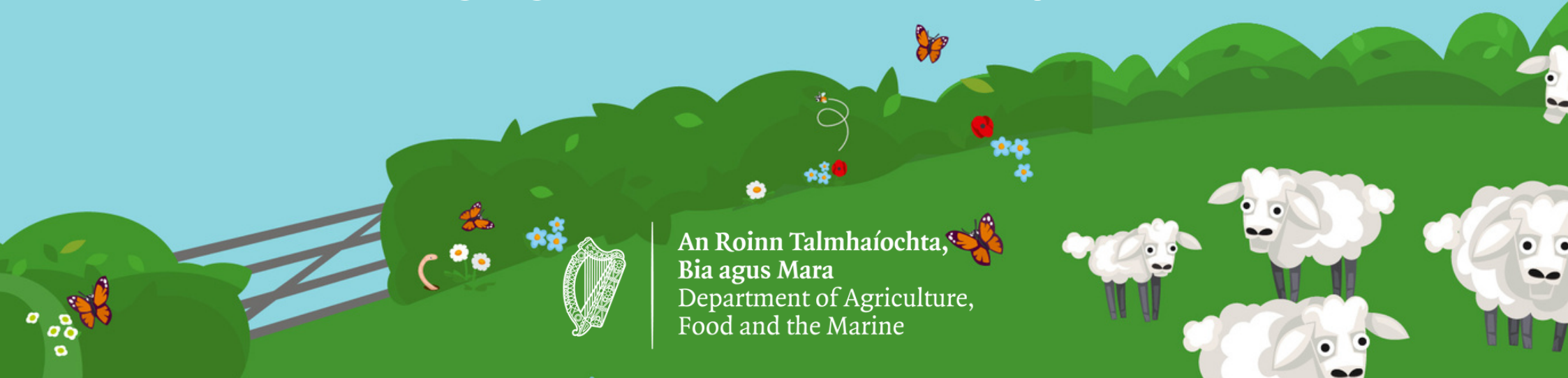




AgriKids Farm Safety Lessons Third and Fourth Classes

Theme 2: Tractor & Machinery Safety

Engage, Educate & Empower

The bottom of the slide features a colorful illustration of a farm scene. In the foreground, there are several white sheep with black faces and legs. There are also several orange and black butterflies. In the background, there are green hills and a wooden fence. A harp is visible on the left side of the illustration.

An Roinn Talmhaíochta,
Bia agus Mara
Department of Agriculture,
Food and the Marine

Learning Outcomes Theme 2

Learn about the various types of farm machinery and equipment that are commonly used on a farm and how and why a farmer must be responsible and safe when using tractors, quad bikes and Power Take Off, (P.T.O.), equipment. We also learn how we can help remind farmers by learning key safety tips which can be shared.

This topic covers:

- 1.What kind of machines do farmers use**
- 2. Where do they use them**
- 3. Do you know the tractor rules and the tractor blind spots**
- 4. Learn the tractor safety checklist**
- 5. What is S.T.O.P.I.T?**
- 6. Quad bikes**
- 7. What are PTOs?**

Theme 2

Tractor & Machinery Safety

Safety Signs:



What farm activities take place in each season?

Spring
lambing calving
sowing ploughing
crops soil



Summer
hay silage
making baling



Autumn
harvesting
crops



Winter
ploughing sowing
putting animals
into sheds



Theme 2

Tractor & Machinery Safety

Safety Signs:



Machinery

**Can you name different types of farm machinery
used on a farm?**



Theme 2

Tractor & Machinery Safety

Safety Signs:



Machinery

**Do you know what each piece of named machinery
does on the farm ?**



Theme 2

Tractor & Machinery Safety

Safety Signs:



Machinery

**Do you know where on the farm they may be used
and during what season?**



Theme 2

Tractor & Machinery Safety

Safety Signs:



Vehicles (some examples below)



These are driven
by the farmer.

Machinery (some examples below)



These are powered or
pulled by a tractor.

We will learn lots more about each of these in
the next few slides.

Theme 2

Tractor & Machinery Safety

Safety Signs:



Tractors - Vehicles



There are lots of different makes and models of tractors.

They are used on farms to pull or work equipment such as ploughs, harrows, slurry agitators, etc.

Theme 2

Tractor & Machinery Safety

Safety Signs:



Combine Harvester - Vehicles



**There are lots of
different makes and
models of combine
harvesters.**

**It's job is to cut and
harvest grain and
cereal crops.**

Theme 2

Tractor & Machinery Safety

Safety Signs:



Quad Bike - Vehicles



**There are lots of
different makes and
models of quad bikes**

**It is a 4 wheel motorised
bike used to drive across
fields. They are only
suitable for passengers
and safety equipment
must be worn**

Theme 2

Tractor & Machinery Safety

Safety Signs:



Gators - Vehicles



There are lots of different makes and models of gators

Gators are an off road vehicle used on farms and many industries where all-terrain ability and versatility is required. designed to help property owners haul material and travel across terrain ranging from smooth, to very rough.

Theme 2

Tractor & Machinery Safety

Safety Signs:



Plough - Machinery



**Digs up the earth
to loosen the soil
or before the
farmer sows the
next crop in their
field.**

Theme 2

Tractor & Machinery Safety

Safety Signs:



Trailers - Machinery



Normally pulled by a tractor and used to carry a variety of products around the farm, such as grain and food crops.

Theme 2

Tractor & Machinery Safety

Safety Signs:



Slurry Agitator – Machinery



Normally powered by a tractor. A slurry agitator is used to mix (agitate) slurry which is kept in the slurry tank / pit.

Theme 2

Tractor & Machinery Safety

Safety Signs:



Slurry/Muck Spreader- Machinery



**Normally pulled
by a tractor.
Spreads slurry
across the
farmer's fields.**

Theme 2

Tractor & Machinery Safety

Safety Signs:



Cultivator/tiller- Machinery



Normally pulled by a tractor. Used after ploughing to break down the soil and prepare it for sowing seed.

Theme 2

Tractor & Machinery Safety

Safety Signs:



Topper- Machinery



Used to keep
fields tidy by
cutting weeds and
long grasses,
rushes, etc.

Theme 2

Tractor & Machinery Safety

Safety Signs:



Mowers- Machinery



Cuts grass when making hay, silage, haylage. Can also be used to keep fields tidy.

Theme 2

Tractor & Machinery Safety

Safety Signs:



Sprayers- Machinery



**Sprays fertilisers
or pesticides on
crops to keep
them healthy.**

Theme 2

Tractor & Machinery Safety

Safety Signs:



Diet Feeder – Machinery



A diet feeder weighs, mixes, and shares out animal feed. Mostly used for cattle feeding and in particular dairy cattle.

Theme 2

Tractor & Machinery Safety

Safety Signs:



Hay Turner - Machinery



When grass has been cut, the turner is used to turn the grass so it can dry in the sun and be baled for hay

Theme 2

Tractor & Machinery Safety

Safety Signs:



Baler - Machinery



Used to bale hay
and straw. Bales
can be round,
small rectangle or
larger rectangle.

Theme 2

Tractor & Machinery Safety

Safety Signs:



Sower – Machinery



Used to sow crop
seeds such as
barley, oats and
wheat.

Theme 2

Tractor & Machinery Safety

Safety Signs:



**How many brands of tractors
can you name?**



Theme 2

Tractor & Machinery Safety

Safety Signs:



Some brands are:

John Deere

New Holland

Massey Ferguson

Deutz

McCormick

Fendt

Claas

Ford

Case

David Brown

Landini

Zetor

Fiat

Valtra

International

Do you know any of
these tractor logos?



MF



C



JD

NH

Theme 2

Tractor & Machinery Safety

Safety Signs:



Why do we measure tractor speed in horse power?



In olden times before mechanised machines, horses were used to 'power' the various tools.

Trailers, ploughs and the earliest combine harvesters were horse drawn.

Theme 2

Tractor & Machinery Safety

Safety Signs:



Why do we measure tractor speed in horse power?



Horses were also used to transport the farmer and their family, farm produce such as milk and eggs and to clear areas of the farm of scrub and overgrowth.

It would be a huge status symbol to own a horse and much of the time neighbouring farms shared their horses. This practice was known as 'Comhar', the Irish for partnership.

Theme 2

Tractor & Machinery Safety

Safety Signs:



Horses are no longer used due to fear of being bitten and animal safety concerns.

Today machinery remains the most common cause of a farming accident.

Theme 2

Tractor & Machinery Safety

Safety Signs:



Tractor Safety – Know the Blind spots



Image taken from teagasc.ie

Visibility can be limited for farmers when sitting high up in tractors, combine harvesters, etc.

NEVER play near a moving tractor or any other type of farm machinery as you may not be visible.

Theme 2

Tractor & Machinery Safety

Safety Signs:



Look at the picture below and note where the blind spots are located.

FRONT



BEHIND:



Theme 2

Tractor & Machinery Safety

Safety Signs:



Why do you think people need to be careful around moving tractors and vehicles?



Can the farmer always see you when they are driving?

Theme 2

Tractor & Machinery Safety

Safety Signs:



Are you old enough?

**Do you know how old you should be to be a
passanger on a tractor?**

Theme 2

Tractor & Machinery Safety

Safety Signs:



Are you old enough?

Under 7 Years: you are not permitted in Ireland to be a passenger in a tractor. (In the UK the minimum age is 13)

7+ years: The age you are permitted in Ireland to be a passenger in a tractor as long as there is a passenger seat and seat belt.

14 years: You may drive a tractor on the farm only and only after completing a safety training course.

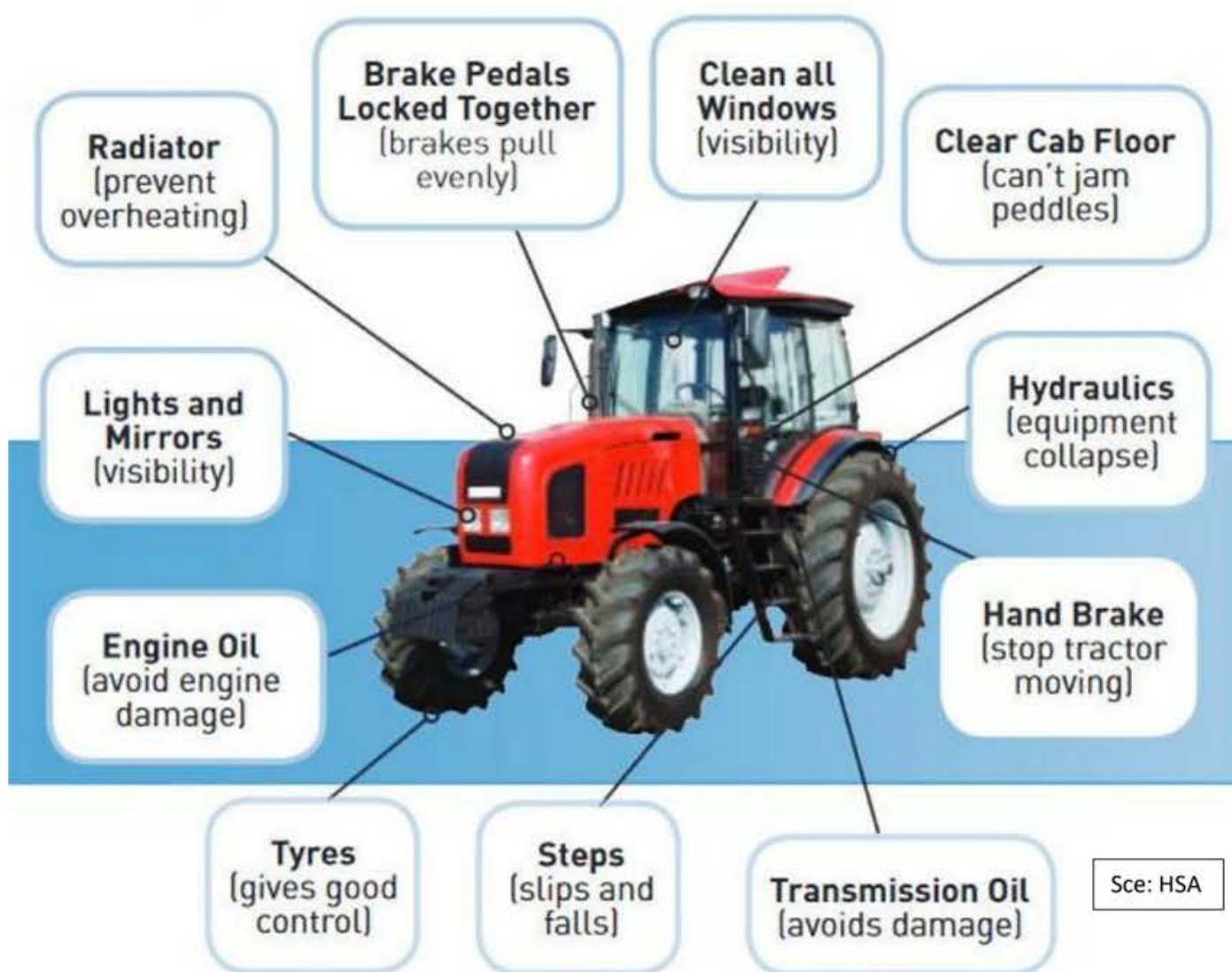
16 years: You may drive a tractor on the road but only after you complete special training and acquire a license.

Theme 2

Tractor & Machinery Safety

Checklist

All farmers should check the following before using their tractor.



Ahead of busy times when they will be relying on their tractors to get the job done, farmers must take extra care of their tractor.

Theme 2

Tractor & Machinery Safety

Safety Signs:



Checklist

What could happen if the farmer does not do these checks regularly?

Prevention and forward planning can help the farmer to do a safer job.



Theme 2

Tractor & Machinery Safety

Safety Signs:



What to wear in a vehicle?



Seat belts – The Safety Zone

Most tractor cabs have Roll Over Protective Systems (ROPS) in place. These ROPS create a 'Safety Zone' inside the tractor cab. By wearing a seat belt farmers and passengers are kept inside the 'Safety Zone' and have protection from being thrown from the tractor if the tractor over turns.

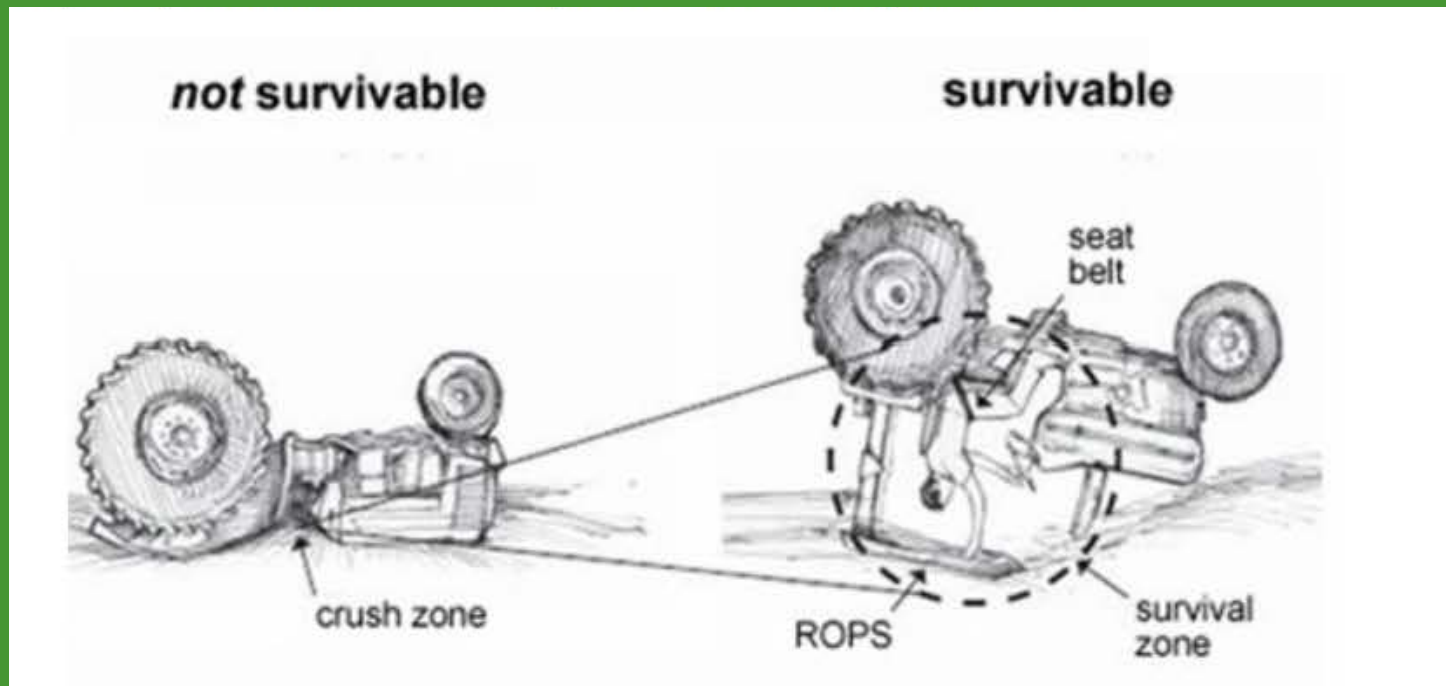
Theme 2

Tractor & Machinery Safety

Safety Signs:



Seatbelt Safety



All passengers should wear a seat belt to prevent them from falling from the tractor.

Theme 2

Tractor & Machinery Safety

Safety Signs:



Tractor Safety



The farmer should also wear a hi vis vest so he/she can be seen while getting in and out of the tractor.

Theme 2

Tractor & Machinery Safety

Safety Signs:



How to stop a tractor safely

After a long day of hard work on the tractor, the farmer needs to know how to stop the tractor safely.



‘Safe Stop’

S.T.O.P.I.T

Theme 2

Tractor & Machinery Safety

Safety Signs:



How to stop a tractor safely



S Stop the tractor in a Safe place. Farmers should park the tractor facing forward. This means they don't have to reverse it out when using it again.



P

Put the bucket or fork down.



T

Take up the hand break and prevent the tractor from rolling



I

Turn off the Ignition.



O

Take the tractor Out of gear and feet Off the pedals



T

Take out the keys. Leaving keys in the tractor means the farmers is at risk of it being stolen or driven by someone with no permission to do so.

Images NFU

Theme 2

Tractor & Machinery Safety



Quad Bikes

A quad bike is also known as an All-Terrain Vehicle (ATV). Farmers use quads on their farms when herding animals, checking stock in fields, transporting food and equipment and for general transport.

Theme 2

Tractor & Machinery Safety

Remember your ATVs!

- A** – Age: Are you old enough to use a quad bike. To use quad bikes typical to farms, you must be 16+.
- T** – Training: Before using a quad, all farmers should be trained in how to operate the vehicle.
- V** – Visual Inspections. Like their tractor, farmers should check their quad is not damaged, has oil, lights, good tyres and fuel before using.
- S** – Safety equipment. Farmers musts make sure they are wearing the correct clothing and PPE (Personal Protective Equipment).

Theme 2

Tractor & Machinery Safety

What to wear on a quad bike

Discuss with your class:

Do you know what PPE (Personal Protective Equipment) should be worn on a quad bike?

Theme 2

Tractor & Machinery Safety



Head

Head protection is very important on a quad bike. You could wear a motorcycle helmet or a horse riding helmet.

Why do you think we need to protect our head?

Theme 2

Tractor & Machinery Safety



Clothes

Clothing which is strong and covers arms and legs. High visibility clothing must be worn on a quad bike.

Why do you think we need to wear this type of clothes?

Why should we not wear shorts or t-shirts?

Theme 2

Tractor & Machinery Safety



Hands

Gloves for protection and to keep hands warm in cold weather & for good control of the ATV.

Why do you think we need to wear gloves on a quad bike?

Theme 2

Tractor & Machinery Safety



Feet

Boots or wellingtons which are strong and have good grips.

**Why do you think we need to wear these on a quad bike?
Why should the shoes have good grip?**

Theme 2

Tractor & Machinery Safety

Eyes



Goggles to protect eyes from insects and branches.

Why do you think we need to wear these on a quad bike?

Theme 2

Tractor & Machinery Safety



REMEMBER:

NO passengers should EVER be on a quad bike.

You can unbalance the quad and cause it to turnover

Theme 2

Tractor & Machinery Safety

Safety Signs:



**Do you know what the
letters PTO stands for?**



Theme 2

Tractor & Machinery Safety

Safety Signs:



PTOs- Power Take-Off

PTO is a part on the back of a tractor that transfers power from the engine to machines attached to the tractor, like mowers or feeders.



PTOs are extremely dangerous! Be careful!

Theme 2

Tractor & Machinery Safety

Safety Signs:



PTOs- Power Take-Off

**The PTO rotates between 9 & 16 times per second.
Farmers must be careful not to get entangled in
the moving shaft.**

**All PTOs should be covered with a guard and
safety chains.**



PTOs are extremely dangerous! Be careful!

Theme 2

Tractor & Machinery Safety

Safety Signs:



Power Take-Off (PTOs)



PTOs can be very dangerous because the spinning shaft moves fast and can catch clothes, hair, or hands, pulling a person in quickly. Farmers must always have a PTO guard in place and never go near it while it's turning.

PTOs are extremely dangerous! Be careful!

Theme 2

Tractor & Machinery Safety

Safety Signs:



Power Take-Off (PTOs)



Peter lost his leg in a PTO accident.



PTOs are extremely dangerous! Be careful!



Irish Rural Link
Nasc Tuaithe na hÉireann



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Thank you

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