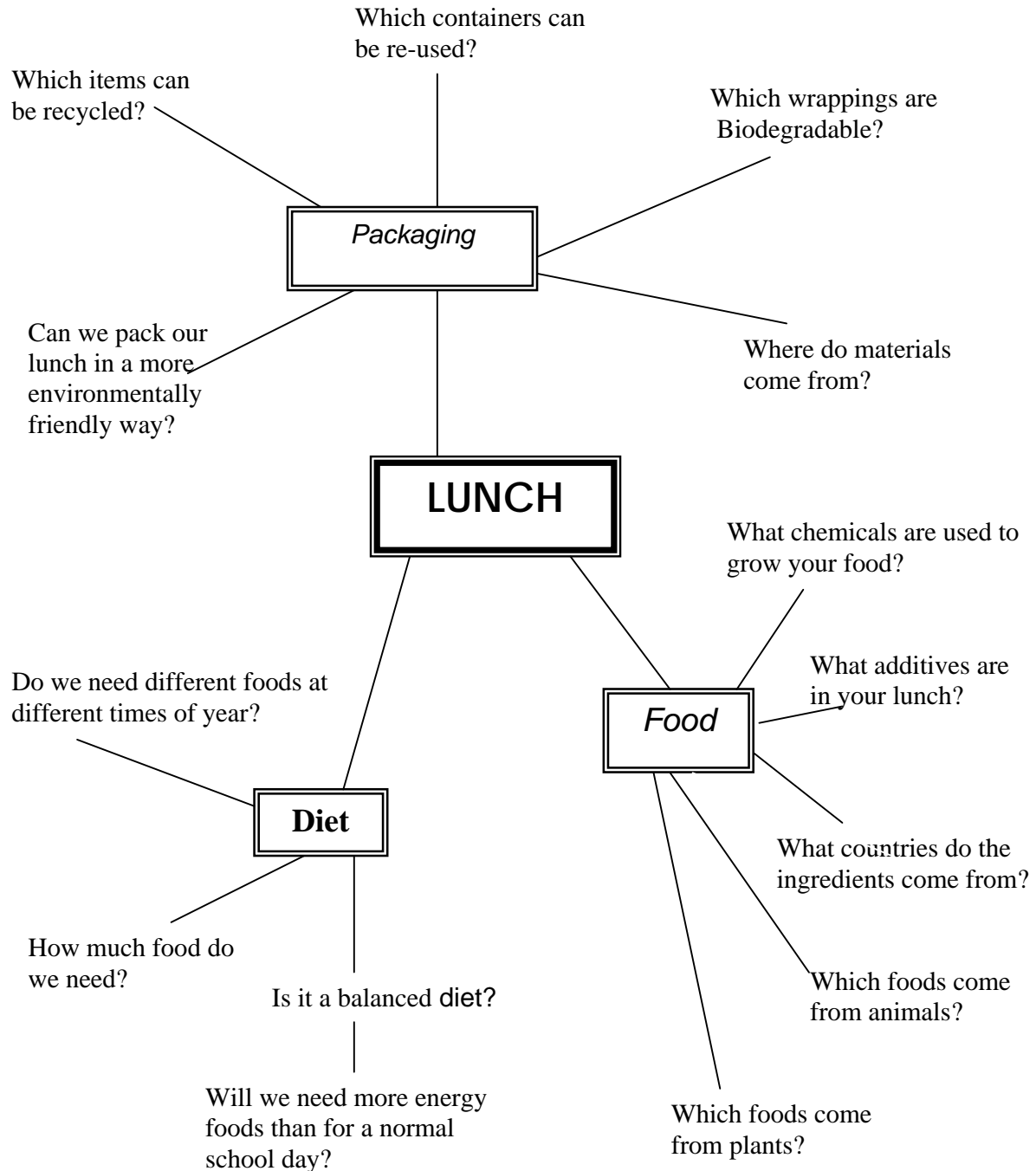


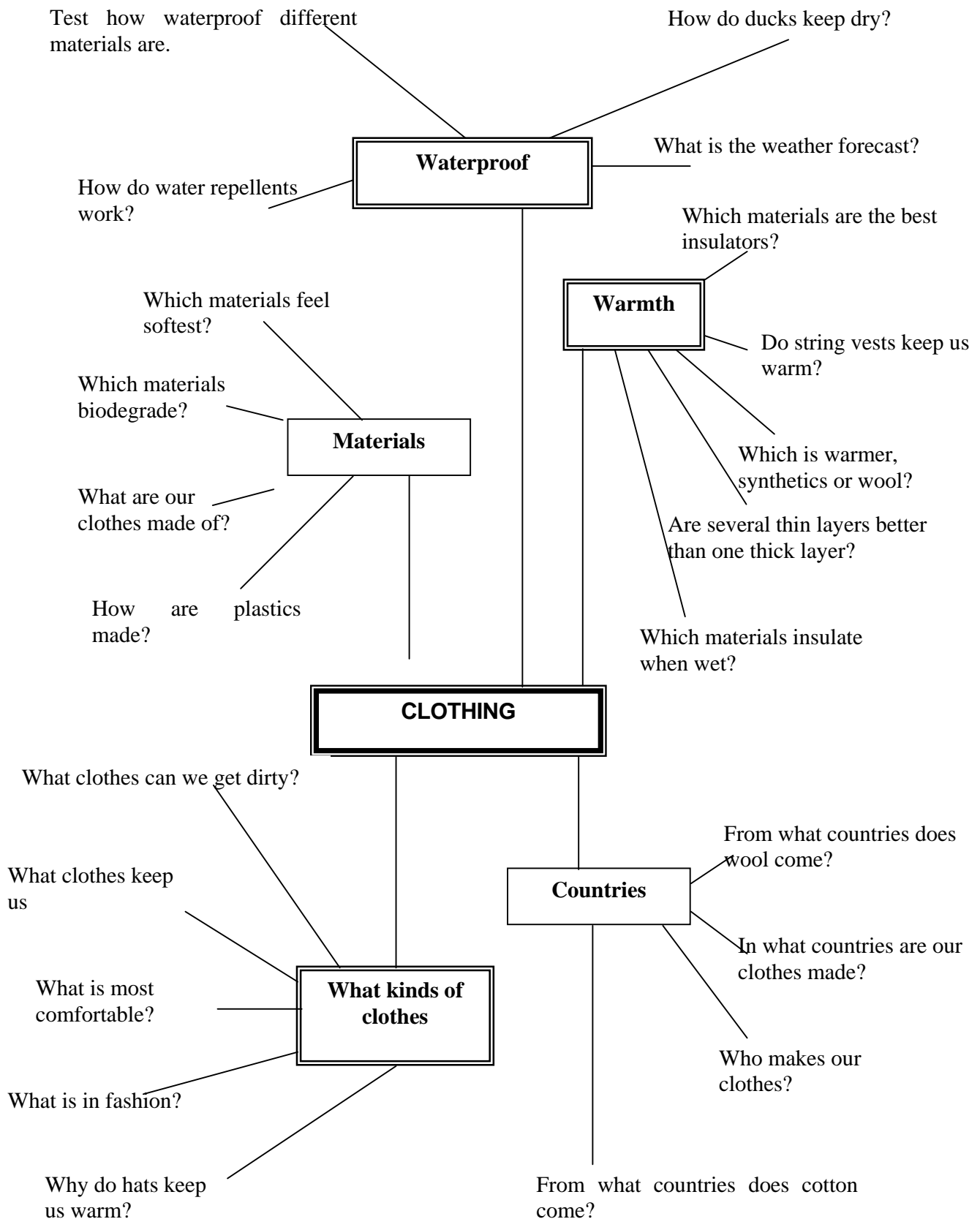
## Involving your students in preparing for their visit

Youngsters will get more from their visit if they have carried out some preparatory work in connection with whichever topic or programme which they are to follow.

There are also valuable educational opportunities in involving them in planning for the visit itself. There are in particular many environmental implications in a day visit.

### The packed lunch





\*Biodegrade – break down and return the basic materials to be re-used by nature when we have finished with them.

What is the connection with the ancient Forest of Feckenham?

St Augustine and the Mitre Oak?

What are the forests used for?

## HISTORY

How did Bishops Wood get its name?

How did man use woodland in the past?

What connection is there between Hartlebury Castle and Bishops Wood?

How far is it?

Where is Bishops Wood?

What route will you take?

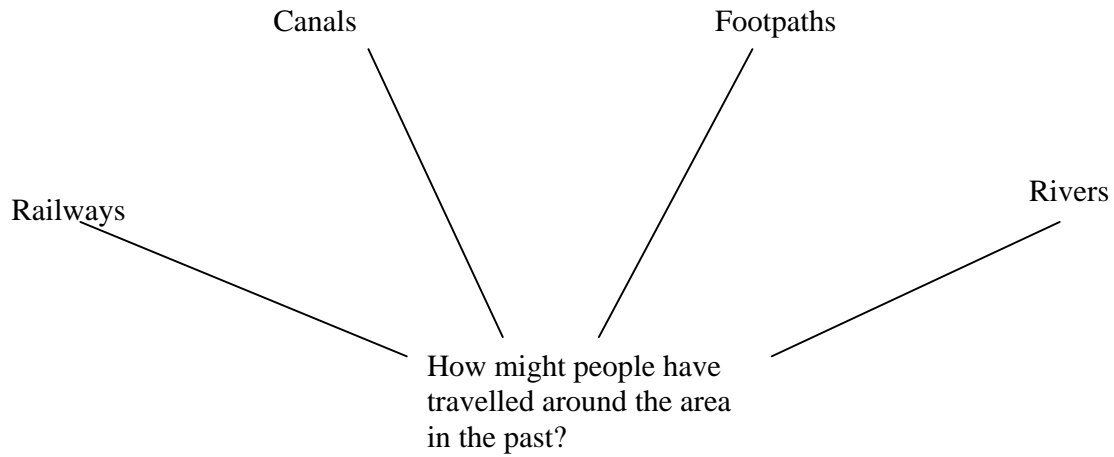
## MAPS

What is the area of the wood?

What area of the map is covered with woodland?

Compare with old maps?

How much Woodland has been lost?



**TRANSPORT**

How much fuel will coach or mini bus use?

How much fuel would it take to transport the whole class by car?

a) 4 to a car?

b) 2 to a car?

c) 1 to a car?

Where does the fuel come from?

How was it made?

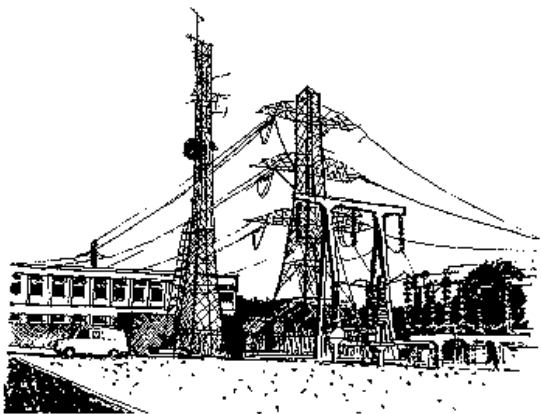
What pollution may result?

# The Sub-Station

After the end of the First World War this country's appetite for electric power developed rapidly. To help meet this growing demand in the West Midlands, the Shropshire, Worcestershire and Staffordshire Electric Power Company commissioned a power station at Stourport-on-Severn in 1927, using the river as the source of the cooling water essential to the process of generating electricity.

Power from that station (extended in the 1930s and known then as Stourport A power station) was fed to local distribution points through overhead lines operating at 66,000 and 33,000 volts. Later the station was among those selected for interconnection to the 132,000 volt national grid transmission system, then managed by the Central Electricity Board. Overhead lines operating at 132kV, carried on pylons now familiar to us, were constructed from Stourport to the Black Country and the outskirts of Birmingham and to Worcester. Two separate lines, each carrying a single circuit, were built between Stourport and Worcester, one on either side of the River Severn.

Following the Second World War, the demand for electricity resumed its upward trend and was expected to double over ten years or so. To cope with this growth, new generating stations had to be built and the main transmission and distribution systems extended and reinforced. A second power station (Stourport B) was opened at Stourport in 1950 and connected into the existing 132kV and 66kV networks. In 1959 the western 132kV link between Stourport and Worcester was split at Hallow and the resulting two circuits were extended to Hereford so that the demand in that area could be supplied from the stations at both Worcester and Stourport. Meanwhile, a completely new primary transmission grid, operating at 275,000 volts, was superimposed countrywide upon the original 132kV grid. As part of this, a ring of overhead lines carrying two circuits was built to encircle Birmingham and the Black Country. Bishops Wood sub-station is part of this 275kV ring connecting major sub-stations at Penn, near Wolverhampton, Feckenham, near Redditch and Kitwell, near Birmingham. Later, yet another transmission network was established to transfer power at 400,000 volts between several major sub-stations in the country.



## **TRANSMISSION SUB-STATION**

*The function of the sub-station is to transform high voltage power (275,000 volts) fed in from power stations to a lower voltage (132,000 volts) and distribute it out via cables and overhead lines to Midlands Electricity in neighbouring towns. To carry this out, circuit breakers (switches) and other ancillary plant are required.*

To meet the growth of electricity demand, the former Central Electricity Generating Board planned a large new sub-station, Bishops Wood, at which power could be drawn from the 275,000-volt circuit of the West Midland ring, transformed down to 132,000 volts and injected into the network centred on Stourport. This was done by connecting the existing 132kV lines to the new substation. In addition, two other lines were needed to carry power from the substation to areas in which the supply of electricity was either becoming seriously inadequate or was expected to require reinforcement by 1970. The first of these lines were connected to another new, smaller sub-station at Ludlow, built to serve that town and its surroundings. This line operated initially at 132,000 volts but was so constructed that, should the need arise, it could be easily modified to carry power at 275kV. The second line, operating at 132,000 volts, connected Bishops Wood with smaller sub-stations at Warndon and Timberdine, east and south of the City of Worcester, and at Malvern, so that supplies to the areas served from these focal points could eventually be reinforced.

The electrical plant at Bishops Wood comprises the 275kV side of the sub-station, supplied from the West Midlands ring and equipped with circuit breakers and isolators for controlling the incoming and outgoing feeders. Its equipment includes four circuit breakers, each weighing about 60 tonnes which can interrupt the flow of electricity with blasts of highly compressed air and so allow for operational flexibility. In 1990, a compensating plant was installed and commissioned at Bishops Wood sub-station to improve the efficiency of power flow.

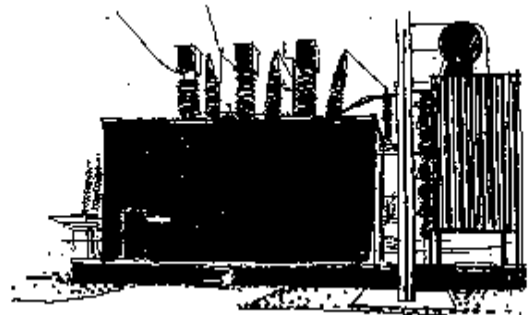
## Transformers

Linking with the 132kV side of the sub-station, from which the electricity is distributed, are three main transformers each weighing about 150 tonnes and each capable of supplying, for example, 240,000 one-bar electric fires. The transformers are housed in brick and concrete buildings to diminish noise. Provision has been made for the future addition of a fourth transformer, should it be required.

### TRANSFORMER

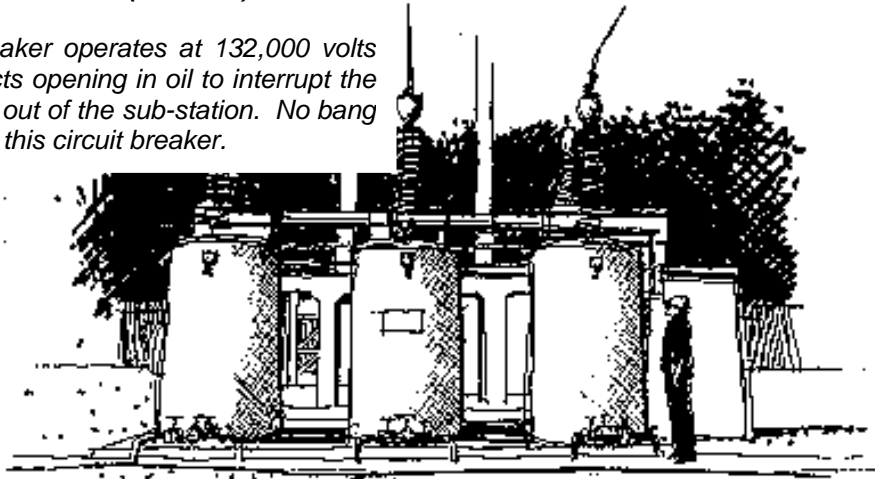
*The transformer reduces the voltage from 275,000 volts to 132,000 volts. Similarly, it can also increase the voltage from 132,000 volts to 275,000 volts. The heat generated by the transformer is controlled by circulating oil through the fan-cooled radiators. The brick housing around the tank is to limit the emission of noise.*

*NOTE: A single bar electric fire consumes 1 kW (kilowatt) of power.*



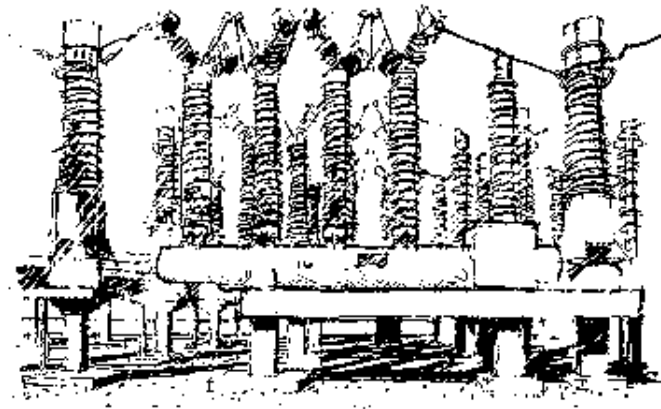
### **OIL CIRCUIT BREAKER (SWITCH)**

*The circuit breaker operates at 132,000 volts with the contacts opening in oil to interrupt the current flowing out of the sub-station. No bang is emitted from this circuit breaker.*



### **Circuit Breakers**

The 132kV side of the sub-station, unlike the 275kV side has a circuit breaker for each circuit bringing power into or distributing it from the site. The circuit-breakers control the supply to Worcester, Hereford, Stourport, Ludlow, Droitwich, Timberdine and Malvern and provision has been made for extensions as and when the need arises.



### **AIR BLAST CIRCUIT BREAKER (SWITCH)**

*The circuit breaker operates at 275,000 volts and opens with the assistance of compressed air to interrupt the flow of electric current. The bang emitted when the circuit breaker opens is due to pressurised air being released to atmosphere.*

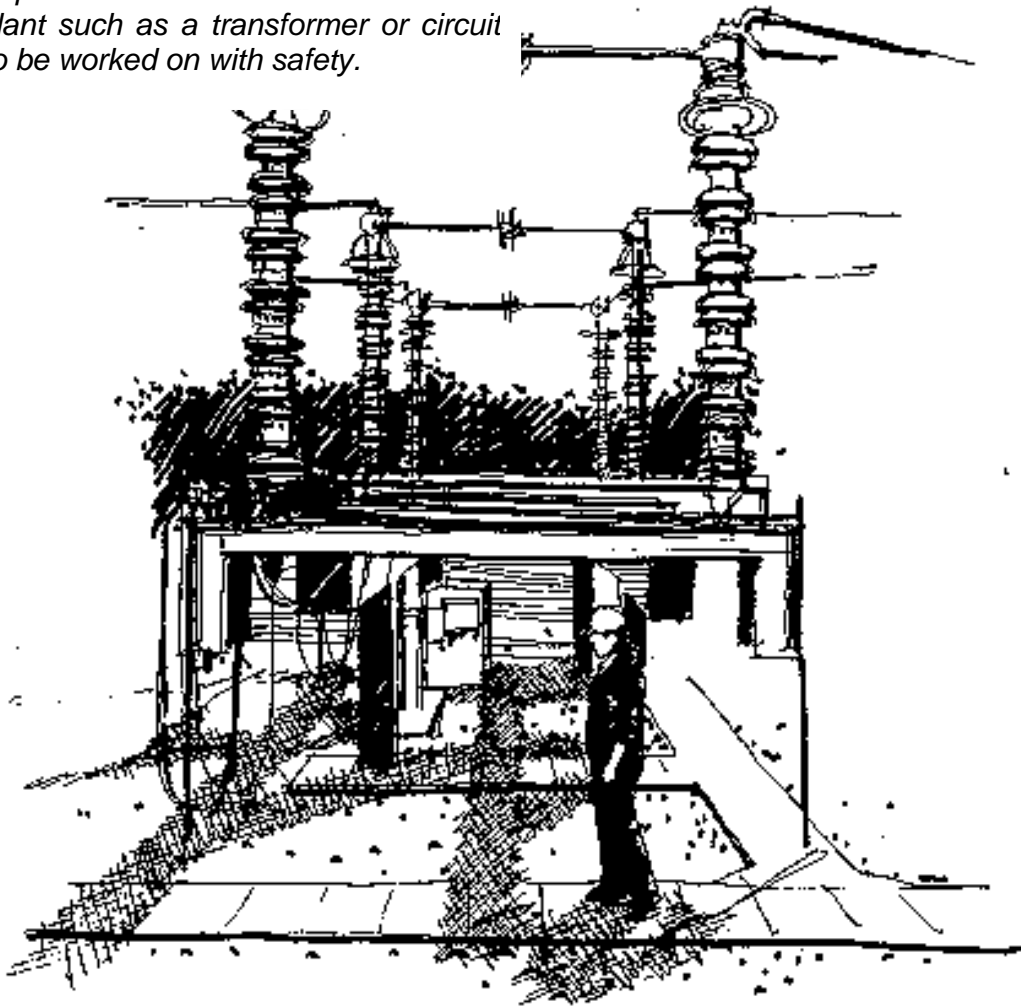
### **Control**

The double-storey building houses the control system from which the engineer can operate the switching station. Instruments and protection equipment indicate whether switches are open or closed as well as detecting faults on the lines and cables connected to the sub-station. Should a potentially serious fault develop, the equipment is automatically isolated in a fraction of a second and a comprehensive alarm system informs the operator where a fault has occurred.

A second single-storey building, placed in the centre of the operational area, houses a diesel generator to provide an emergency supply of electricity for sub-station equipment.

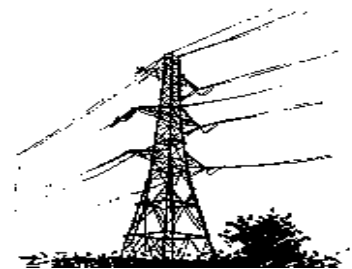
## Isolator

*The isolator operates at 275,000 volts but does not interrupt electric current when opening. It is opened after the circuit breaker has interrupted the electric current to allow an item of plant such as a transformer or circuit breaker to be worked on with safety.*



## Tower

The steel tower (pylon) next to the sub-station is a Double Circuit type. The two 275,000 volt circuits terminate before dropping down on to the concrete landing structure to enter the sub-station. One circuit is from Penn sub-station, near Wolverhampton and one from Kitwell sub-station, near Halesowen.



Linesmen carry out maintenance on these pylons when the electricity is switched off and the circuit is dead. A different circuit identification plate is fixed to each of the legs and used as a safety precaution reference when the circuit is made dead.

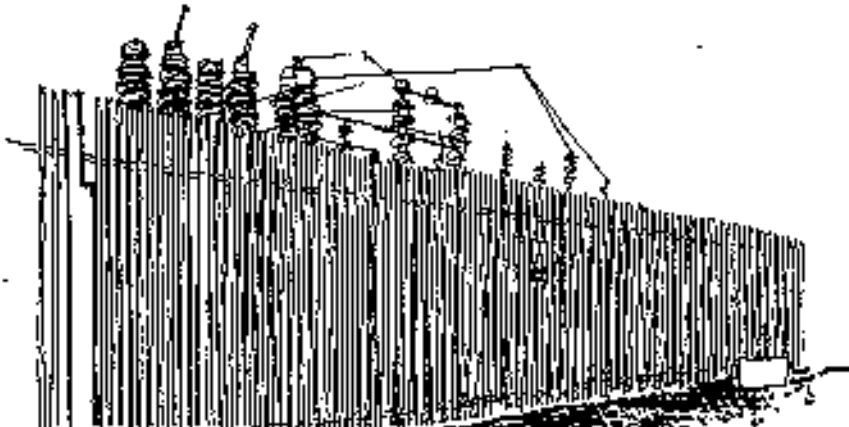
## Tower and Concrete Support

At the other end of the sub-station are two 275,000-volt circuits from Kitwell sub-station, near Halesowen and Feckenham sub-station, near Redditch. These two circuits diverge onto two concrete supports before entering the sub-station. These are so placed to lift the conductors on the long span to the sub-station. This is necessary to avoid cutting down too many trees to provide safe clearance from 'live' conductors.



## Fence

The steel-paling fence which surrounds the 'live' high-voltage electrical plant in the sub-station is 2.5 metres high. It is necessary to prevent unauthorised people from interfering with equipment which could cause a fatal accident.

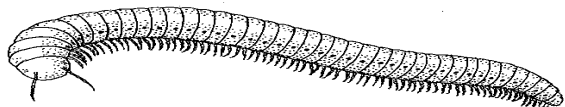




# Bishops Wood Centre Pupil Evaluation Form

**Teacher:** If possible, please divide the class into small groups to complete this questionnaire and only give guidance when necessary so we know how the children really feel. Thank you.

**Class:** Please answer the questions honestly. We need truthful answers so we can make your visits even better!



## About your trip

Name of school: .....

Class : .....




Programme (if known): .....

Date of visit: .....

Who is filling in this form? .....

Number in group: .....

Your ages: .....

1	Did you enjoy your day? (tick one box)			
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In what ways? .....			
	.....			

2	Was your programme leader helpful and did they make your day fun?
	Yes <input type="checkbox"/> No <input type="checkbox"/>
	How? .....
	.....

3	Would you like to visit Bishops Wood again?
	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Why? .....
	.....

PTO

4 What did you notice of the ways in which we are trying to:

a) Save energy?  
.....  
.....

b) Save water?  
.....  
.....

c) Save or recycle materials?  
.....  
.....

5 Can you suggest any other ways in which we could be saving these things?  
.....  
.....

6 One of our sponsors is NG who own the site and the substation near the centre. Do you think it is a good idea for big companies to help pay for places like Bishops Wood which schools can visit?

Yes  No

7 What else do you remember about your visit (the programme, the weather, the toilets, the building, anything else)?  
.....

8 Was there anything you did **not** like/ **not** enjoy and if so, why?  
.....  
.....

9 Write one thing which you learnt at Bishops Wood which will help you back in school.  
.....  
.....



**Thank you !!**

# Bishops Wood Centre.

## Post-visit Evaluation Form

We continue to strive to improve our service to schools. Please complete this form at the end of your visit and hand it in to the education centre or post to the Head of Centre at Bishops Wood in the envelope provided.

Name of school: .....

Class : .....

Programme .....

Date of visit: .....

1 Did you judge your visit to represent:

Good value for money                       fair value                       poor value

If no please comment .....

2 What did you hope your group would gain from the visit .....

a. ....

b. Did the visit achieve your objectives? More than expected  Fully  Mainly  Partly  No

3 How would you rate the programme leader's welcome?

very welcoming            1     2     3     4     5     very unwelcoming

4 How would you rate the programme leaders rapport with your group?

Excellent                    1     2     3     4     5     poor

Do you have any comments on questions 3 and 4 above ? .....

.....

5 How would you rate the facilities available for your group?

Excellent                    1     2     3     4     5     poor

Comments .....

.....

6 How would you rate the attitude of other centre staff who assisted during your visit?

Excellent                    1     2     3     4     5     poor                    N/A

Comments .....

.....

7 Which aspects of the visit do you think were most useful to your group?

.....

.....

8 Which aspects of the visit, if any, do you think your group found least useful ?

.....

.....

PTO

9 What changes, if any, would improve your next visit?

.....  
.....

10 Please rate the following components of your visit:

Pre-visit information  
Excellent 1  2  3  4  5  poor

Briefing or introduction at start of visit  
Excellent 1  2  3  4  5  poor

Activities content  
Excellent 1  2  3  4  5  poor

Programme leader's organisation of class  
Excellent 1  2  3  4  5  poor

Appropriateness of programme for ages and abilities of class  
Excellent 1  2  3  4  5  poor

11 What additional material, if any, would help in preparation for your visit?

.....

12 What additional material, if any, would help you follow up the visit?

.....

13 In what ways do you think the visit will benefit the **future** learning and achievement of your pupils?

.....

14 Did you or your pupils visit our website before your visit?

.....

15 One of our partners who help fund the centre is National Grid who own the substation on site. Do you have a view on business and industry sponsoring centres such as Bishops Wood?

.....

**Thank you very much for taking the time to complete this evaluation. Please also indicate on the attached form how your visit contributed to the learning objectives that you identified beforehand.**

(Teacher evaluation V2)



Investing in the future  
Bishops Wood is part of National Grid's network of environmental education centres based on substation sites. The centres are run in partnership with environmental organisations, local authorities and others.



# What do you want your pupils to get from their visit to Bishops Wood?

(Please return this completed form to Bishops Wood Centre **at least 2 weeks before your visit.**)

Name of School \_\_\_\_\_

Name of teacher \_\_\_\_\_

Programme \_\_\_\_\_

Date of Visit \_\_\_\_\_

Each of our programmes has been carefully planned with a range of hands on activities and a balance of different learning styles. However each class (and pupil) is different and your visit will be more productive if you can let us know what you hope your pupils will gain from their experience at Bishops Wood. We can then tailor the programme and activities to closely meet your needs and those of your pupils.

1. What do you expect to have covered on the topic/area of study before your visit?

\_\_\_\_\_

2. What preparations will you ask your class to carry out before the visit? (See suggestions in pre-visit information that you will have been sent.)

\_\_\_\_\_

3. Will you ask your pupils to look at the Bishops Wood website before your visit?

\_\_\_\_\_

4. It will help us to plan the activities and their locations if you can note if any of your pupils have any specific learning needs or if any pupils (or adults) have any mobility or other physical issues.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

PTO

5. You will no doubt have a large number of learning objectives in mind, ranging from gaining knowledge and skills and acquiring and developing social skills and values to using or improving motor-skills. Please list those objectives that are most important to you in the left hand column of the table below. The other (grey) columns are to complete during or at the end of your visit.

Name of School \_\_\_\_\_

Name of Teacher \_\_\_\_\_

Programme \_\_\_\_\_

Date of Visit \_\_\_\_\_

Learning Objectives in order of priority (list at least 3)	Exceeded expectations	Fully achieved	Mainly Achieved	Partly Achieved	Not achieved
1.					
2.					
3.					
4.					
5.					

You may also wish to comment on the impact of the visit on individual pupils, perhaps for whom you had particular learning objectives in mind.

Please return to Bishops Wood Centre, Crossway Green, Stourport-on-Severn, Worcs DY13 9SE **at least 2 weeks before your visit.** Thank you.