



## Objectives

- 1) To become familiar with the level of farm accidents and the importance of safe work practices on the farm.
  - a) To be able to identify health and safety hazards and understand the risks associated with farming.
  - b) To be able to identify the electrical risks, including those associated with overhead electricity wires and underground cables, and to be able to specify the necessary safety improvement measures for the farm.
- 2) To conduct a risk assessment in advance of a farm visit considering the hazards, risks, preventions and considerations in relation to machinery, electricity, working with animals, chemicals, using equipment, etc.

## Introduction

Introduce students to the topic of farm safety and establish its context in the Agricultural Science curriculum. Inform students that they will be doing a risk assessment for their upcoming farm visit.

## Development

- Explore students' knowledge of farm safety through class discussion. Ask them to name as many safety considerations as they can e.g. machinery, electricity, roofs, slurry gas, handling animals. Write each of these considerations on the board.
- Elicit from the students their understanding of the difference between a hazard and a risk. Write the definitions on the board and ask students to record in their notes.
  - **A hazard is a potential source of harm or adverse health effect on a person or persons.**
  - **A risk is the likelihood that a person may be harmed or suffer adverse health effects if exposed to a hazard.**
- Introduce students to the concept of risk assessment. Ask them to think of any day-to-day activities where they assess risks before taking action e.g. crossing the road, lifting heavy objects.
- Ask students to complete Question 1- Risk Assessment (Farm Safety Activity Sheet), (1) naming five farm hazards, including one involving electricity, (2) assessing their associated risks and (3) thinking of ways to prevent harm. Discuss the results in pairs. *\*Refer to Farm Safety Teacher Resource Sheet for more information.*
- Ask students to complete Question 2 (Farm Safety Activity Sheet), identifying specific electrical risks and safety measures on the farm. *\*Refer to Farm Safety Teacher Resource Sheet for more information.*

## Conclusion

Discuss the upcoming class farm visit and associated hazards.

## Extension Activity:

National Safety Challenge – ask students to think about how they can innovate safety in the agricultural sector and how they could implement that innovation. Entries and ideas will be accepted in any format: written (up to 300 words), visual (e.g. photography, poster, design, sketch) or digital (e.g. audio, video). Visit [www.esbnetworks.ie/education](http://www.esbnetworks.ie/education) for more information on entering.

## Resources

- Farm Safety Activity Sheet
- Farm Safety Teacher Resource Sheet
- ESB Networks website, including the publication: **Farm Safely with Electricity**

## Key Vocabulary

- Risk
- Hazard
- Harm
- Working conditions
- Electricity
- Voltage
- Machinery



## 1. Risk Assessment

Based on your knowledge of farm safety, name *five* hazards on a farm, assess the *risks* associated with each, and think of a way you can prevent each from causing harm.

HAZARDS	RISKS	HOW CAN I PREVENT HARM?



ESB NETWORKS

National Safety  
CHALLENGE

## Farm Safety Activity Sheet



### 2. Electrical Risks

Look at the following images and identify the electrical hazards. Assess the risk and describe how each risk can be addressed so that the potential for harm is removed.

#### HAZARD SITUATION / SAFETY MEASURES:



---

---

---



---

---

---



---

---

---



---

---

---

PROUDLY SUPPORTED BY:





ESB NETWORKS

National Safety  
CHALLENGE

## Farm Safety Activity Sheet



### 2. Electrical Risks (continued)

Look at the following images and identify the electrical hazards. Assess the risk and describe how each risk can be addressed so that the potential for harm is removed.

#### HAZARD SITUATION / SAFETY MEASURES:



---

---

---



---

---

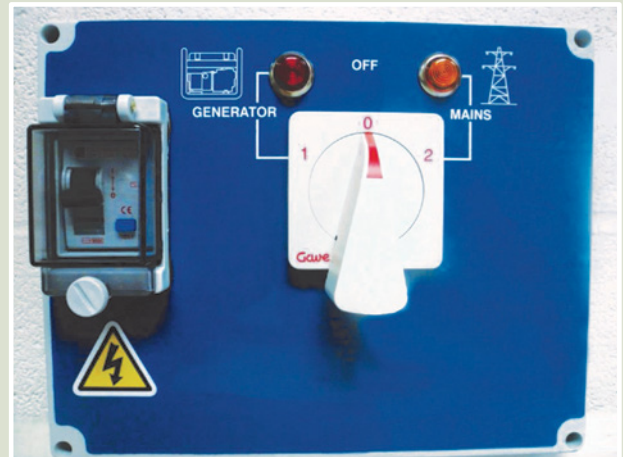
---



---

---

---



---

---

---

PROUDLY SUPPORTED BY:





## Sample Risk Assessment

Ensure there is safety signage on display at key access points to the farm.

ACTIVITY	HAZARDS	RISK LEVEL (High, Medium, Low)	ACTION Risk Reduction Measures
<b>Walking on the Farm</b>	Injury from slipping and falling; wet ground	Low	Students & teachers to wear suitable clothing and footwear. Teachers to maintain group discipline. Walking routes selected as fit for purpose.
	Injury from barbed wire	Medium	Brief visiting parties; all fences crossed using stiles; stiles maintained on a regular basis.
	Injury from electric fences	High	Ensure the fencer unit is fitted in accordance with the wiring rules as specified by Safe Electric. Ensure students are made aware of the presence and location of electric fences and that they stay clear of electric fences.
	Animal contact/ proximity	Medium	Where students are permitted to touch livestock, use only quiet, predictable animals and instruct children beforehand about safe handling of livestock.
	Infection- bacteria contact	Medium	Wash hands thoroughly after contact with livestock.
	Chemical contact	Medium	Keep all chemicals securely locked away from children.
	Injury from electricity	High	Look out for and do not approach or touch damaged or fallen electricity wires and notify ESB Networks. Be careful that tall machinery does not pass under overhead electricity wires. If you are digging, check with ESB Networks to ensure there are no underground cables. Ensure all electrical fittings are IP rated and fit for use.



**National Safety**  
CHALLENGE

# Farm Safety Teacher Resource Sheet



## Sample Risk Assessment (continued)

ACTIVITY	HAZARDS	RISK LEVEL (High, Medium, Low)	ACTION Risk Reduction Measures
<b>Farm Operations</b>	Injury from working farm machinery	High	Do not allow students to go near working machinery. Ensure adequate supervision. Look out for and avoid overhead wires.
	Injury from stationary farm machinery	Medium	Do not allow children near to stationary farm machinery. Ensure adequate supervision. Look out for and avoid overhead wires.
	Injury from unstable buildings/unsecured doors/gates/ladders	High	Fence off areas with unstable buildings. Secure large doors, gates and ladders.
	Injury from tools	Medium	When working with tools, give proper instruction, check understanding and supervise activity carefully.
<b>Specific Locations</b>	Steep slopes	Medium	Ensure students do not run on slopes, instruct them how to proceed safely and avoid steep slopes when wet or slippery.
	Machinery / Animal shed	Medium	Ensure that all electrical equipment, including leads, wiring, sockets and plug tops are safe to use and that the installation is protected by an RCD.
	Bale stacks	High	Ensure all are maintained and secure. Ensure bales are not stacked or stored under or close to overhead wires.
<b>Weather Conditions</b>	(Depending on time of year)	Medium	Plan activities appropriate to the season.
		Medium	Check for damaged or fallen electricity poles and wires after storm weather and strong winds and notify ESB Networks.

PROUDLY SUPPORTED BY:





National Safety  
CHALLENGE

# Farm Safety Teacher Resource Sheet



## Electrical Risks

Contact with overhead wires causes serious and even fatal injuries. Accidents occur through failure to notice the overhead wires and to take sensible precautions.

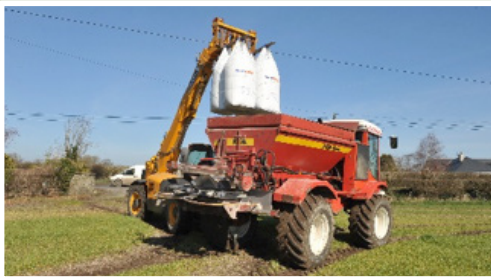
### HAZARD SITUATION / SAFETY MEASURES:



- NEVER store items underneath electricity wires. The dangers are that machinery will be used to handle these items and be too close to the wires.
- REMEMBER electricity can jump gaps.
- NEVER store or stack bales under or close to overhead wires.



- DO take extreme care when moving objects or loads near overhead wires. In general, keep long items in a horizontal position when moving them.



- DO be aware of the danger of making any contact - or even near contact - with overhead wires.
- DON'T move tall machinery or high loads under or in the vicinity of overhead wires.
- Carry out activity a safe distance from the overhead wires (at least 10 metres).
- Know the location of overhead electricity wires and include them on the Farm Safety Statement.
- Inform machinery drivers/operators of the presence of wires.
- Provide safety cab stickers to users of tall machinery.



- NEVER approach or handle fallen electricity wires.
- Electricity wires are always live.
- Keep your distance and keep everyone else clear.
- Contact ESB Networks immediately.
- NEVER touch anything that could conduct electricity e.g. gates, fence wire, unless you are sure it is safe.

PROUDLY SUPPORTED BY:





National Safety  
CHALLENGE

# Farm Safety Teacher Resource Sheet



## Electrical Risks (continued)

Contact with overhead wires causes serious and even fatal injuries. Accidents occur through failure to notice the overhead wires and to take sensible precautions.

### HAZARD SITUATION / SAFETY MEASURES:



- Do cover electrics and ensure there is a fire extinguisher in the hay shed, due to increased fire risk.
- Never store flammable materials near electrical equipment or directly beneath light bulbs. Remember electricity generates heat.



- Know the location of overhead electricity wires.
- There must always be at least 3 metres vertical clearance from the chute to the wires.
- Contact ESB Networks if you think there is a problem, so that a safe solution can be provided (emergency contact no. is 1850 372 999).
- If accidental contact occurs, stay in the cab, keep everyone clear and contact ESB Networks.



- Make sure that there is no risk of coming near to electricity wires when felling trees or using a hedge cutter.
- Contact ESB Networks for advice in advance.
- REMEMBER electricity can jump gaps.
- When cutting timber around electricity poles, clear around the pole and stay by hand.
- Check the max working height of the boom and saw.
- Carry out the work so that if something goes wrong the timber will fall away from the electricity wires.
- Never carry out hedgcutting near overhead electricity wires.
- Never put yourself in a position where the machine or any tool being used can come near electricity wires.



- Special rules apply to the installation of standby generators which your registered electrical contractor will be familiar with.**
- Always ensure a proper change-over switch is installed at the main distribution board.
  - Always use a registered electrical contractor.
  - Always notify ESB Networks of the presence of a standby generator.
  - Never use a temporary generator without a change-over switch.
  - Never plug a portable generator into a socket.
  - Never use more than one extension reel.

PROUDLY SUPPORTED BY:

