

# A Farm Equipment Safety Activity Book!



Child Not Seen by Operator



Child Not Seen by Operator



Safe Children: Happy Families

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## The Problem!

### *Child Farm-related Deaths:*

*Every 3 days a child dies!*

### *Child Farm-related Injuries:*

*Each day about 33 children are injured!*

60% of child-related deaths happened to young children living but not working on the farm!

The # of Injuries is increasing among youth aged 10-19!

### **5 Related Causes:**

1. Child playing or standing close to farm machinery!

2. Child is an extra rider!

3. Child allowed to be or play in the worksite.

4. Child doing work that does not match their size, strength, vision, hearing and/or brain development!

5. Child not playing in a secure fenced play area!

### Prevent Injuries and Fatalities by:

1. Identifying major hazards that cause injury or death.
2. Managing major hazards: using barriers or methods to reduce, isolate or eliminate danger.

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National Children's Center  
for Rural and Agricultural Health and Safety

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*ABCs of Farm Equipment Safety*

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## Statistics: Farm Injuries and Deaths of Children and Adults

### 2017 Childhood Agricultural Injuries U.S. Fact Sheet



***Every 3 Days----a child dies***



***Every Day---about 33 children are injured in an agriculture-related incident***

***Did you know----25% of all youth fatalities involve machinery?***



“Abe, did you know nearly 75% of farm fatalities involving children aged 0-6 years old are caused by:

- Runovers (bystander in the barnyard/worksite)
- Runovers (extra rider fell under wheel/equipment)
- Drowning”

“I see!”

“Today’s morning paper listed the top reasons children under 6 years old are admitted to the hospital or need medical care by a doctor for a farm-related injury. Here, take a look!”



### The DAILY NEWS

***Injuries requiring hospitalization are caused by:***

- *Falls*
- *Machinery*
- *Animals*

***Injuries requiring treatment at a local doctor include:***

- *Animal injuries*
- *Entanglement by machinery*
- *Falls from heights*



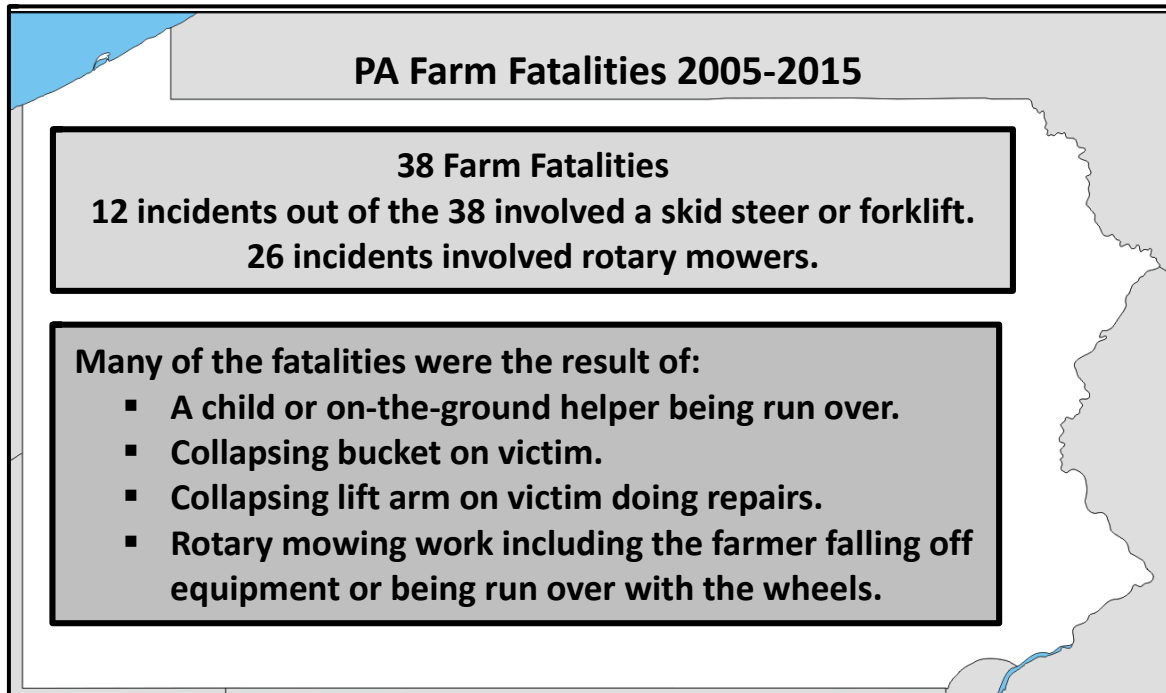
**This safety activity booklet has been made possible by:**

- Funding by The National Children's Center
- Created & Coordinated by Kay Moyer & Binkley & Hurst, LP
- Artist and graphic Design by Karen Chow
- English grammar by Carolyn Nelson

## Problem: Recent Increase of Child Runover Injuries and Deaths.

### Runovers: A Leading Concern Using Tractors, Skid Steer Loaders & Forklifts

A June 2016 news article by Penn State Agriculture Safety and Health Extension, New Trends in Pennsylvania Farm Fatality Statistics, reported that from 2005 through 2015, thirty-eight (38) Pennsylvanians lost their lives in incidents involving skid steers loaders or forklifts (12 incidents) and during rotary mowing activities (26 incidents).



For the past three years 50% of total fatalities (13 of the 26 incidents) involved rotary mower work. Most disturbing are the several reports of the tractor operator or extra riders being thrown from the tractor and run over by the mower.

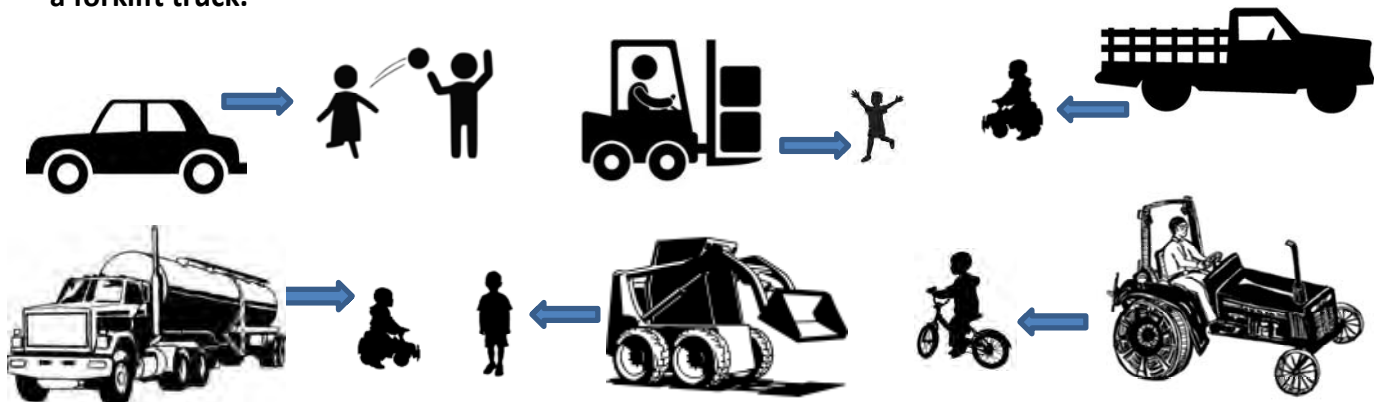
<http://extension.psu.edu/business/ag-safety/news/2016/new-trends-in-pennsylvania-farm-fatality-statistics-identified>



### What is a Runover Incident?

One meaning of the term “runover” is to knock down a person with a moving vehicle.

Runovers of children on farms usually involve: a car, truck, tractor, skid steer loader, or a forklift truck.



## **Child Runovers Occur When:**

- A child (bystander or onlooker) is too near moving farm equipment, large animals or vehicles.
- A child is an extra rider on equipment; one bounce can cause them to fall from equipment under the wheel or under trailing machinery.



## **Children Are at Greater Risk Because:**

- Young children are quick and impulsive.
- Operators of equipment may assume a child is not around.
- Young children usually focus on doing one thing at a time –“going to dad” etc.
- Young children don’t understand the dangers of being near moving farm equipment.
- Young children think the driver will see them and will not hit them.
- Drivers have a hard time seeing a small child 2’-3’ tall in contrast to a youth or adult.
- Equipment has blind spots. These are areas where the driver cannot see a person, animal or even objects by direct sight or by using mirrors.
- Drivers can’t hear a child calling--farm equipment is noisy, farmers may have lost some of their hearing and/or be wearing hearing protection or be inside a tractor cab.



## **Did You Know?**

It is common for a farmer to lose hearing in one ear faster than the other. Farmers usually face the tractor or loud machinery they are pulling exposing one ear to more noise than the other.

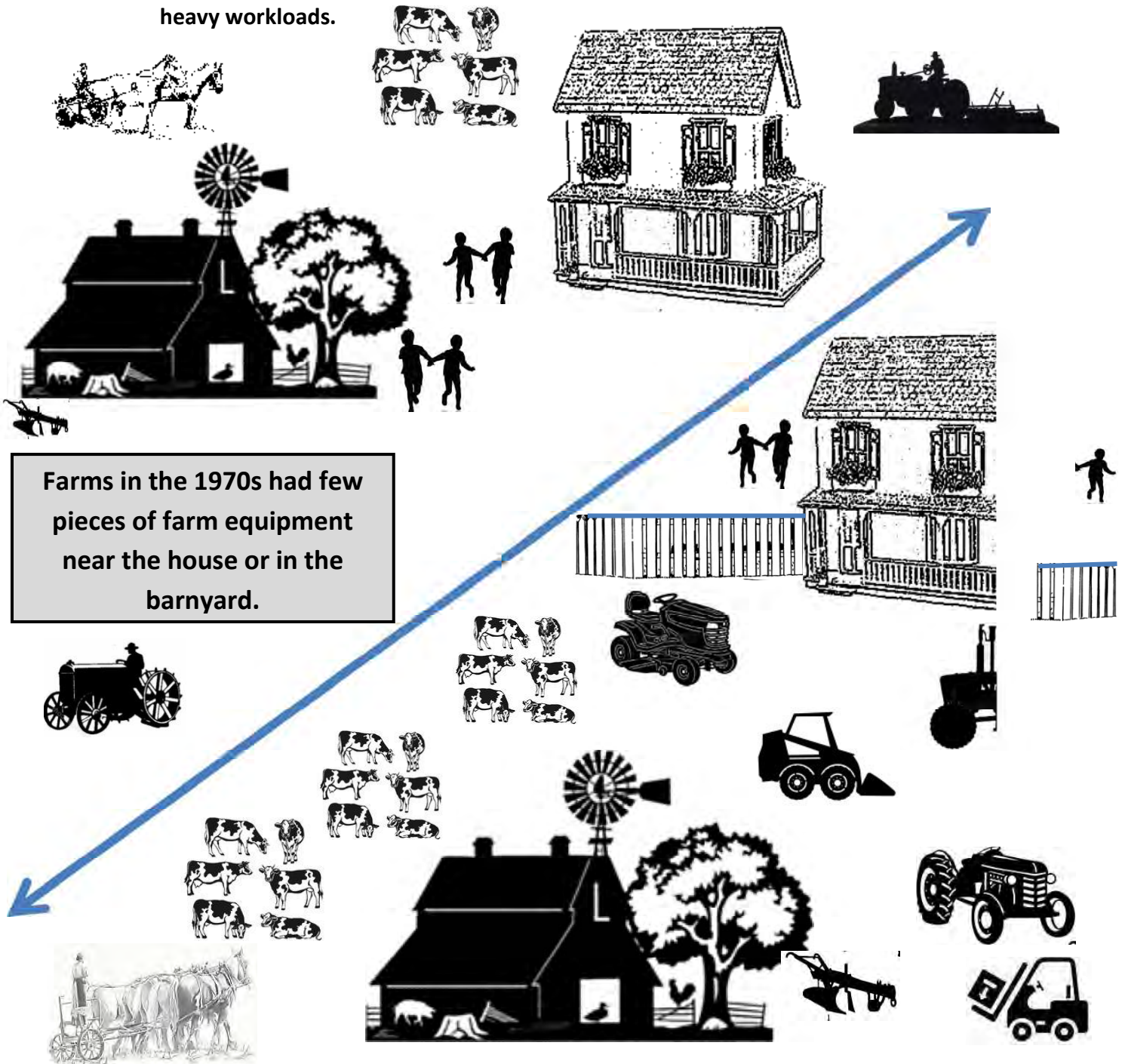


## **Remember to: Wear Hearing Protection Around Machinery.**



## Child Runover Accidents Increased Recently Due To:

- An Increase in the number of tractors, teams of horses, mules, and the number of farm implements needed today compared to 10-20 years ago.
- Today's farm machinery is faster, bigger and more technical than in the 70s or 80s.
- The first Bobcat was sold by Melroe Co in 1958 and was popular on farms in the 70s and 80s. Today there are thousands of these machines being used.
- Forklift equipment has only been used by farmers for the past 4-5 years to handle heavy workloads.



## Actual Accounts of Farm-related Tractor and Forklift Injuries and Deaths

The boy's father thought his son would be safe in the tractor cab, like he had been many times before. This time the cab door unlatched when the tractor went through a rut and before the father could step on the brakes, his son fell out of the cab and was run over by the rear wheel of the tractor. <http://nasdonline.org/185/d001588/when-two-039-s-a-crowd-dangers-of.html>.

A 3 ½-year-old girl was severely injured after she fell from the bucket of a tractor. The driver could not stop the tractor in time.

A 9-year-old boy was run over by a tractor. The boy had been cutting down small trees in the pasture and putting them into the tractor's front bucket, while his 10-year-old sister drove the tractor. The boy fell and was run over by the tractor's front and rear tires. He was seriously injured.

A 6-year-old girl fell off a tractor driven by her father and was run over by the trailing mower. She survived but underwent multiple amputations.

A 2-year-old died after falling out of the back window of a tractor.

A 5-year-old boy was killed when crushed under the wheels of a reversing tractor. The driver didn't see the boy, even though he was careful and used his rear view mirrors.

A 3-year-old girl in April 2017, fell from a moving tractor, when a side door opened she was leaning against. The child was struck by the fertilizer applicator in tow. The child suffered serious injuries.

A 17-year-old youth died when he was riding on the side of a forklift. He fell off and was run over by the equipment.

A 14-year-old youth from Arizona died when he lost control of the forklift he was operating while going over a bridge.

A 3-year-old boy was hit and killed by a reversing forklift just days after his third birthday. He was pronounced dead at the scene.



**cultivate  
SAFETY**

The clippings can be found at <https://cultivatesafety.org/>

## Actual Accounts of Farm-related Skid Steer Loader Injuries and Deaths

A 7-year-old child died after falling off a makeshift seat between the bucket and the loader wheel.

A 22-month-old child was sitting on his father's lap on a skid steer and either fell or jumped onto the bucket. The child died at the scene.

A 3-year-old child was injured when his grandfather stopped a machine suddenly. The boy was thrown from the bucket of a skid steer loader. He suffered severe injuries requiring surgery. The grandfather was charged with child endangering because he "created a substantial risk to health and safety of a child."



A 2-year-old child died after falling off a skid steer loader he was riding. He died of massive head trauma.

An 8-year-old boy died after being struck by a skid steer loader. The driver was backing the skid steer when the machine struck the boy.

A 3-year-old toddler was seated between the legs of his grandfather in a Bobcat loader. The Bobcat loader became off balance. The child's head struck the loader causing his death.

A 19-month-old child died when he was run over by a skid steer loader driven by a family member. The driver was not aware that the child was around.

A 4-year-old boy was pushing a little wheelbarrow when suddenly he was struck by a backing skid steer loader. He died at the scene.



A 3 ½ -year-old died of massive head injury after falling off the bucket of a skid steer loader. She was caught in the loader wheels.

A 5-year-old was crushed by a skid steer loader. He was riding in the bucket when he fell out. The child died instantly.



## Size, Strength, Vision, Hearing, and Brain Development Affect Risk of Injury When Walking and Riding On the Road.

# ROAD SAFETY

### Size:

- Children under 10 years-old are at greater risk of injury because they are short and therefore are not easily seen by vehicle drivers.

### Strength---Children:

- Have fewer balance skills.
- May lack coordination (may fall or stumble) crossing the road, especially when they run.
- Can't get out of the way of vehicles as fast as an adult.

### Vision---Children Have:

- Less ability to see objects on the side. Vision skills not fully developed.
- Less ability to see around objects such as trees or buildings—not tall enough.
- Limited observation skills—may be easily distracted.

### Hearing—Children May Have:

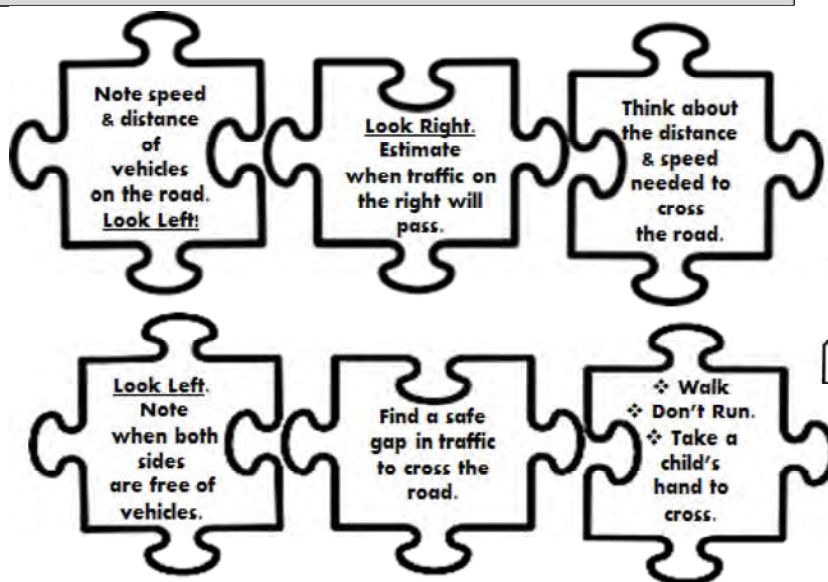
- Difficulty detecting the (direction) of the sound of approaching vehicles.
- Difficulty detecting how far away (distance) the sound of a vehicle is to them.

### Brain Development---Children May:

- Be impatient, impulsive and can easily be distracted by friends or by talking.
- Not be able to focus on more than one thing at a time—short attention span.
- Assume---if they see a car or truck, the driver must see them & won't hit them.
- Have a limited sense of danger.



To cross the road safely we need to connect the puzzle pieces together in a split second.



### Parents and Teachers Can Help Children Be Safer When Walking or Riding on the Road By:

- Increasing a child's knowledge of how to walk or ride safely on the road.
- Reminding and encouraging them to put road safety rules into practice:
  - Always wear a safety vest.
  - Walk and ride single file—talk later when you are safe at home.
  - Walk on the left—see the driver's eyes.
  - Ride on the right—wheels go with wheels.
  - Walk or ride as far off the road as possible.
- ❖ Being the best role model you can be---it could save your life or the life of someone you love.

## Size, Strength, Vision, Hearing, and Brain Development Affect Risk of Injury When Operating Farm Equipment.

# FARM EQUIPMENT SAFETY



### Size:

- Legs and arms are shorter than adults:
  - Difficulty reaching pedals, steering wheels, foot or hand controls.
  - Difficulty wearing seat belt.
  - Difficulty seeing behind, front, and sides of vehicle—height is a factor.



### Strength:

- Lacks muscle strength (not fully developed).
- Fatigues more easily than adults.
- Is not as coordinated compared to adults.



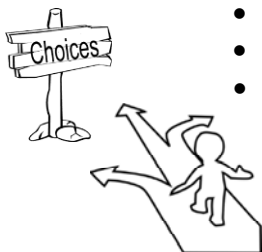
### Vision—Children Have:

- Diminished fields of vision compared to the average adult. (See simulated tractor studies on page 31).
- Difficulty determining angle of inclines and declines --increased risk of rollovers.
- Limited vision capability: they sit lower in the operator's seat due to their height.



### Hearing—Children Have:

- Less ability to estimate where (direction) the sound of farm equipment is coming from.



### Brain Development—Children Have:

- Less understanding of cause and effect (if I do this, then that might happen?)
- Less experience to quickly consider alternative actions when things don't go as usual.
- Less able to judge distance between equipment tires and a ditch—rollover danger.
- Less able to process what's happening in time to prevent an accident.
- Less impulse control--brain is not fully developed until a child reaches their early 20s which increases the risk of runovers and rollovers with farm-related accidents.

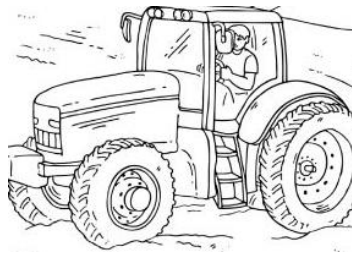
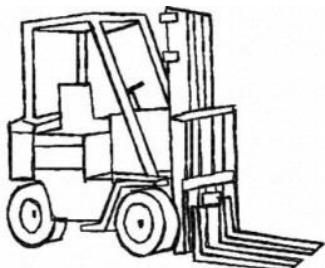
Youth Are Risk Takers



Peer Pressure



Increased Risk of Injury When Operating Machinery.



### What Can Parents Do to Decrease Child Runovers and Rollovers?

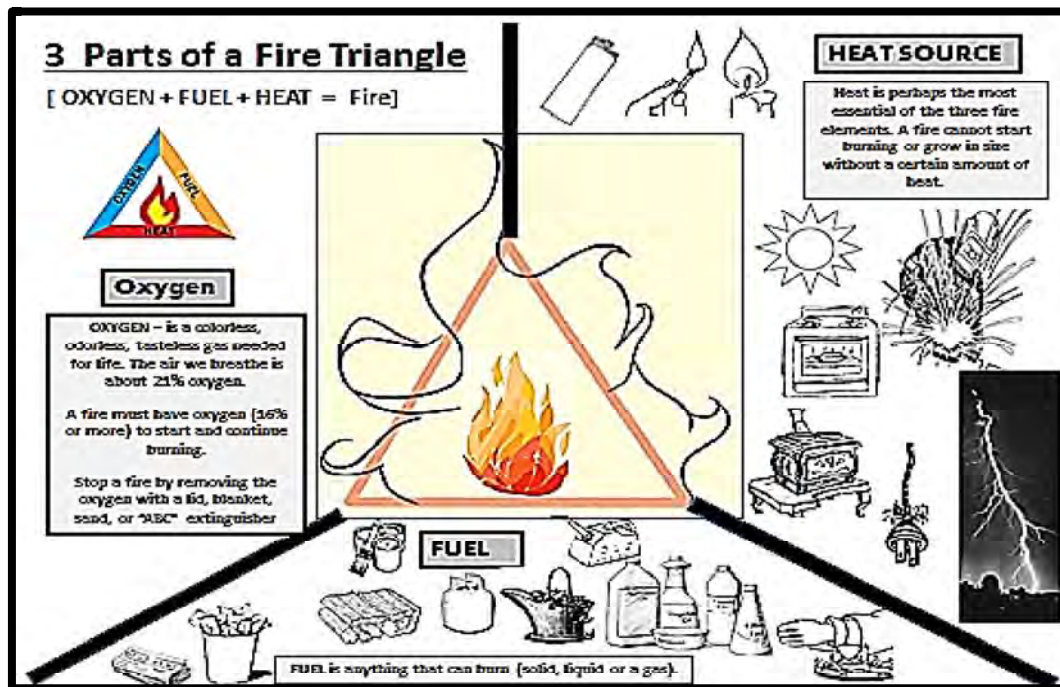
- Use barriers or caregivers to prevent children from getting to the work area.
- Be a good role model:
  - Children watch everything we do. They may think, "If dad or mom does it, it's OK for me."
- Teach how to use safe practices when operating farm equipment.
- Observe youth's work practices and correct as needed, before there is an injury.
- Create and enforce farm equipment safety rules. Example—No Extra Riders.
- Let youth know when you see them using safe work practices. Then reward them.

## Fire Triangle

### Fire Triangle: A Fire Can't Start Unless You Have All Three Elements Of Fire!

- Oxygen
- Fuel (something that burns).
- A heat source

**OXYGEN + FUEL + HEAT = Fire!**



### You can prevent a fire or put out a fire by eliminating one or more of the three elements of fire:

- Putting a lid on a grease fire will eliminate the oxygen
- Putting baking soda or salt on a grease fire will also eliminate oxygen
- Use a fire extinguisher to eliminate the oxygen
- Stop, Drop and Roll actions will put out the fire--no oxygen
- Putting soil on a camp fire smothers the flames--no oxygen
- Keeping wood or coal away from a fireplace eliminates the element of fuel
- Keeping matches, lighters, candles out of reach eliminates heat source

## Injury Triangle

**Child + Cause + Environment = Injury!**

### To Prevent Injuries: Modify One or More of the Three Elements of the Triangle.

#### Child:

- Age and stage of growth and development (physical, mental, and emotional abilities)
- Curiosity and exploring to learn about their environment
- Risk-taking behaviors
- Impulsiveness and decision-making abilities
- Easily distracted

#### Injury Triangle

Host (patient)



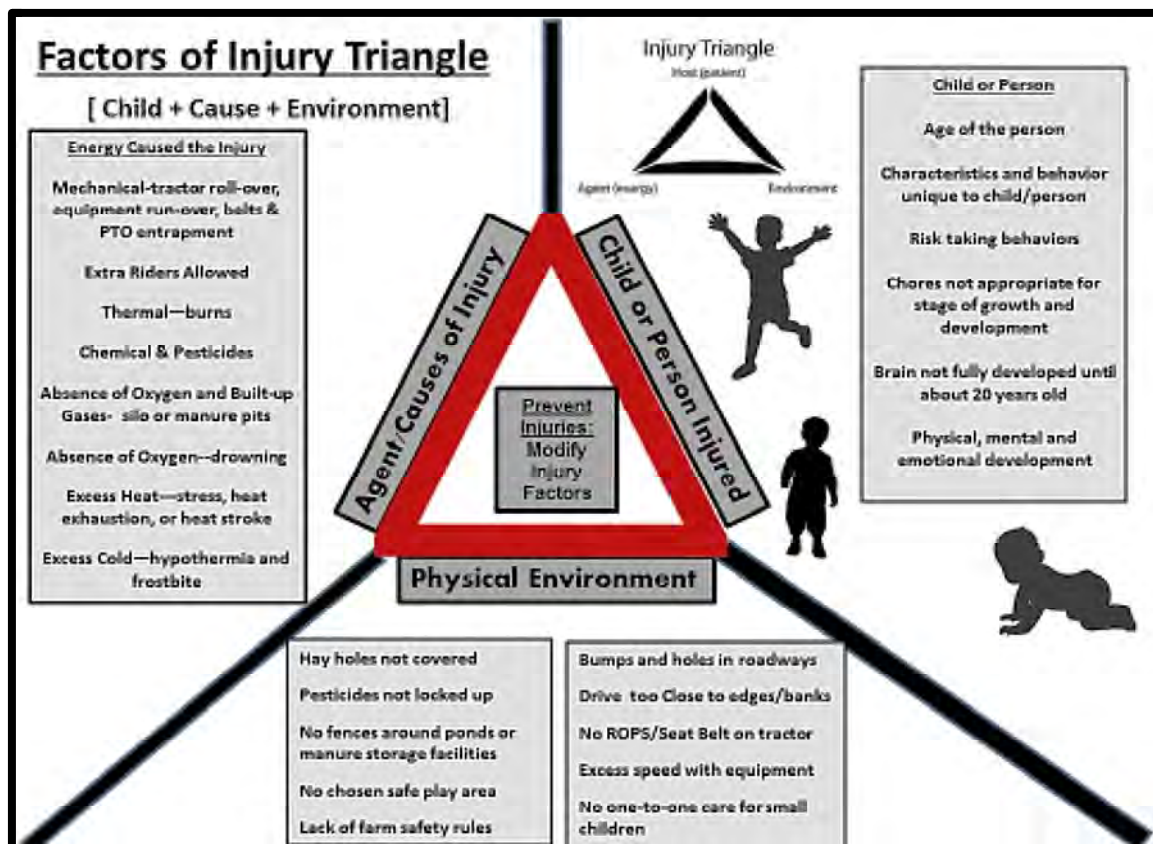
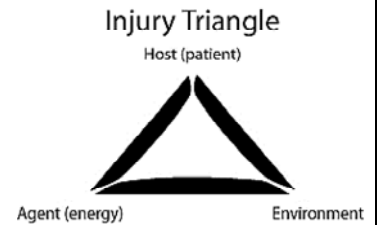
Agent (energy)

Environment

## Injury Triangle Continued

### Agents/Causes:

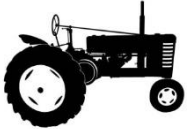
- Adult-only equipment and animals are a DANGER and should not be accessible to small children including: farm equipment, uncovered hay holes, knives, tools, matches, chemicals, large animals, bodies of water, and motor vehicles
- Areas on farms that should not be accessible to young children include: silos, silage bunkers, manure pits, pesticide storage areas, hay lofts, gasoline and farm fuel storage and ponds.
- Other items that should not be accessible to young children include: climbing structures such as ladders, stairs, small toys, and food that can choke them.
- Certain surfaces that increase the probability of injury are: pavements, concrete surfaces, hard-packed dirt, and water.



**Environment:** <http://canadiem.org/injury-prevention-dr-emily-sullivan/>

- Places and facilities such as bodies of water, pools, kitchen stoves and canning equipment, open windows, barns, garages, chemical storage areas
- Not enough supervision or one-to-one care by an adult or older sibling
- Excess stress, long hours and excessive workloads increase safety risks
- Activities and times of the day (milking time) when adults are busy working, making meals, baking, or socializing with friends or family
- Natural disasters including: lightning, hurricanes, blizzards, earthquakes, extreme cold or heat

## Stability and Center of Gravity: Affect Risk of Farm-related Injuries and Deaths.

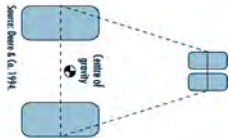


### Did You Know?

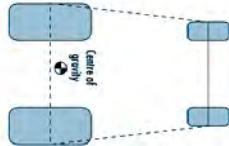


Three-wheeled farm machinery and three-wheeled riding toys have one thing in common:

they are more likely to overturn than will four-wheeled farm machinery or four-wheeled riding toys.



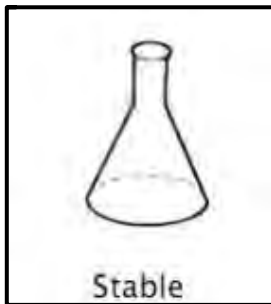
<http://www.ilocis.org/documents/chpt64e.htm>



Why does three-wheeled equipment tip or tumble over quicker than four-wheeled machinery?

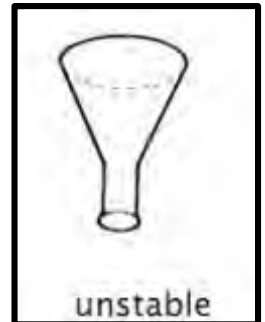
The answer is stability!

### Stability: What Does That Mean?



Stability refers to the ability of an object to return to its original stationary balance, after it has been slightly moved.

The wide base of the bottle on the left provides support and stability so that if the bottle were moved slightly, it would not topple over.



However, if we turn the bottle upside down, the base is very small making the bottle unstable. It would easily topple.

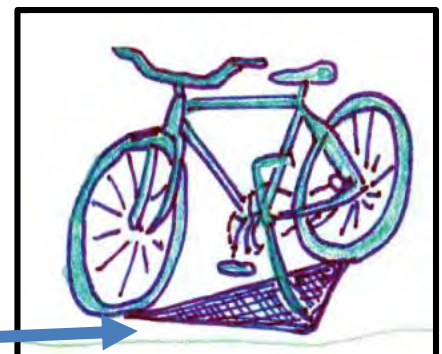


The base support of an object is the area formed by an imaginary line drawn around the supporting parts of the object or item that touches the ground/surface.

The shaded area under the chair formed by the chair legs is a large support base so that if the chair is moved, it will not topple over easily.



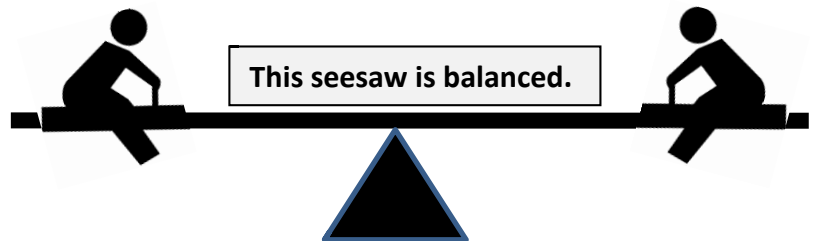
This bike will fall over unless someone puts the kick stand down on the ground to create a base area of support.



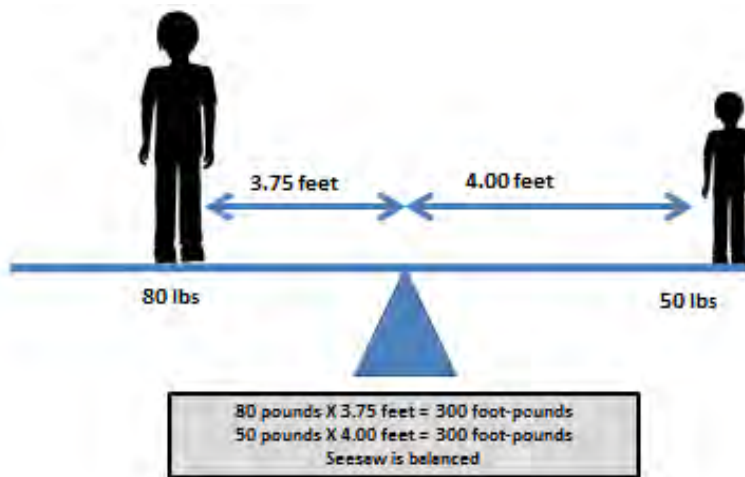
## What is meant by Center of Gravity or Center of Mass?

### The Center of Gravity: Sometimes Called the Center of Mass is:

- The spot where an object, item, person will balance on a single point.
- The weight of the item is evenly distributed on all sides.



### What if one child weighs more than the other? Can the seesaw be balanced?

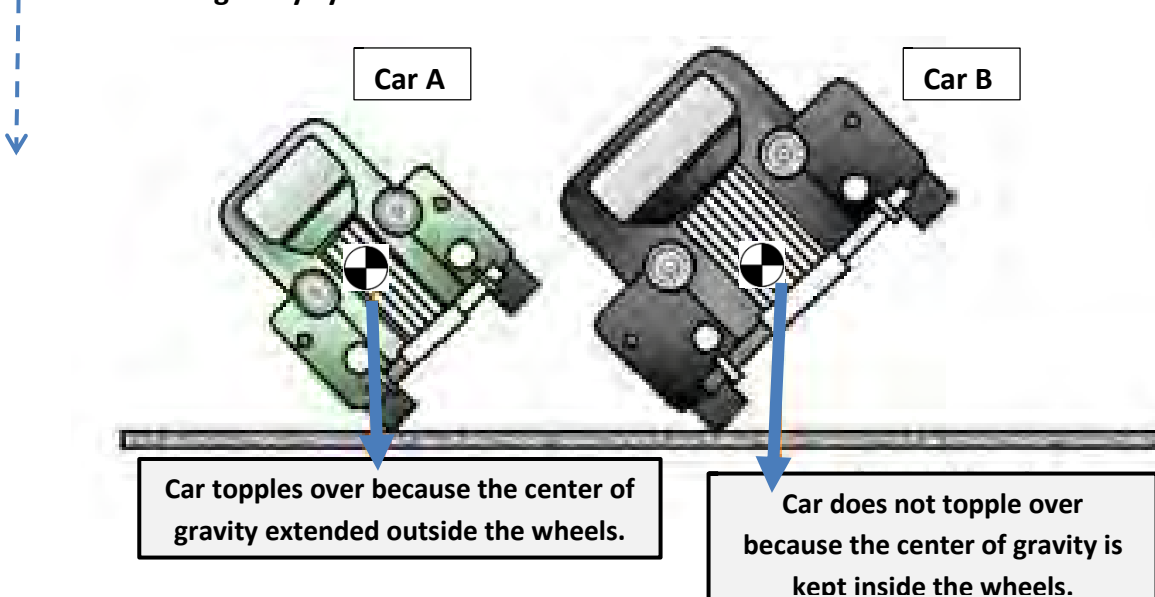


To balance this seesaw, the child who weighs more must get closer to the pivot point than the lighter child.

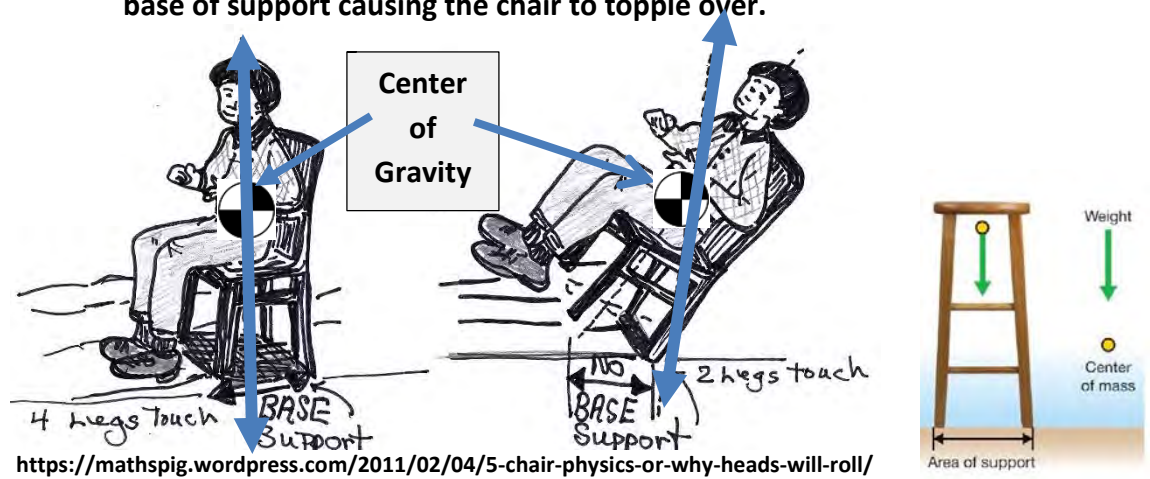
Remember: an object will topple over if its center of gravity is NOT above its area of support.

Another example below shows that car A will topple over first because its center of gravity extends beyond the area of support, outside the tires.

---Center of gravity symbol.



The child leaning back on his chair has caused the center of gravity to extend out over the base of support causing the chair to topple over.

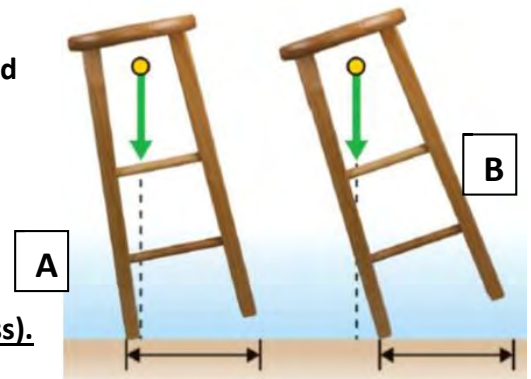


Look at the two stools below. Which one will topple over first? If you said B will topple over first, you would be correct.

Stool B has been tilted, causing the center of gravity to extend out over the base support area so the stool falls over.

### Remember:

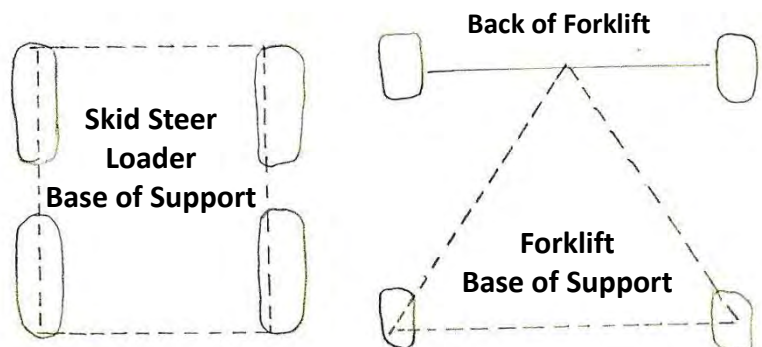
- ❖ Stability of an object depends on:
  - Position of the center of gravity (center of mass).
  - Size of the base of support.
- ❖ An object that is tilted will topple over if a vertical line from the center of gravity falls outside the support base.

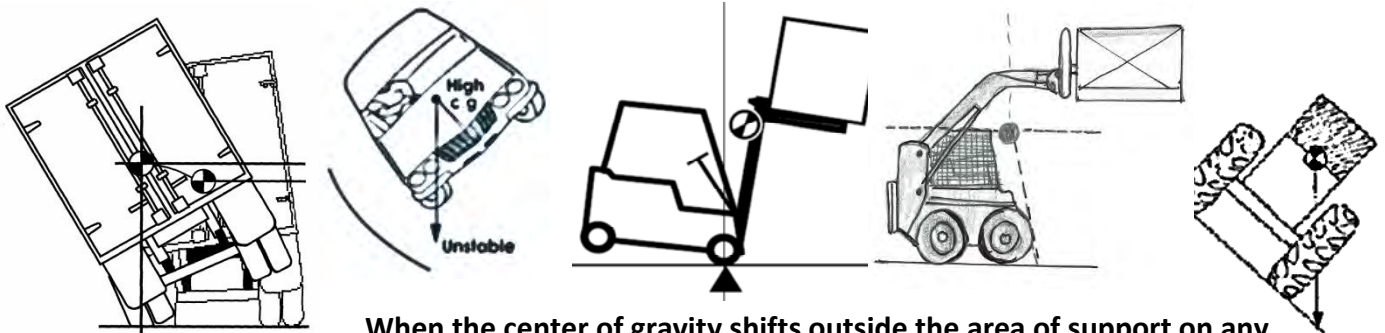


### Farm Equipment: Stability and Position of the Center of Gravity

The Stability baseline of farm equipment is an imaginary line drawn where the tires touch the ground. Which vehicle has a larger stability baseline---the skid steer loader or the forklift?

Yes, the skid steer loader has a larger area of support (square) compared to most forklifts that have a triangular base of support.

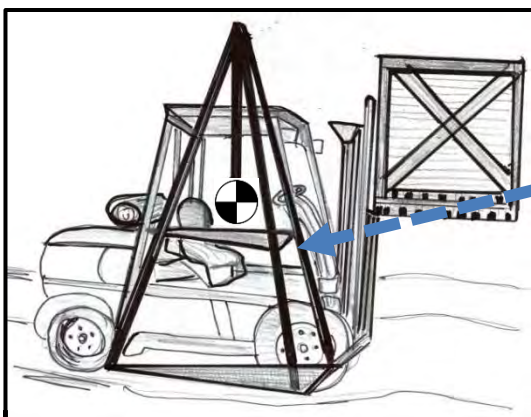
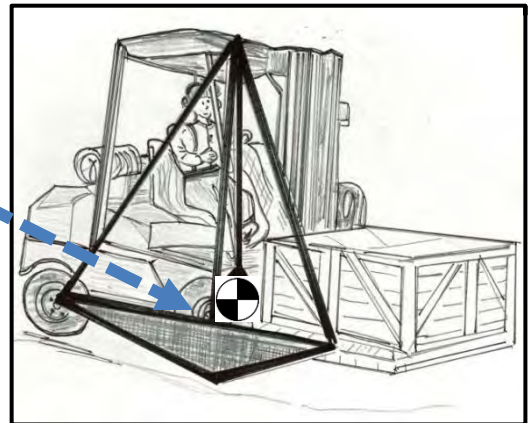




When the center of gravity shifts outside the area of support on any vehicle (trucks, cars, and/or farm machinery), the vehicle will tumble over.

### **Remember:**

- The lower the center of gravity, the more stable and less likely the equipment will topple over.
- The higher the center of gravity, the more likely the equipment will tip over.



- As the center of gravity gets higher, the stability baseline gets smaller.
- The center of gravity must stay within the stability baseline to remain in an upright position.

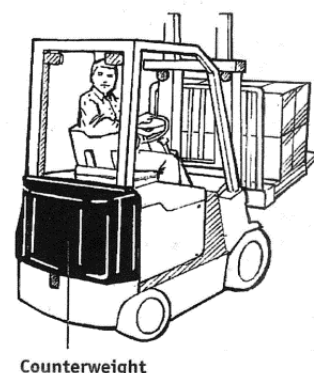


### **Two Ways to Improve Stability of a Vehicle:**

- Lower the center of gravity.
  - Reduce its height-----Keep it low and go slow.
  - Attach heavy weight onto its base.
- Use as wide a base as possible. Put wheels farther apart if possible to Increase the base area.

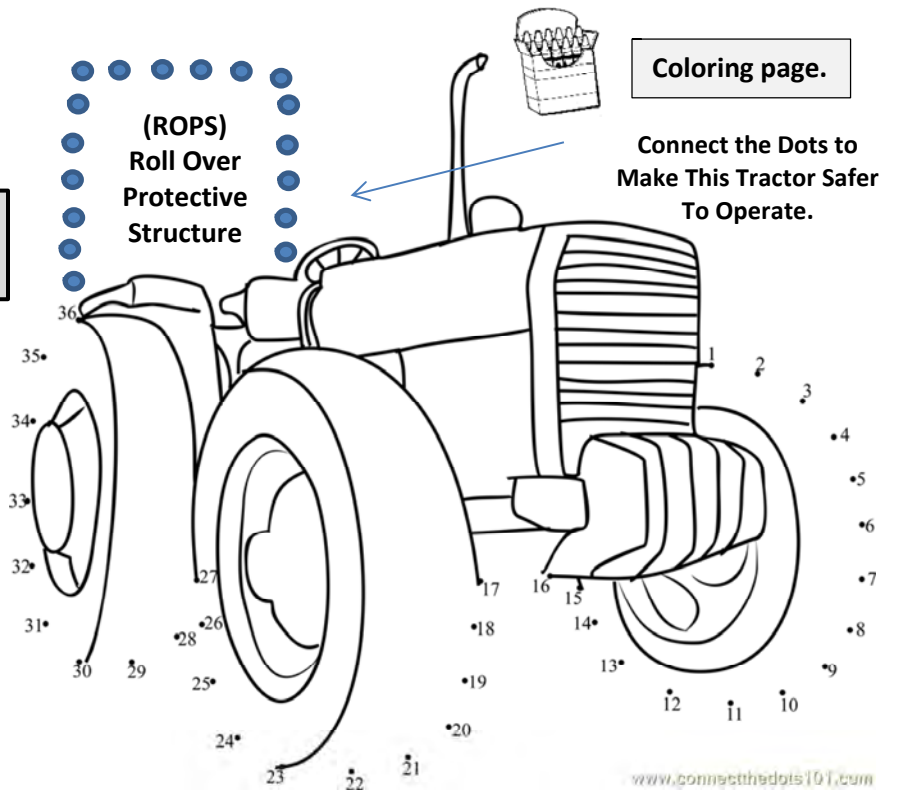
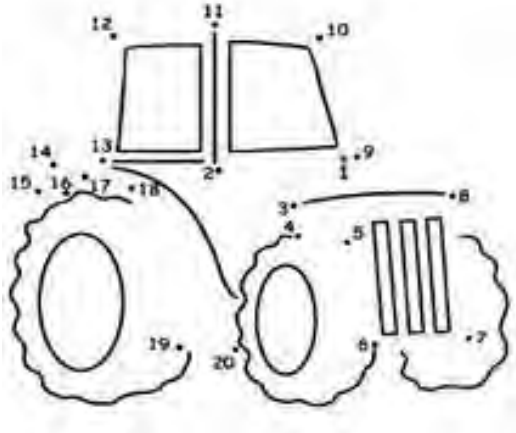


**low & slow**

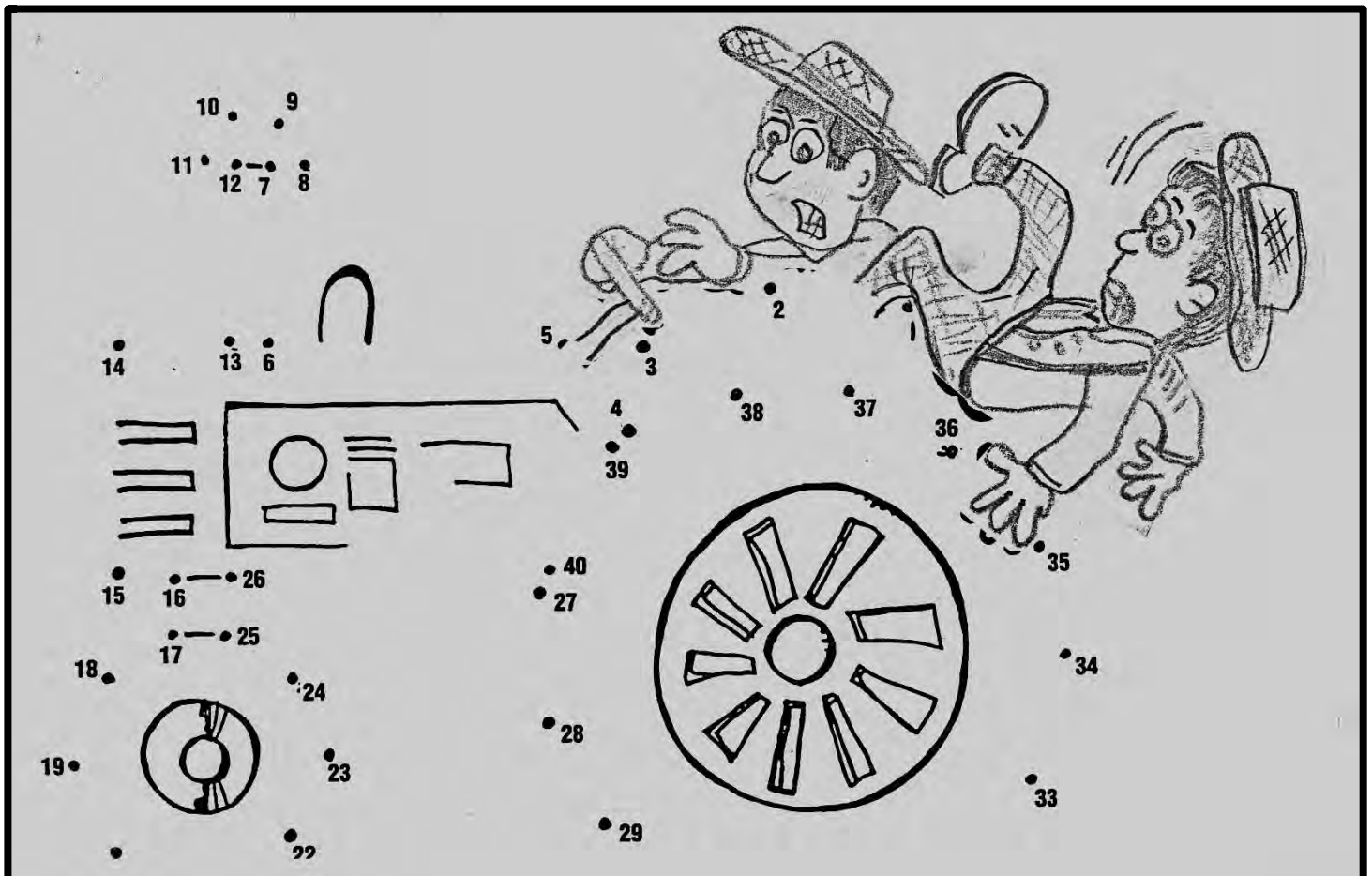


# Tractor Safety Activity Page.

Don't Be An Extra Rider In a Cab  
Tractor. It's Not Safe!



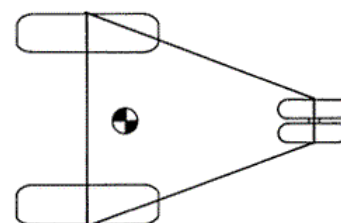
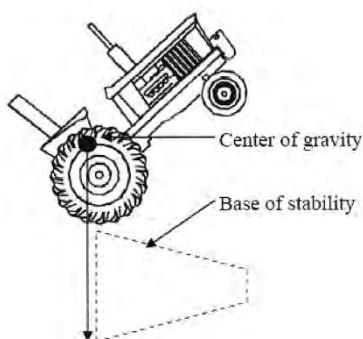
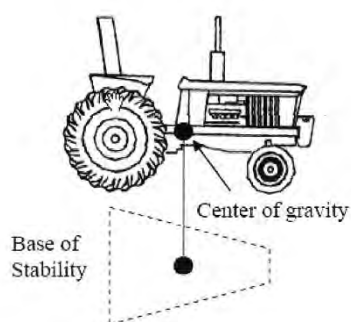
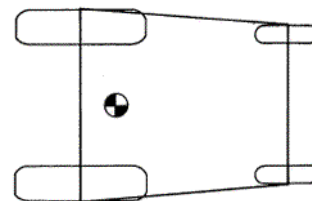
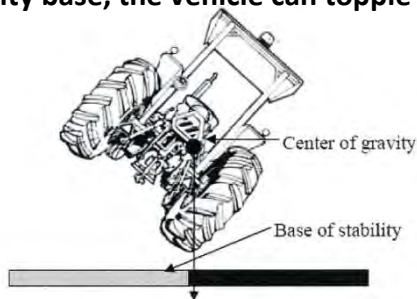
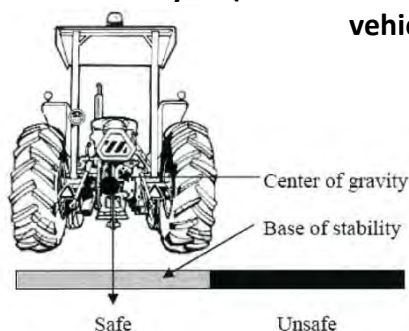
One Seat for One Rider---The Driver!



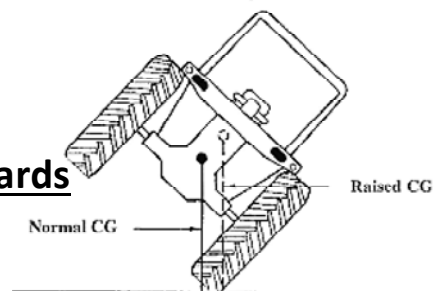
Be Safe, Don't Be an Extra Rider!

## Tractor Stability and Center of Gravity

A four-wheeled tractor (wheels wide in front) has a larger base of stability compared to the tricycle (front wheels close together) tractor. If the center of gravity falls outside the vehicle's stability base, the vehicle can topple over.

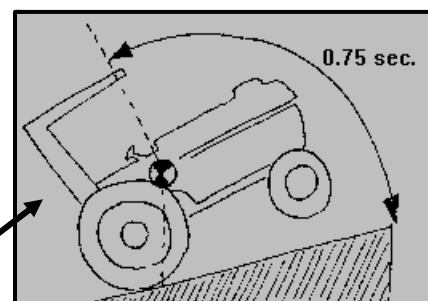
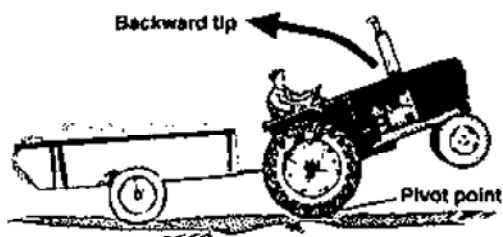
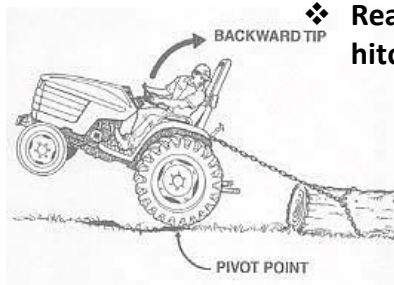


## Tractors Over-Turn 2 Ways--Sideways and/or Backwards



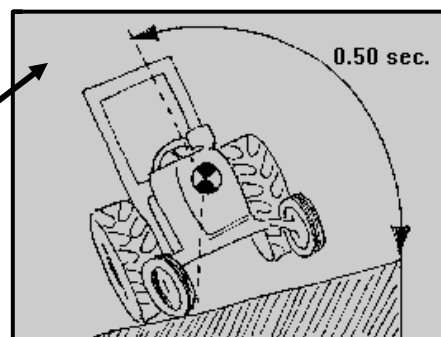
❖ Note: 80-90% of rollovers are side overturns.

❖ Rear overturns are caused by improper weighting or pulling from above the hitch.



### Did You Know?

- A tractor will reach the point of no return for rear overturns in just 0.75 second.
- A side rollover of a tractor will reach the point of no return in just 0.50 second.

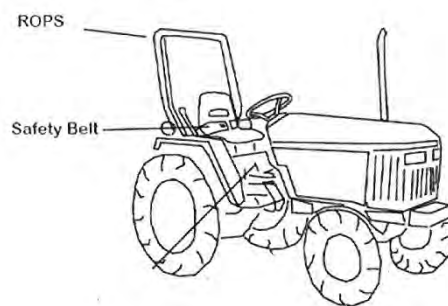
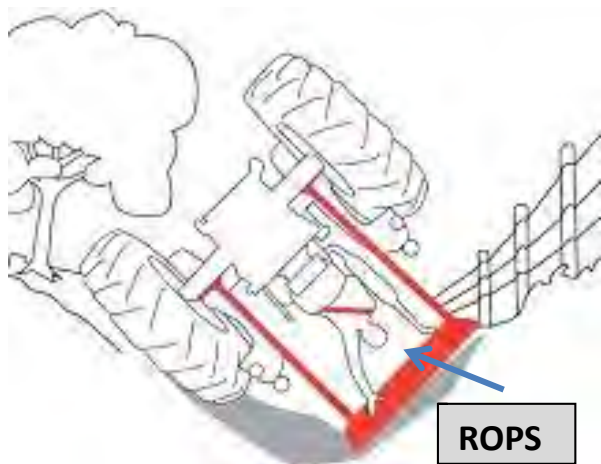


## How Tractor Operators Can Increase Their Safety

### A Roll Over Protective Structure (ROPS) Saves Lives.

**What is a ROPS?** A ROPS protects the operator from being crushed by the weight of the tractor during a rollover. The ROPS stops the equipment from crushing the operator and the seat belt keeps the driver snug in his seat or in the "zone of protection".

But when the driver **does not** wear his/her seat belt, a ROPS is less effective in preventing injuries and deaths. The use of a ROPS and a seat belt is estimated to be 99% effective in preventing death or serious injury in the event of a tractor rollover.



❖ A tractor without a ROPS shouldn't have a seat belt because, your only chance of survival is to jump free of the tractor!

**Did you know----**In Pennsylvania, over half of the farm fatalities each year involve a tractor and/or power take off (PTO) equipment?

### PA Farmers Can Get Help to Put a ROPS on an old tractor

The Rebate Program will rebate 70% of the cost of purchasing and installing the ROPS (Rollover Protective Structure) up to \$865 maximum rebate. This includes the cost of the ROPS (roll bar, ROPS with Awning or ROPS cab), shipping, and installation charges.

[Apply on-line](#) or call the ROPS Rebate Hotline (1-877-ROPS-R4U or 1-877-767-7748)

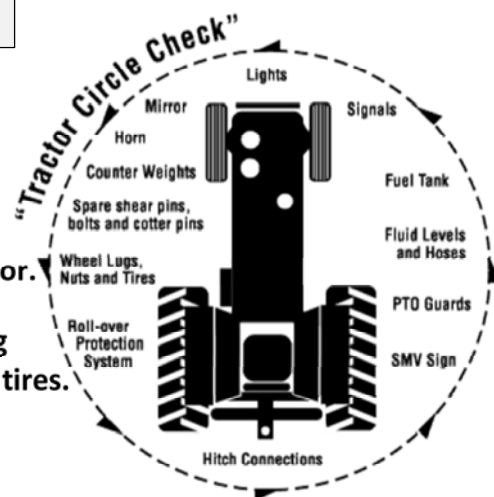
for registration and pre-approval. <https://www.nycamhoutreach.com/ropsr4u/pa/overview/>

<https://www.extension.purdue.edu/extmedia/s/S-0.ch9.html> <http://www.cdc.gov/niosh/docs/95-09/harvesting.html>



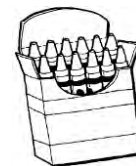
### True Stories: Tractor Runover Incidents and Deaths

- In July 2013, a 12-year-old youth was seriously injured when a tractor driven by his 14-year-old brother hit a bump causing the 12-year-old to fall off under the wheel.
- A 15 year-old was killed when he fell off of a tractor and was run over by a trailer being pulled behind the tractor.
- A 4-year-old boy fell off of a tractor on which he was riding and was fatality injured when he was struck by the tractor tires.



## Skid Steer Loader Safety Activity Page

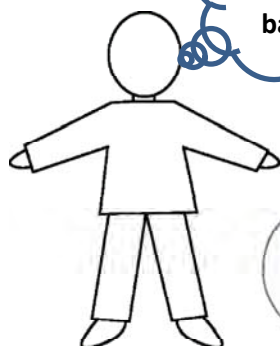
Coloring page.



Play where it's safe.



Stay Away!



Stay Away!

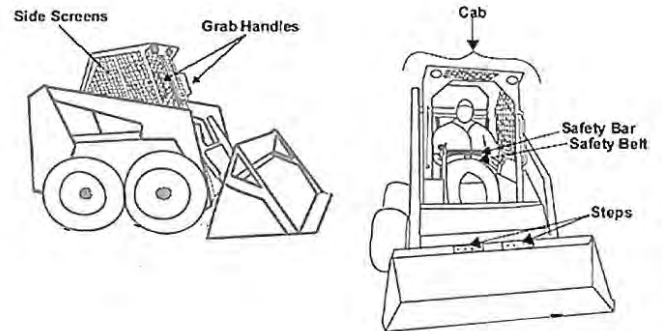
**Remember:**  
Playing near  
farm  
machinery is a  
danger.

## Skid Steer Loader Stability and Center of Gravity

A skid steer is a versatile machine that is able to lift and move heavy objects and go into small areas. Skid steers have different attachments that can be used to do many jobs on a farm: move animal waste, rocks, or logs. A skid steer has 4 wheels that work together to make zero-radius turning possible.



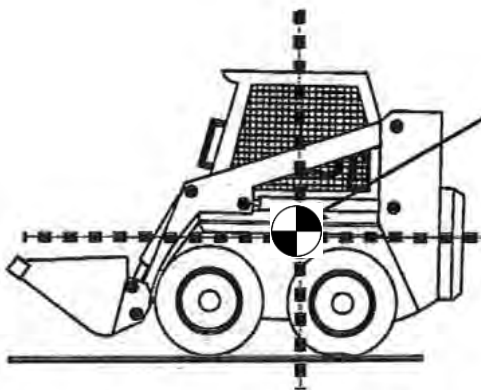
Skid steer equipment has a short wheelbase and narrow width helping the equipment to turn and move easily. A skid steer has a protective ROPS which should never be removed. The side screens protect the operator from being injured or pinched by the lift arm.



[https://en.wikipedia.org/wiki/Skid-steer\\_loader](https://en.wikipedia.org/wiki/Skid-steer_loader)  
<http://www.bobcat.com/loaders/features/all-wheel-steer>  
[https://en.wikipedia.org/wiki/Skid-steer\\_loader](https://en.wikipedia.org/wiki/Skid-steer_loader)  
<http://www.bobcat.com/loaders/features/all-wheel-steer>

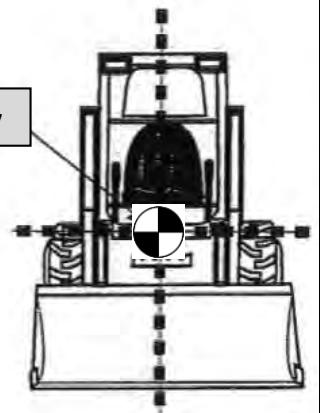
### Center of Gravity is Always Changing Depending on the:

- Size of the load.
- Way the load is carried.
- Height of the load.
- Speed of movement.

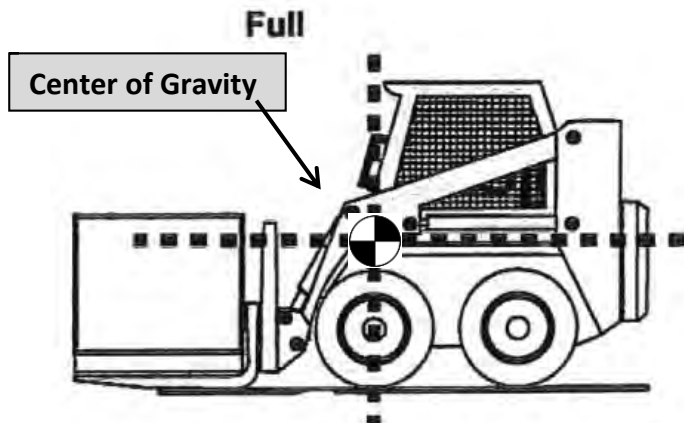


Center of Gravity

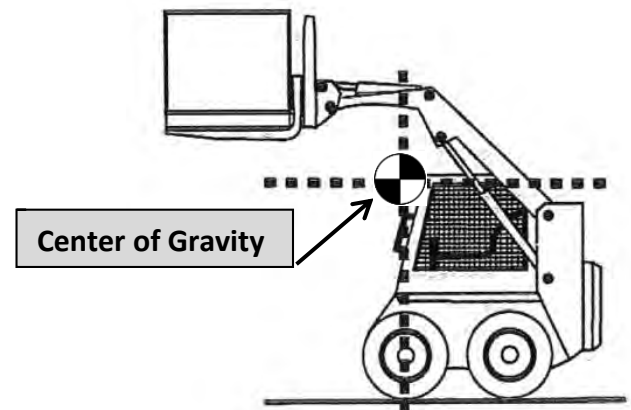
Center of Gravity



Keep the Center of Gravity  
inside the area of support  
to prevent rollovers.



Center of Gravity



Center of Gravity

## Skid Steer Loader Operators Can Increase Their Safety

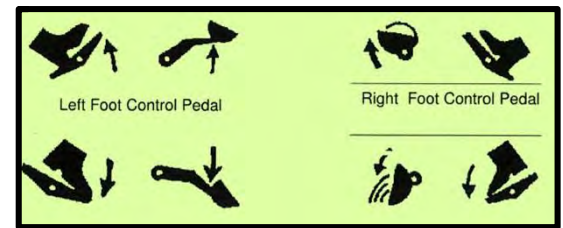
Operating skid steer loaders is not like driving a car or truck. They weigh more, have limited visibility, turn quickly and have blind spots limiting observation of nearby workers or children.



### A Skid Steer Loader:

- Is stopped by bringing control levers to neutral position.
- May have left and right foot controls that operate the bucket.
- Has hand controls:
  - To move the left tires--use the left arm control.
  - To move the right tires--use the right arm control.
  - To move forward or backward--use both left and right arm controls together at the same time.

[//www.kuka-at.com/courses/Forklift/presentation/Inline47.htm](http://www.kuka-at.com/courses/Forklift/presentation/Inline47.htm)



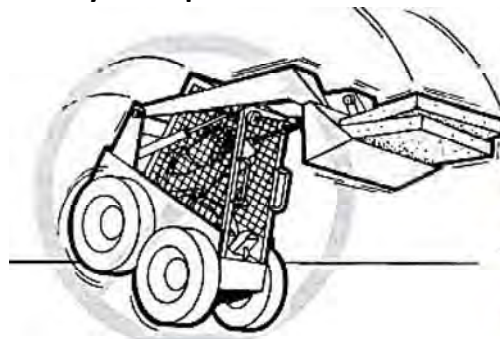
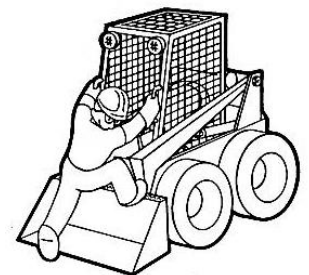
### Causes of Injuries When Operating a Skid Steer:

- Pinned between the bucket and the frame.
- Pinned between the lift arm and the frame.
- Those riding in the bucket can easily fall out and run over.
- Extra riders fall out of the cab and are run over.
- Pinned between the skid steer and a building or object.
- Operators did not wear their seat belt and were thrown out under equipment.
- Safety features: seat belt, ROPS, side screens are modified so they can't provide the operator protection.



### Safe Operating Tips:

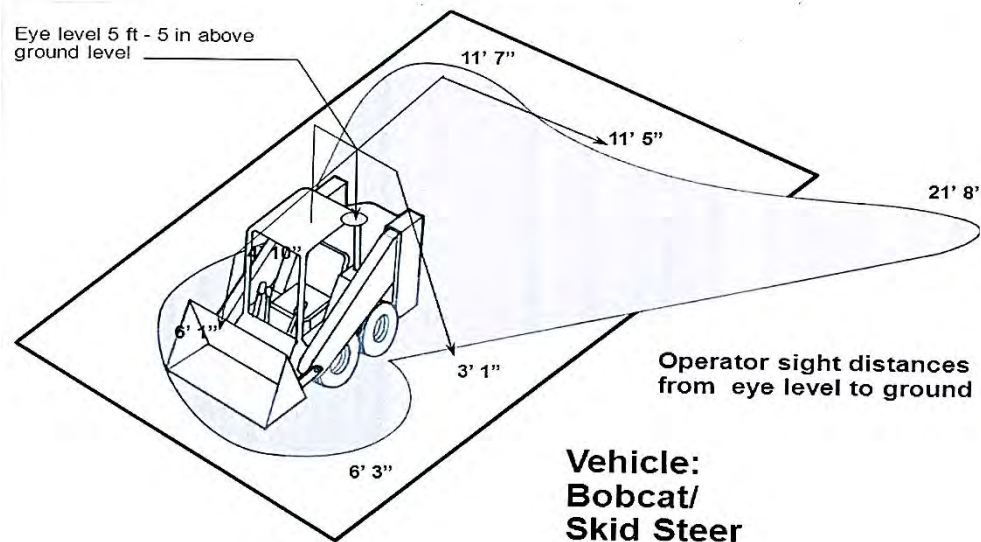
- No extra riders---Never! Never! Never!
- Mount and dismount with 3 point contact.
- Don't carry a heavy load high, keep it low.
- Always point the heavy end of the skid steer uphill when traveling up and down slopes.
- When the bucket is empty, point the heavy end uphill.



## Blind Spots Around Skid Steer Equipment

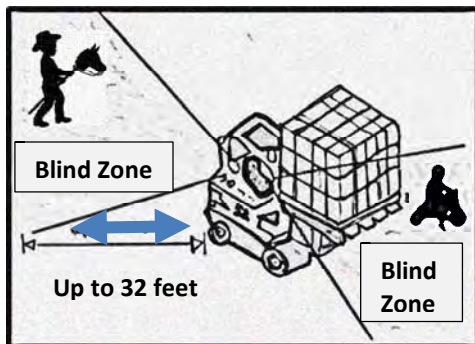
- Each piece of equipment will have blind spots. Get to know where your blind spots are located on your skid steer.
- There is a large blind spot area behind a skid steer. A convex mirror and/or a rear monitor will make a huge difference.
- Remember: the smaller the child, the more the problem for operators to spot them while busy operating the equipment.

[http://m.b5z.net/i/u/10031075/f/The\\_Skid-Steer\\_Machine.pdf](http://m.b5z.net/i/u/10031075/f/The_Skid-Steer_Machine.pdf)

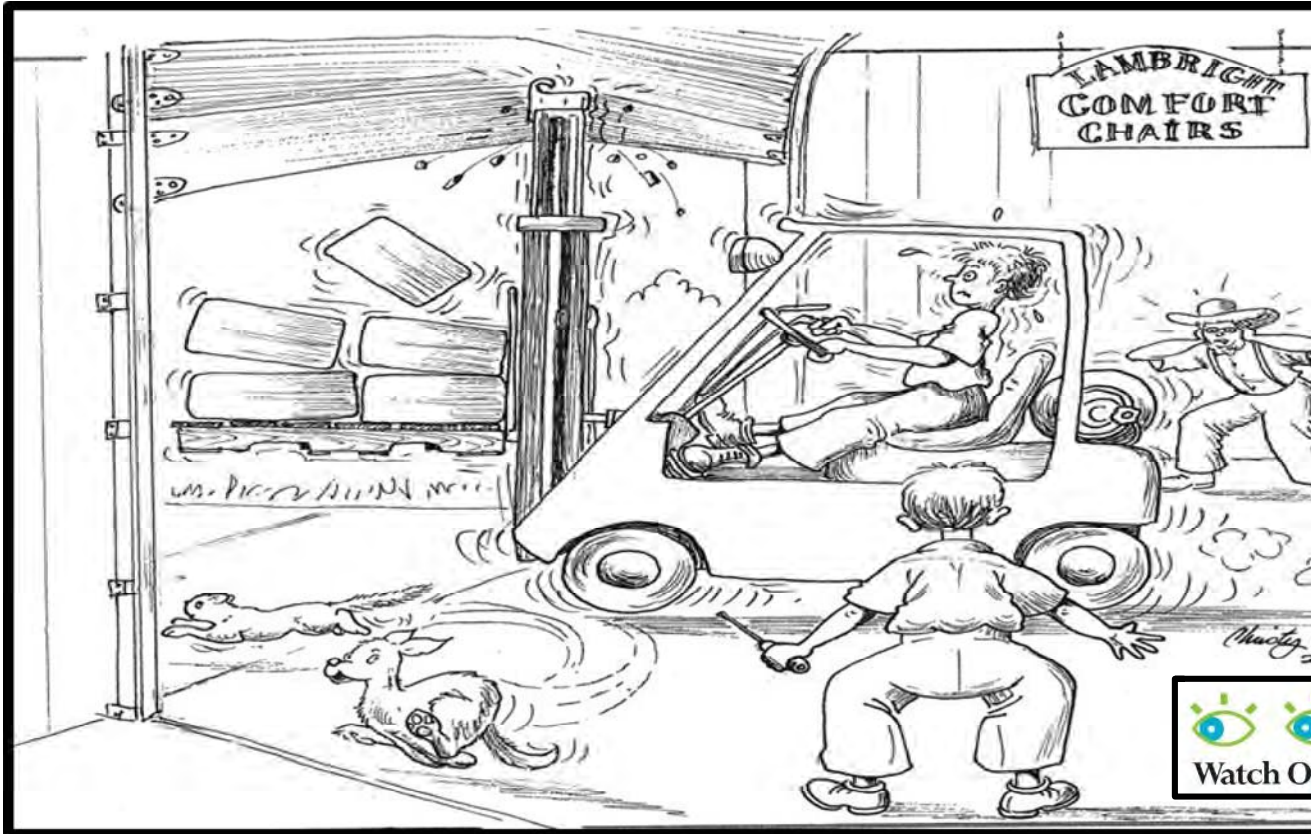


## True Stories: Runover Injuries and Deaths Caused by Skid Steer Equipment.

- In 2012, a 3-year-old boy was killed when he was run over by his 7-year-old brother. He was giving the children a ride and 3 of the children fell out of the bucket and were injured.
- A 12-year-old girl was killed on a dairy farm when attempting to get into a skid steer while it was running. She wanted to take the place of her mother. She lost her balance when the skid steer started bouncing and she was crushed between the frame and the bucket.



- A 2-year-old child was injured after falling off of a skid steer loader that he was riding with his grandfather. The child died later in the hospital from head trauma.
- A 2-year-old Minnesota boy was fatally injured when his father was using the skid steer to move snow. The arm of the skid steer, that controls the bucket, struck the boy on his head.
- In Colorado, a 17-month-old boy was run-over by a skid steer loader operated by his father who didn't see his son in time to stop.



## Forklift Stability and Center of Gravity

### Forklift Equipment:



A forklift is a powered industrial truck used to lift and move heavy materials; bags of feed, mulch, soil, and items on a pallet from one place to another. Forklifts are small and can fit into tiny areas. Forklifts are used in warehouse operations, to load and unload trucks, and to move heavy objects.

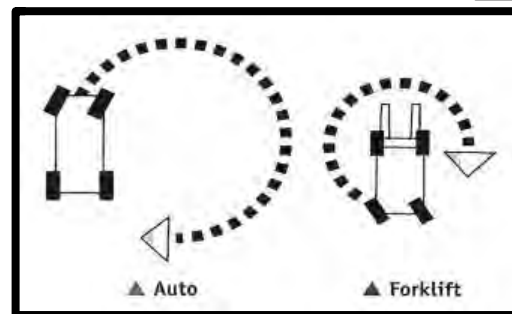
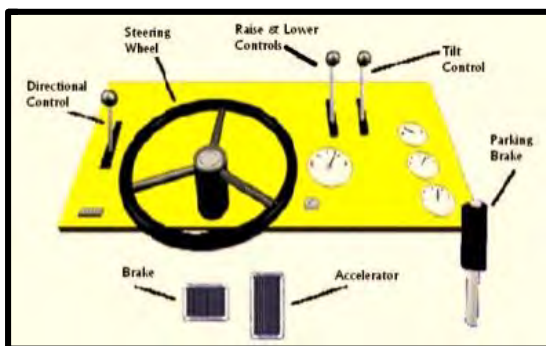
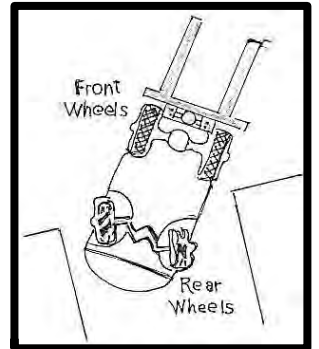
<https://en.wikipedia.org/wiki/Forklift>

### Driving a Forklift is Not Like Driving a Car or Truck.



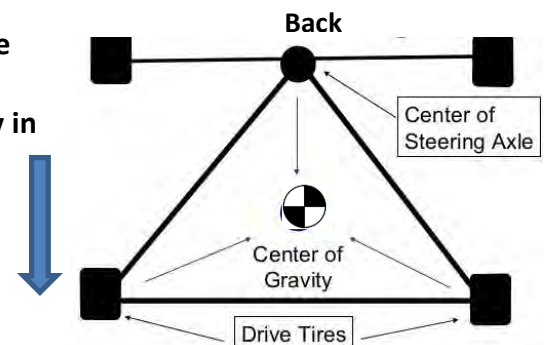
#### A Forklift Truck:

- Steers from rear. The rear wheels of a forklift control the steering. Be aware that the rear end will swing in a circle around the front wheels. [http://www.sueschauls.com/Forklift\\_Handbook.pdf](http://www.sueschauls.com/Forklift_Handbook.pdf)
- Swings wide in the rear and by-standers can easily be struck.
- Can stop quicker than a skid steer.
- Has brakes that work like a car or truck.
- Has controls that are different and more complicated to use than a truck or car.



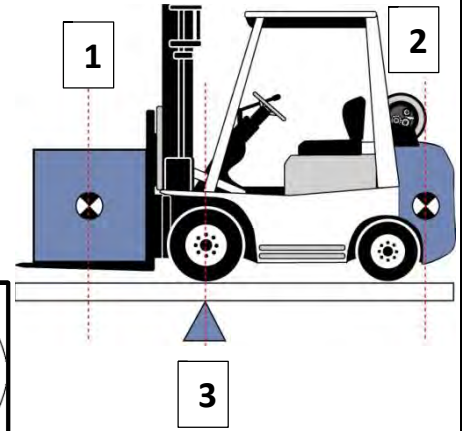
### Forklift Stability

- A forklift usually has front wheel drive just like most cars. Therefore, the forklift will stop moving if one of the front wheels comes off the ground or loses traction.
- To keep the forklift moving forward or backward, the truck's steering axle is attached by a pivot pin in the center rear axle. This allows the front wheels to stay in contact with the surface.
- A forklift has triangle stability and therefore there is increased risk that the center of gravity can extend outside the wheels causing a rollover.
- Forklift stability works the same way as the seesaw. The weight of the truck itself counter balances the load it is carrying.



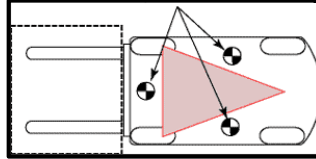
- A forklift has its own center of gravity:

1. Load has a center of gravity.
2. The truck has a center of gravity.
3. The two combined is called the combined center of gravity (CCOG)



A forklift's center of gravity moves when:

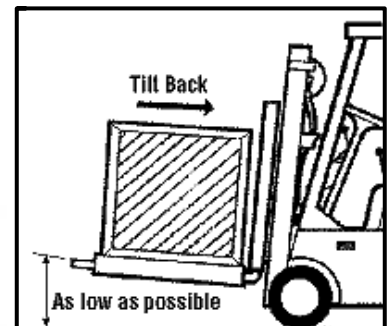
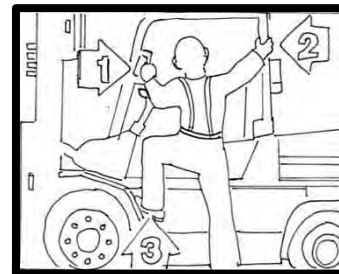
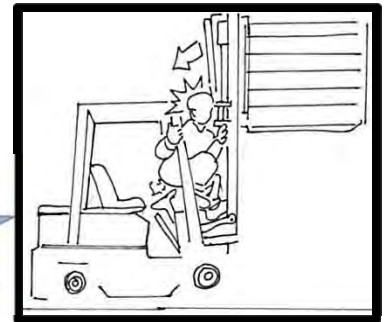
- Lifting and lowering a load.
- Moving the mast forward/backward.



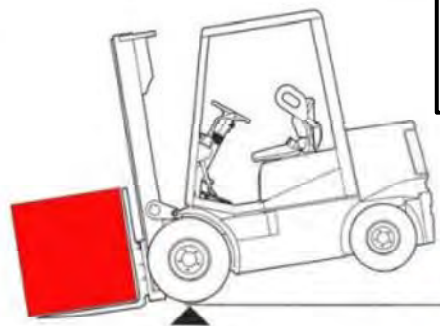
**\*To stay stable and not topple over, the center of gravity must stay within the triangle stability baseline.**

**Tips: To Increase Safety When Operating a Forklift:**

- Don't lean out of the driver's seat. You could be hurt between the mast and forklift.
- Mount and dismount with three point contact.
- Never start equipment when standing outside the equipment, only when sitting in the seat.
- Always wear your seat belt and stay in your seat.
- Keep the load centered, not off to one side.
- Keep the load back against the mast.
- Do Not brake forcefully.
- Drive slowly in order to stop safely.
- Drive carefully on unstable surfaces and wet or icy surfaces.
- Carry the load low, just above the ground with forks tilted back.
- Do not overload the forklift above the weight capacity that is recommended and should be posted on the machine.



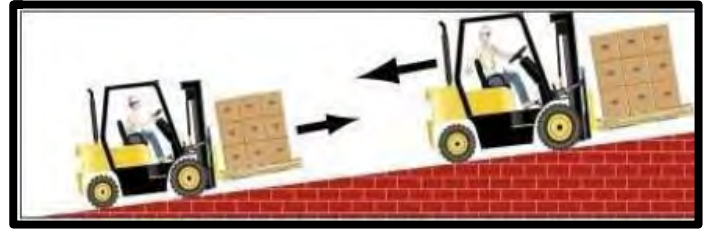
FORKLIFT												
SERIAL NO.	D90 842678 104 5											
CAPACITY	1800 kg											
AT 60 CM LOAD CENTRE WITH UPRIGHTS VERTICAL												
TYPE	G											
CHARGE	<table border="1"> <thead> <tr> <th colspan="3">MAXIMUM RATING</th> </tr> <tr> <th>KILOGRAM</th> <th>A</th> <th>B</th> </tr> </thead> <tbody> <tr> <td>1800</td> <td>60</td> <td>385</td> </tr> </tbody> </table>			MAXIMUM RATING			KILOGRAM	A	B	1800	60	385
MAXIMUM RATING												
KILOGRAM	A	B										
1800	60	385										
FOUR RATING WITH ATTACHMENTS SEE ATTACHMENT NAME PLATE												
DO NOT EXCEED RATING												



**This is what can happen when a driver stops suddenly & is carrying a load.**

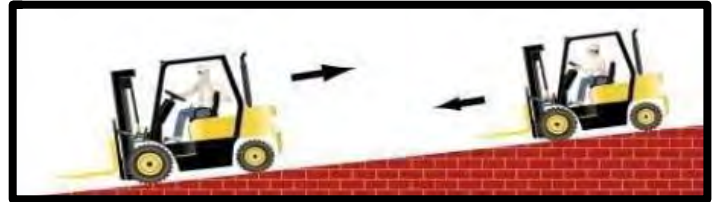
**Always drive with A load:**

- On the “uphill” side.
  - Go backwards down the incline.
  - Go frontwards up the incline to prevent tipping and losing control.



**Always drive with NO load:**

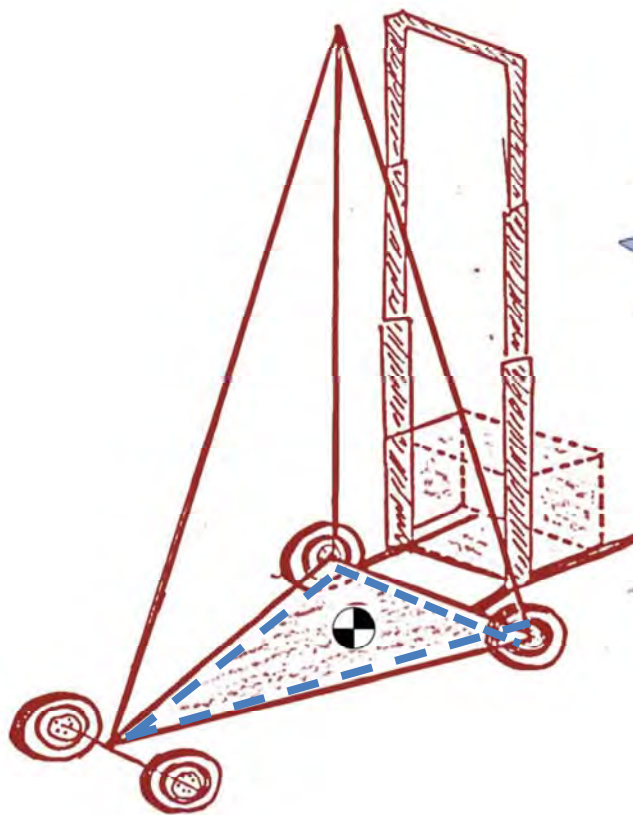
- With forks pointing down the ramp.



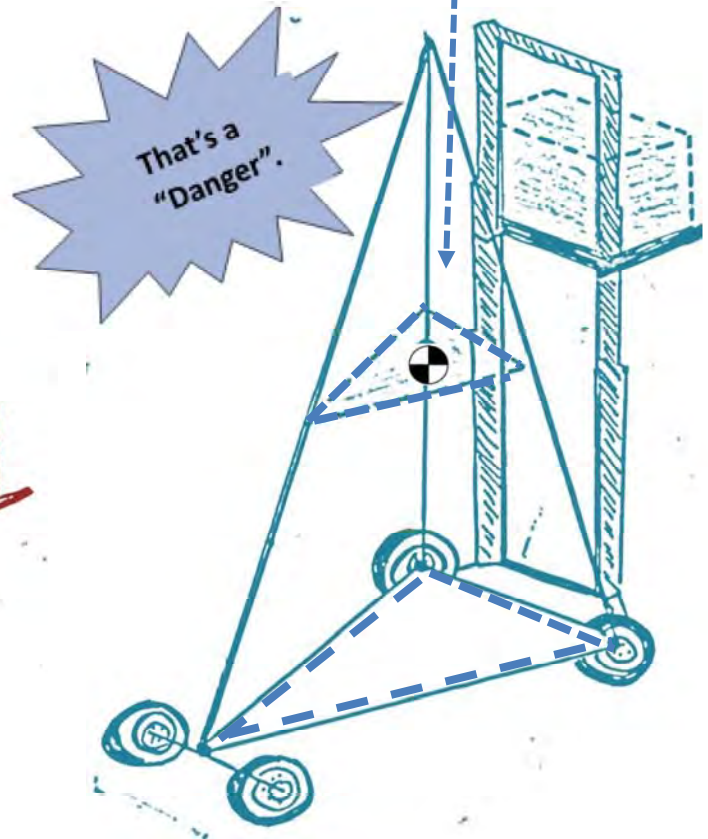
**Top Causes of Forklift Rollovers!**

**The more Height, the more Danger.**

- The stability baseline gets smaller and smaller as the height increases.



●---Center of gravity symbol.

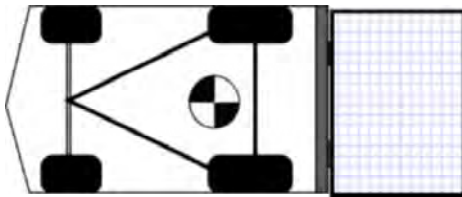


**Avoid Stopping Suddenly.**

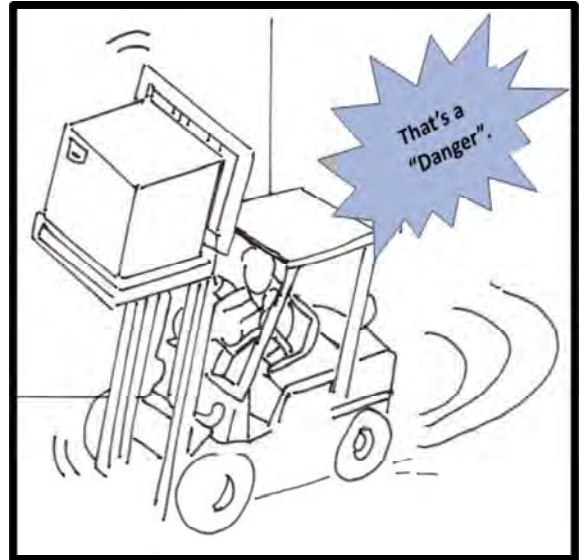
- Even gentle braking can move the center of gravity forward and out of the stability baseline.

## Speeding Increases the Risk of Rollovers.

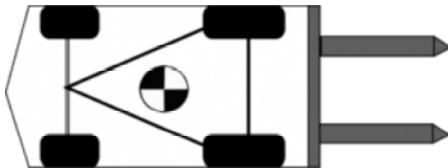
- Turning is a concern especially with increased speed since the forklift goes sideways in the opposite direction from the way the forklift is turning.
- A loaded forklift is more likely to tip forward because the center of gravity is closer to the front axle.



Loaded forklift



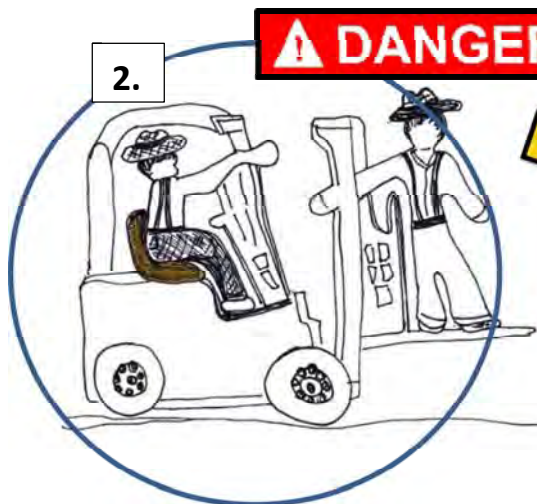
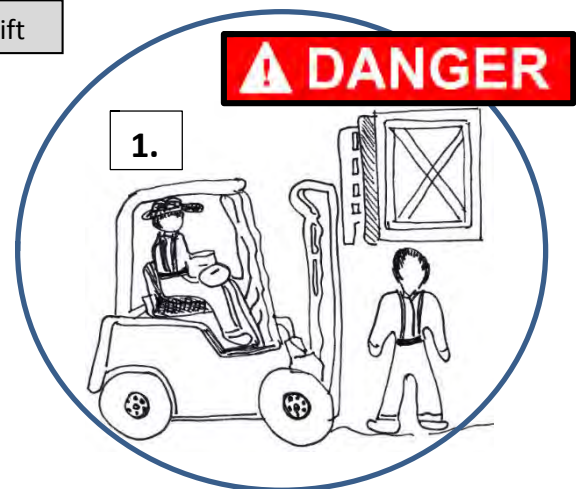
- Even when the forklift is not carrying a load, speed can cause a rollover because the center of gravity is near the sides of the triangle stability baseline.



Unloaded forklift

### Forklift Dangers:

- 1. Don't stand under equipment when the forks are elevated.
- 2. Don't put your hands outside the cage or through the mast of a forklift.
- 3. Don't be an extra rider on a forklift

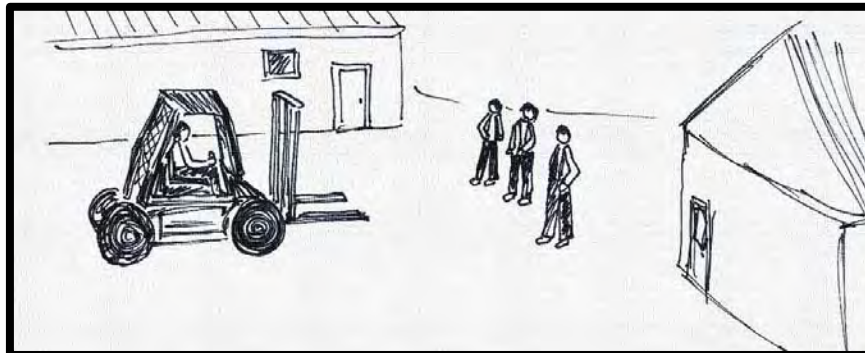
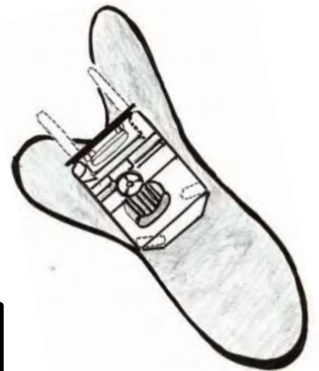


### Common Blind Spots Around Forklifts:

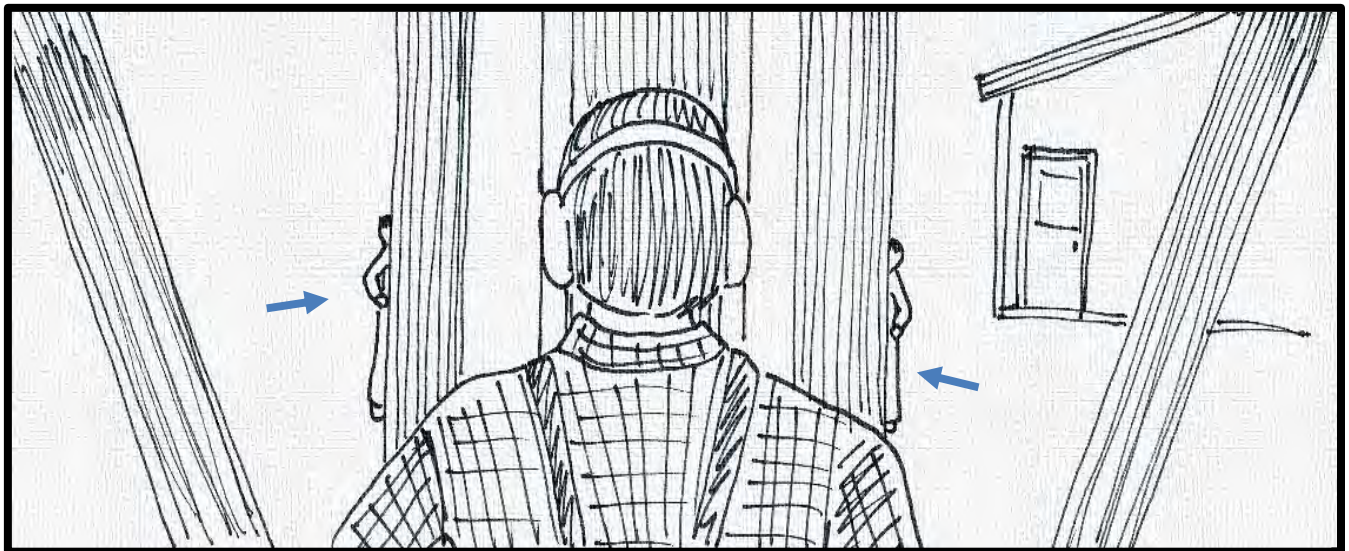
- Directly behind the truck.
  - Look back when backing.
- Far sides or rear corners of the truck.
- In front of the mast, fork carriage, or handling attachment.
- View can be blocked by overhead guard looking up and by supports at front, rear, and the sides.
- View can be blocked by LP fuel cylinder.



**\*Always Look Back**



**How many men are in front of the forklift above? If you said three, you are correct.**



### Answer

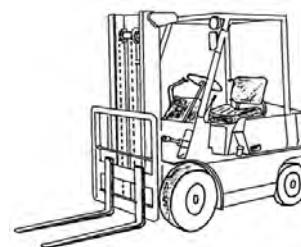
**You saw three workers, but the operator does not see three workers. He sees part of two workers. Can you find them?**

**Now, where is the third worker?**

**Answer: The third worker is in the blind spot in front of the mast.**

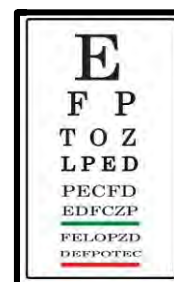
### **True Stories: Runover Injuries and Deaths with a Forklift:**

- A young person was riding on the side of the forklift that was driven by an untrained operator. The young person fell off and the forklift ran over his foot causing an injury.
- An 8-year-old child was run over by the wheels of a reversing forklift. The child was visiting his grandparents and was often taken for rides around the farm. The child fell from the forklift under the back wheel and died at the hospital.
- A 10-year-old boy died while driving a forklift near his family's farm. The forklift was driven over a ditch and it rolled over.
- A young boy drove a forklift up a ramp. When it tipped over, the boy fell out of the forklift which landed on top of him.
- March 2009, a 12 year-old boy was struck by an object falling off of a moving forklift at his father's business. He was severely injured and died.



## **DID YOU KNOW?**

**90% of the information we use  
when operating a vehicle is  
gathered by our vision?**



Farm equipment (tractors, skid steer loaders, forklifts) are the cause of approximately 50% of farm-related deaths and many injuries that occur each year. Many of the deaths and non-fatal injuries involve working youth with limited visual conception.

One study "Limitation in fields of vision for simulated young farm tractor operators" was research done by J.H. Chang et al. The study included youth simulated tractor operators and 42 farm tractors in popular use in the U.S. They compared fields of vision of youth compared to adult operators.



**The results showed that youth operators typically had  
diminished fields of vision compared to the average adult**

The degree of visual limitation was greater for objects at close distances straight in front of the operator/tractor. The studies reported that limited vision increases risk of runovers, rollovers, and collisions. <http://dx.doi.org/10.1080/00140131003671983>.

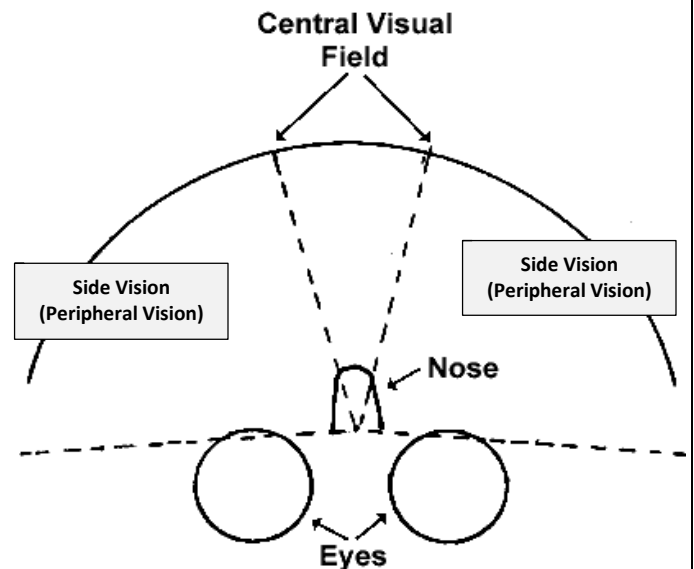
## Our Ability to See Affects Risk of Injuries and Fatalities

### We Use Central Vision and Peripheral Vision to See Clearly

**Vision:** is being able to see. Our visual system is the most complex and least developed system at birth. A baby spends the first few weeks or months learning to see.

#### Normal Vision Includes:

- **Central vision:**
  - What we see when we look straight ahead.
  - Central vision is what we see when we look through binoculars.



- **Peripheral or Side Vision Is:**
  - What we see out of the corner of our eye.
  - Not as clear as central vision.
  - Sensitive to light.
  - Sensitive to motion.

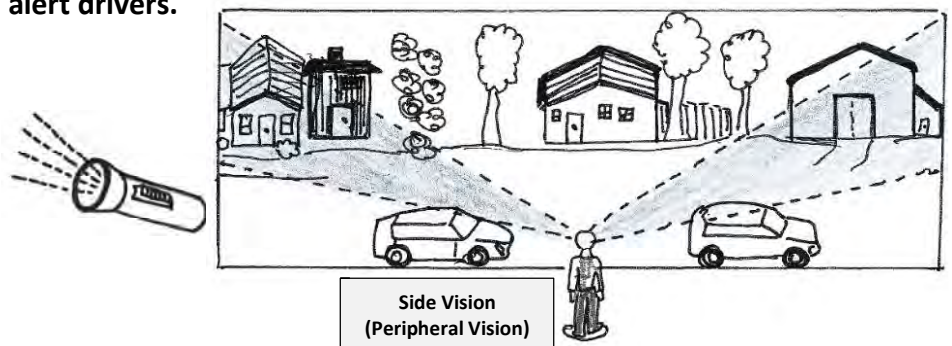
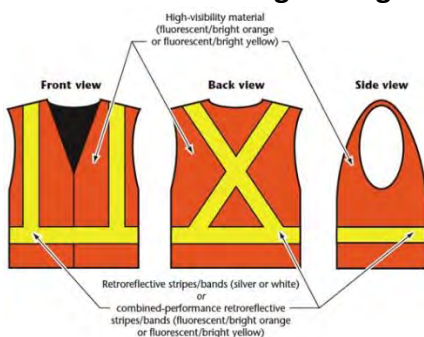
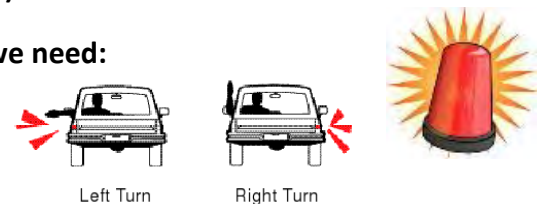


The constant motion of our eyes causes us to see a sharp, clear view. However, when we look straight ahead our eyes can scan 50% of our visual field or view. Our side vision provides us with information on movement and light.

**Did You Know?** ---When a person loses their side vision, we say they have "tunnel vision". They only see what is directly in front of them (central vision).

Side vision is not as clear as our central vision. That is why we need:

- Turn signals to blink on the sides of cars.
- A flashing light on farm equipment.
- Bright reflective safety vests.
- A moving flashlight to alert drivers.



## The Location of Our Eyes Affects How Much We See When Looking Ahead

When we use both eyes and look straight ahead at an object, the amount of area we can see is called our Field of Vision.

### Cats:

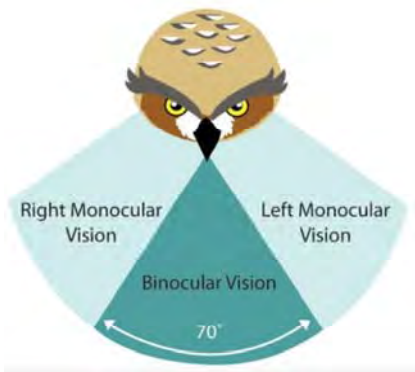
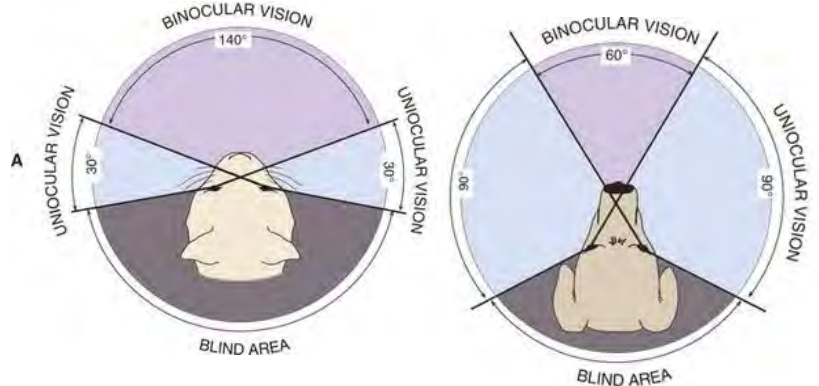
- Have 200 degrees of visual field.

### Dogs:

- Have 240 degrees of visual field because their eyes are on the side of their head.



[http://veteriankey.com/wp-content/uploads/2016/08/B9780721605616500046\\_gr7.jpg](http://veteriankey.com/wp-content/uploads/2016/08/B9780721605616500046_gr7.jpg)



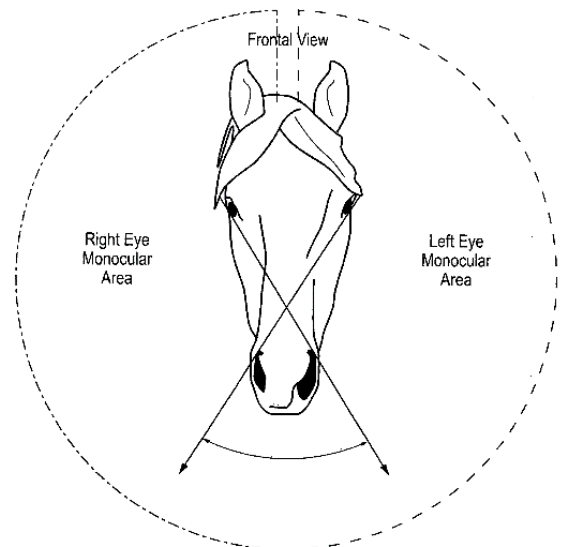
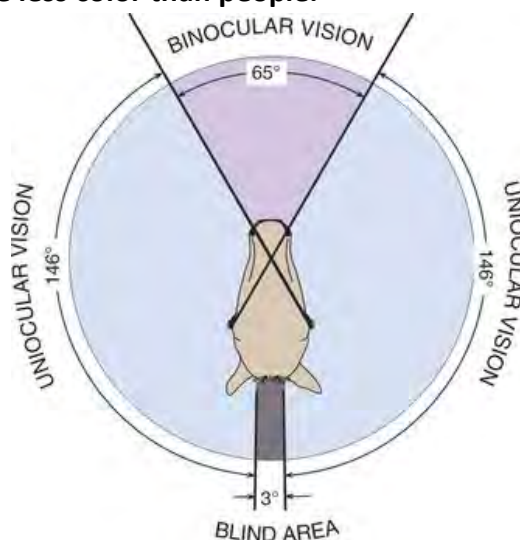
### Owl's Eyes Are so Big, Powerful, and Fill the Entire Eye Socket.

Owls can turn their heads 270 degrees but when they are hunting a mouse or rat they:

1. Sit on the branch quietly (so their prey may not know they are there).
2. Don't move.
3. Keep their eyes in a gaze on an object straight ahead.
4. Sit still and watch for movement on the side.

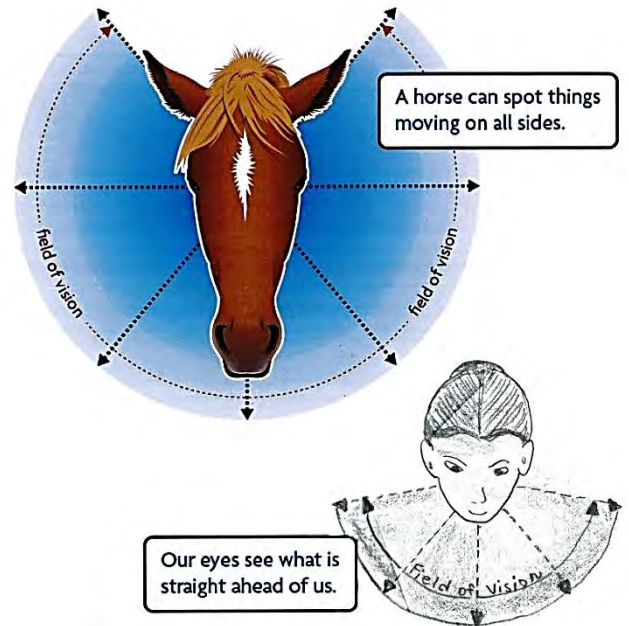
### Horses:

- Have 340 degrees of vision because their eyes are on the side of their head.
- Have the largest eyes of any land animal.
- Can watch what's happening on the side without turning their heads.
  - It's a prey protection skill.
  - That's why we talk to them when we get close so they don't get spooked.
- Have blurrier vision than people.
- See less color than people.



### People:

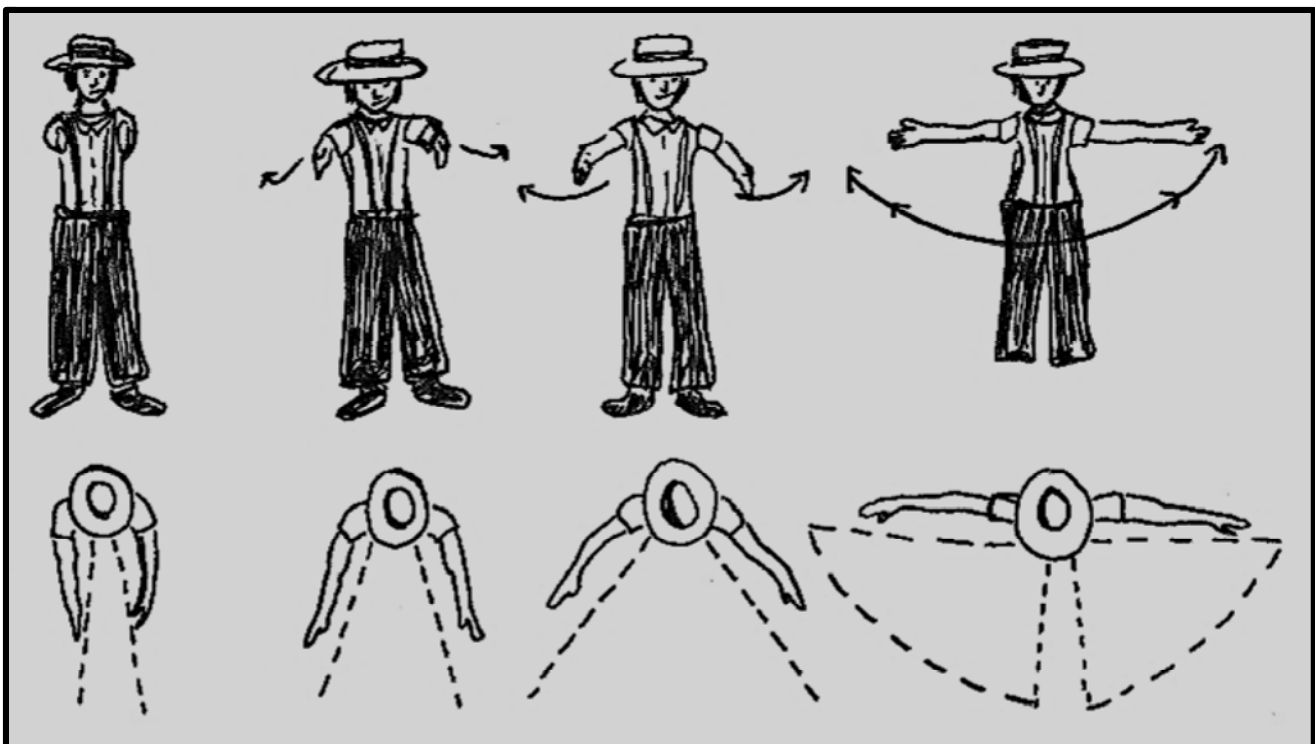
- Have 200 degrees of visual field.
- A child reading a book (looking ahead using their central vision) is aware of things going on around them (the teacher approaching from the side) because they are using their side vision.
- We also use our side vision when:
  - Riding a bike or a scooter.
  - Walking along the road.
  - Crossing the road.
  - Playing baseball (catching fly balls through the air).
  - Driving horses, a tractor, skid steer loader, or forklift, car or truck.



### Test Your Peripheral Vision:

1. Stare at a fixed point right in front of you.
2. Raise your arms straight out in front of you, as seen in the picture. You may do it with your thumbs pointing upwards.
3. While you keep looking at the fixed point in front of you, move your arms horizontally towards the back. Move slowly, moving your hands towards your side. Stop when you see the edges of your thumbs out of the corners of your eyes while staring ahead.

[<http://vital-points.com/improving-your-situational-awareness-part-2-peripheral-awareness>]

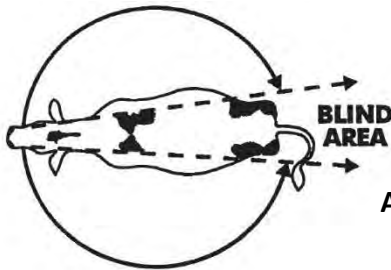
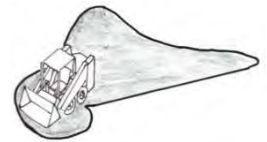


## Equipment Blind Spots Increase the Risk of Rollovers and Child Runovers

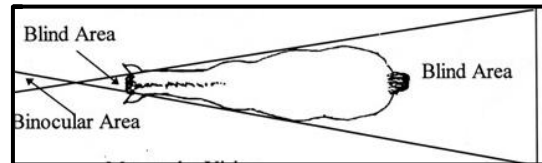
### Important facts to know about blind spots:

Blind spots are areas near a vehicle that cannot be directly seen by the operator of the vehicle.

- Blind spots are found in front of, on both sides, and behind all cars, trucks, buggies, and farm equipment.
- The size of the blind spots will vary with the size of the vehicle--the bigger the vehicle, the bigger the blind spot.
- The height of the operator of a vehicle will affect visual ability. The shorter the person, the more difficult it is to see around farm equipment.
- Children are short and therefore are close to the ground. They are more difficult to spot around equipment or vehicles.

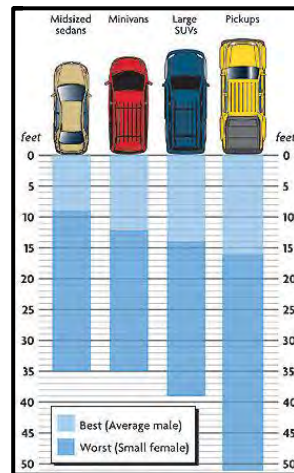


### Blind Spots

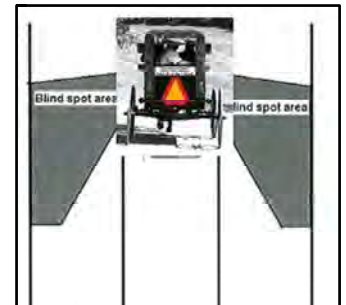


Animals like cows and horses have blind spots.

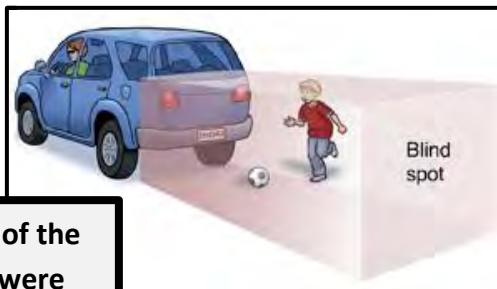
All Vehicles Have Blind Spots.



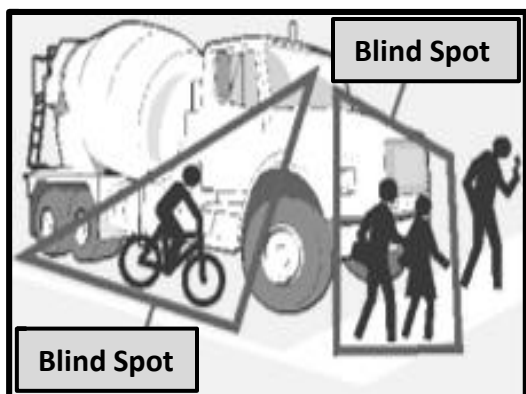
Did you know that the bigger the vehicle, the bigger the blind spot?



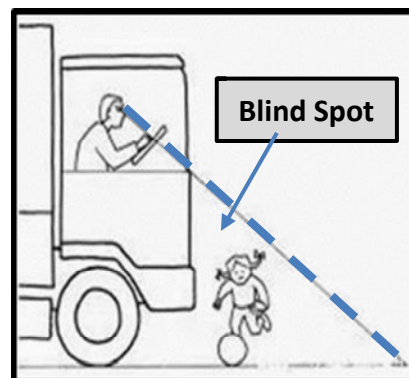
Buggies Have Blind Spots.



The operator of this car could not see any of the 76 children sitting behind her van. They were invisible to her through her mirrors. The best thing to do before moving a vehicle or machinery is to take a walk around the vehicle.



Those who stand too close to the sides, front or the back of a vehicle can be hit. The driver can't see anyone who is standing in a blind spot.



Never think that you can outrun a backing vehicle.

Vehicles go faster than you can walk or run.

The driver may not know you are there in time to get stopped!



How many children do you see standing next to the car? \_\_\_\_\_ Answer.



How many children does the driver see when looking in his rear view mirror? \_\_\_\_\_ Answer.



Yes, the driver only sees three children, not five.

Why can't the driver see all five children in his mirror?

Answer:

Two of the children are hidden behind part of the car: the car post/roof.





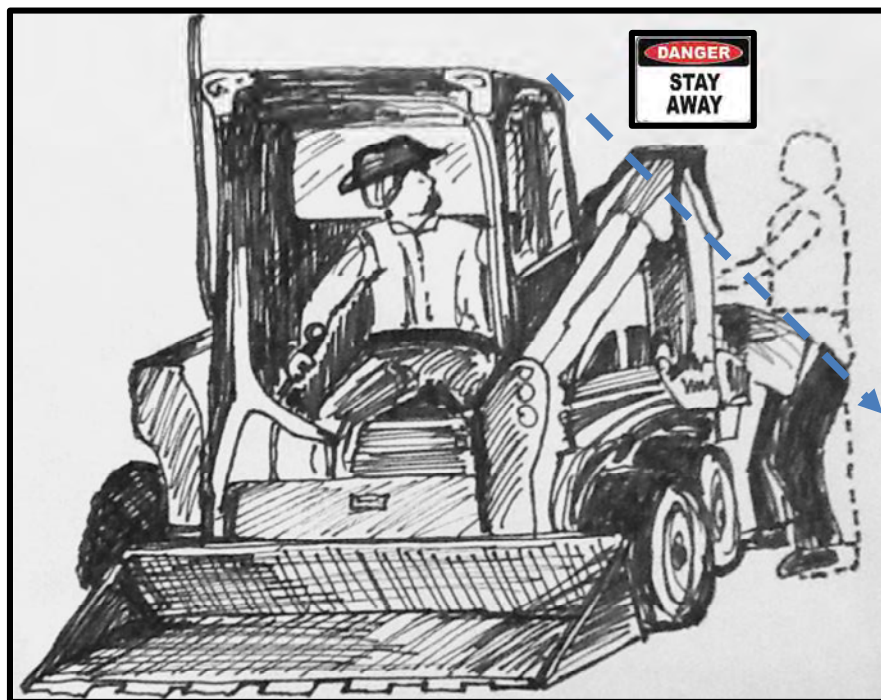
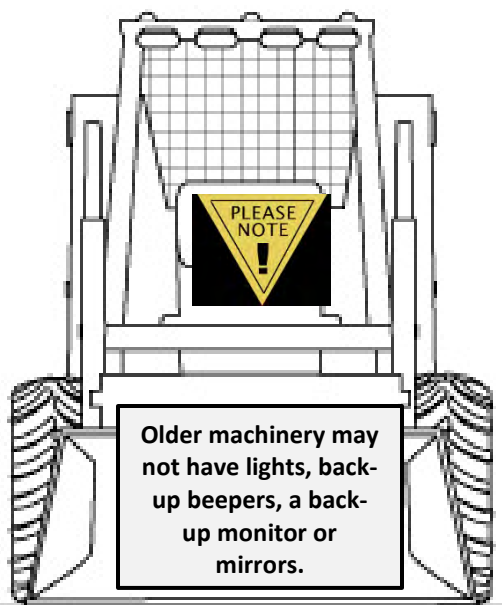
**Children:** Don't play or walk in front of or behind a car, truck, or any farm machinery. The driver may not be able to see you in his mirrors.



**Drivers:** Always walk around your vehicle before you move forward or backward to make sure there are no children standing nearby. *It only takes a few minutes and those few minutes could save a life!*



It's difficult to see what is directly behind a skid steer loader. The back window is high off the ground, making it impossible to see adults bending over or to notice children.



**Before Operating Equipment:**  
**Find out Where the Blind Spots Are Located Around Your Tractor, Skid Steer Loader, or Forklift**

### **Family Blind Spot Activity--initial first steps:**



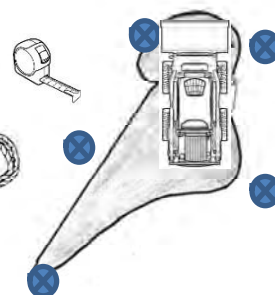
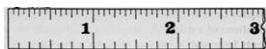
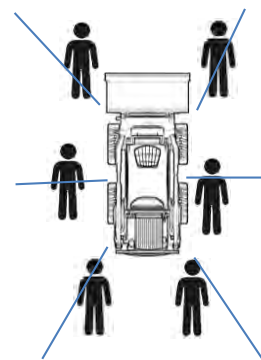
- ❖ Take the key out of the equipment, apply the brakes and turn the wheel sideways.
- ❖ Put your vehicle (tractor, skid steer loader, forklift, car or truck) in an open area where there is no moving traffic so everyone is safe. *You can repeat this demonstration with different vehicles to show how blind spots vary from one piece of equipment to another.*

Adapted from: [https://www.osha.gov/dte/grant\\_materials/fy11/sh-22285-11/Handouts.pdf](https://www.osha.gov/dte/grant_materials/fy11/sh-22285-11/Handouts.pdf)

## Family Blind Spot Activity Continued



1. Have one youth sit in the driver's seat.
2. Position other youth around the vehicle: including the front, both sides and back of the vehicle.
3. Each youth, one at a time, will walk slowly from their spot until the driver sees their shoes (using only his or her mirrors or windows).
4. The driver can indicate when he/she sees the person's shoes by beeping the horn or saying, "I see your shoes".
5. Mark that spot with a box, bucket or jug. Repeat until you have located all the edges of the blind spots.
6. Finally, draw a line with chalk or use a rope to connect the edges to see the size of the blind spot for that driver. You can use a tape measure to measure the distance.



*Note: the height of the operator and the size of the vehicle will cause variation in the size of blind spots! The bigger the vehicle, the bigger the blind spot.*

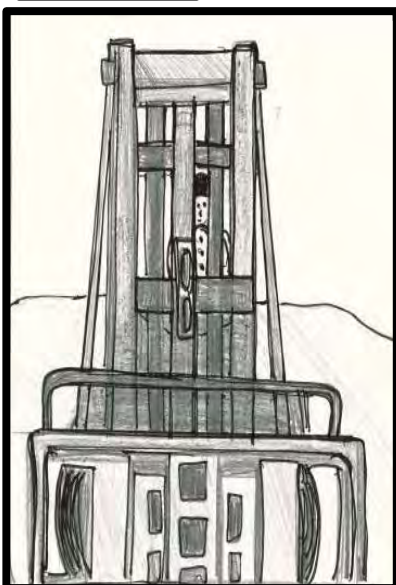
**Safety = Good Working Farm Equipment + Safety-Minded Operators**

*New Farm Equipment is Designed to Increase Safe Handling and Operating*



### Used Machinery May:

- Lack an operational manual.
- Lack classroom or hands-on safety training.
- May lack safety features found on newer equipment that protect the operator as well as by-standers.

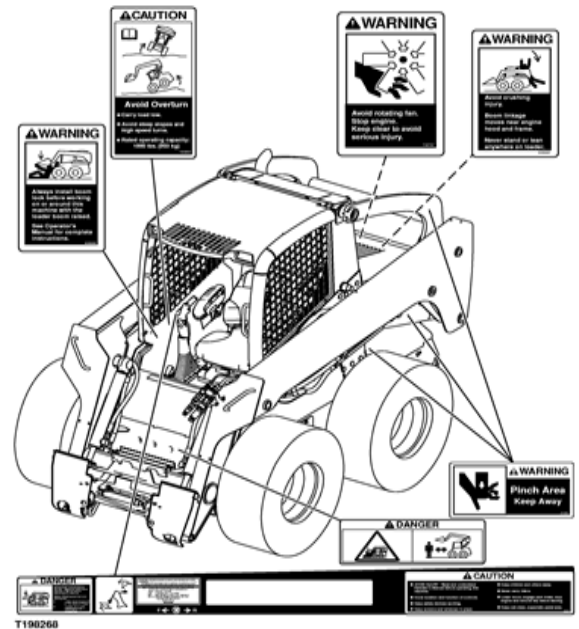


**Note:** the older forklift shown on the left with limited front vision through the mast makes it harder for the operator to see what is ahead. The operator on the right is operating a newer model with a mast that allows the driver better vision to the front.

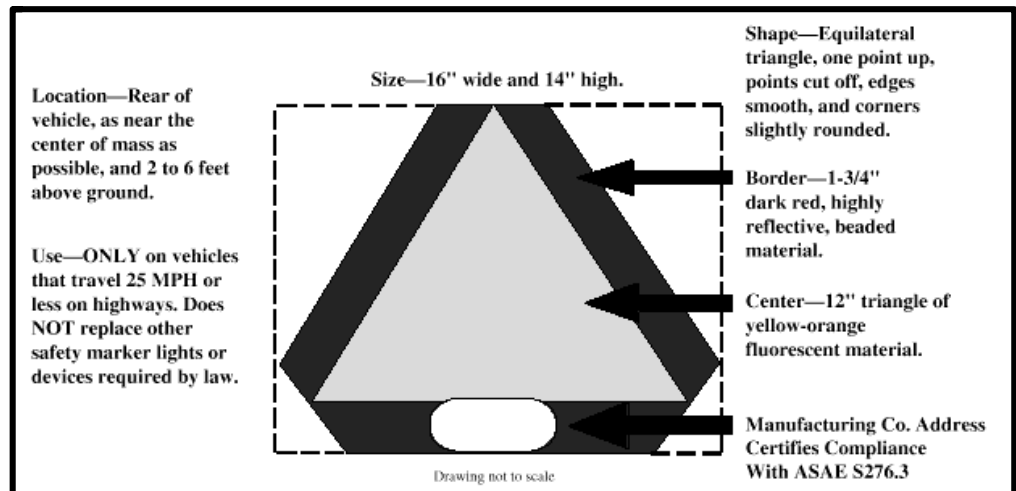


## *The Good News Is: Safety Gear Can Be Purchased and Installed on Used Equipment Such As:*

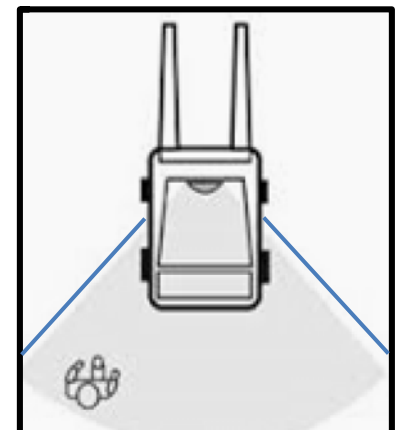
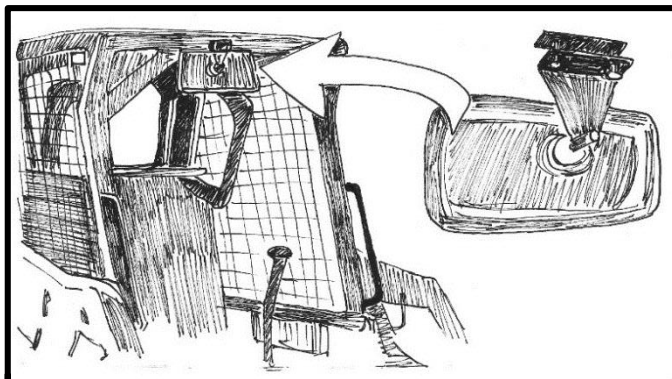
- **Warning Stickers**—remind operators to use safe practices.



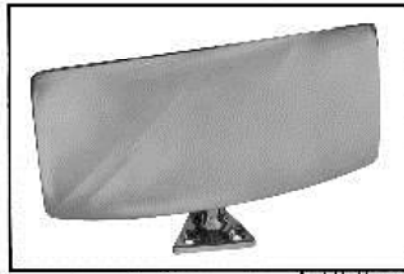
- **Slow Moving Vehicle Sign**—put on all equipment traveling under 25 mph.



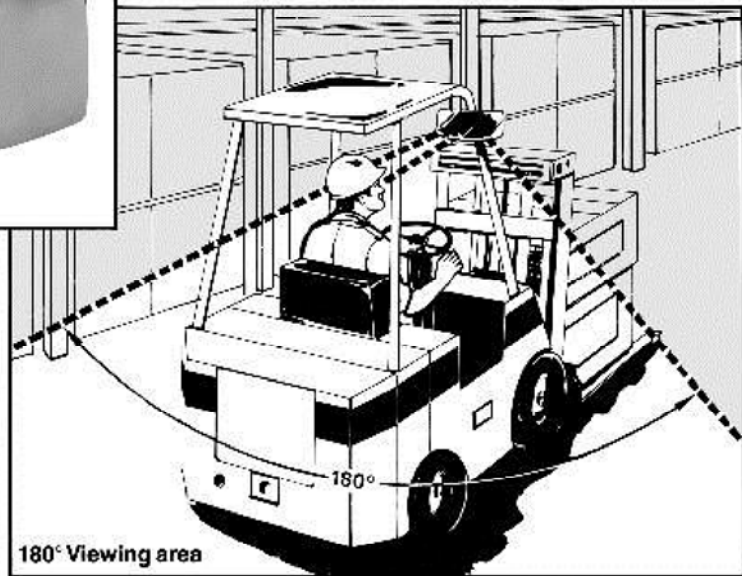
- **Mirrors**--enhance the operator's view to the rear of the machine.



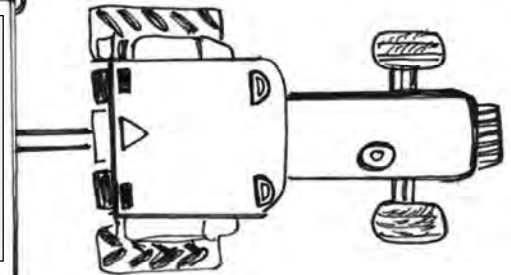
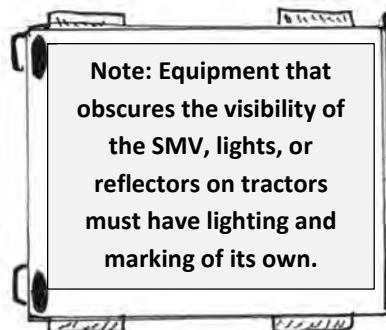
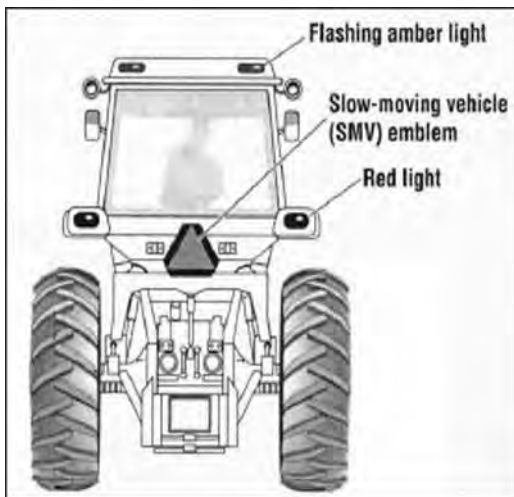
Operator's view using a mirror.



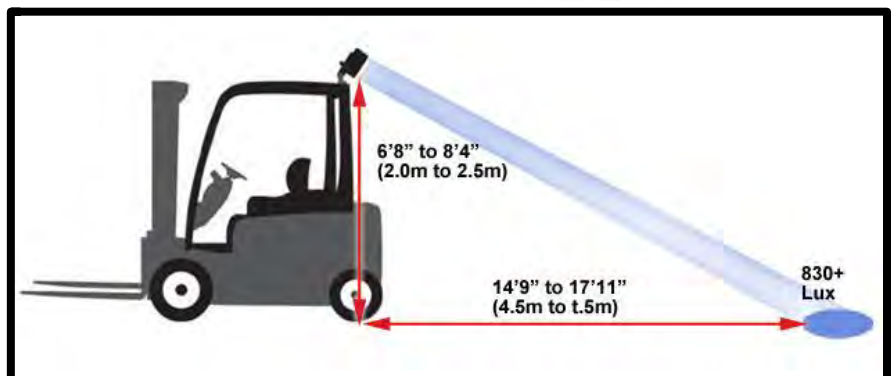
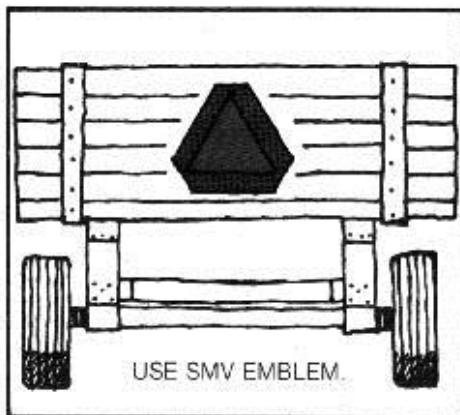
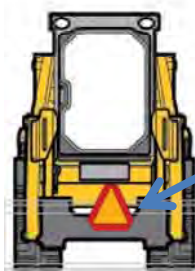
See in all directions  
at a single glance



- **Lights**—warning lights on top of vehicles and “blue” spotlights warn those standing nearby.



Use a slow  
moving  
vehicle sign  
(SMV) and  
Lights when  
driving on  
the road!



- **Backup Alarms**—warn children and adults that the equipment is going to be moving or coming near them.



Note: Children may be focused on what they are doing and may not hear the alarm.

Do everything you can to prevent an injury---beep, blow the horn, use a mirror, a monitor, and have someone responsible for the care of a small child.

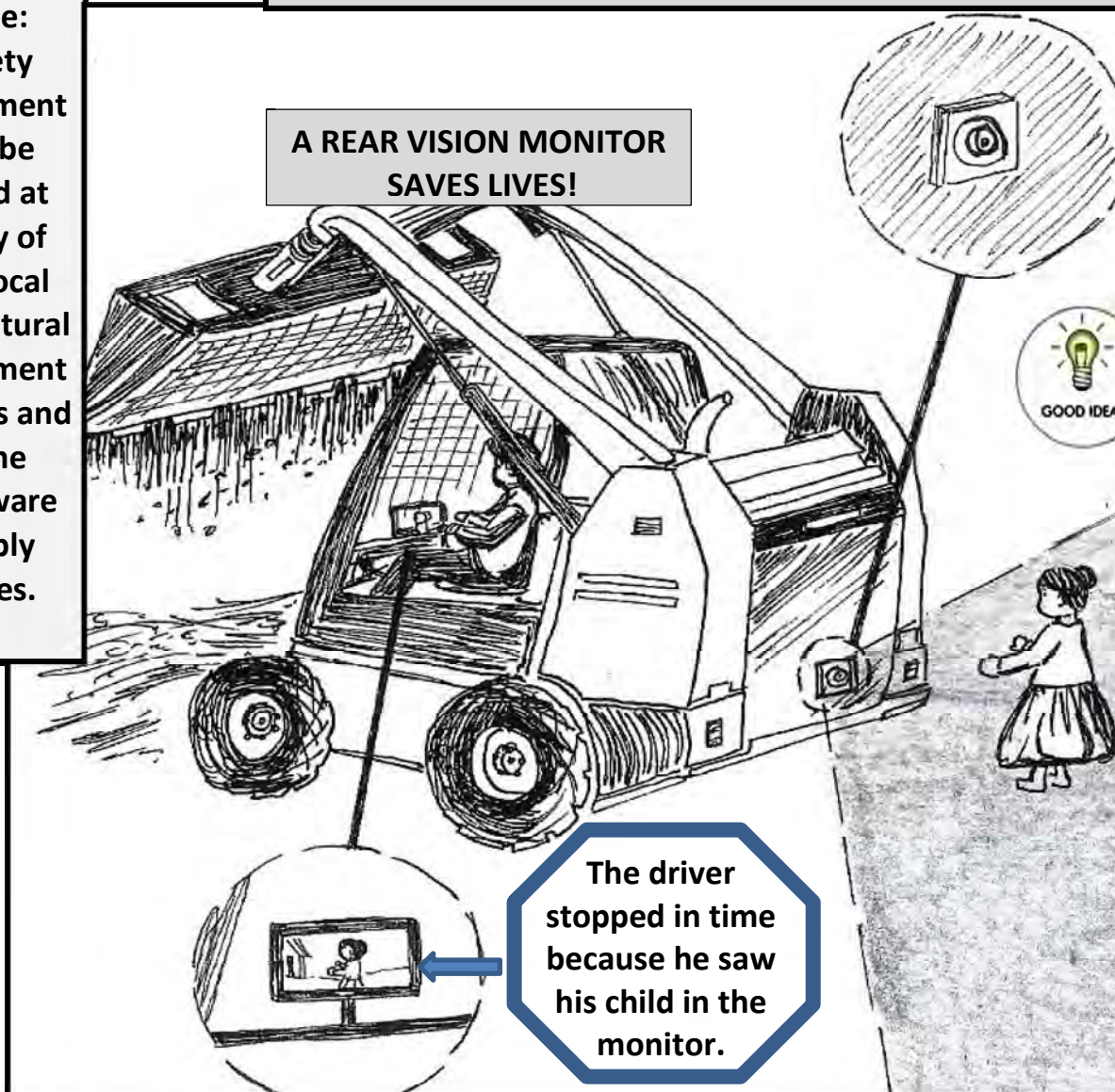


- **Backup Monitors**—(sometimes called back-up camera) do not take pictures but allow the driver to see what is directly behind the equipment.

4" monitor with new metal license plate cam (color night vision and IP68 weatherproof rating) complete kit with 30ft cable.

Note:  
Safety equipment can be found at many of the local agricultural equipment dealers and some hardware supply stores.

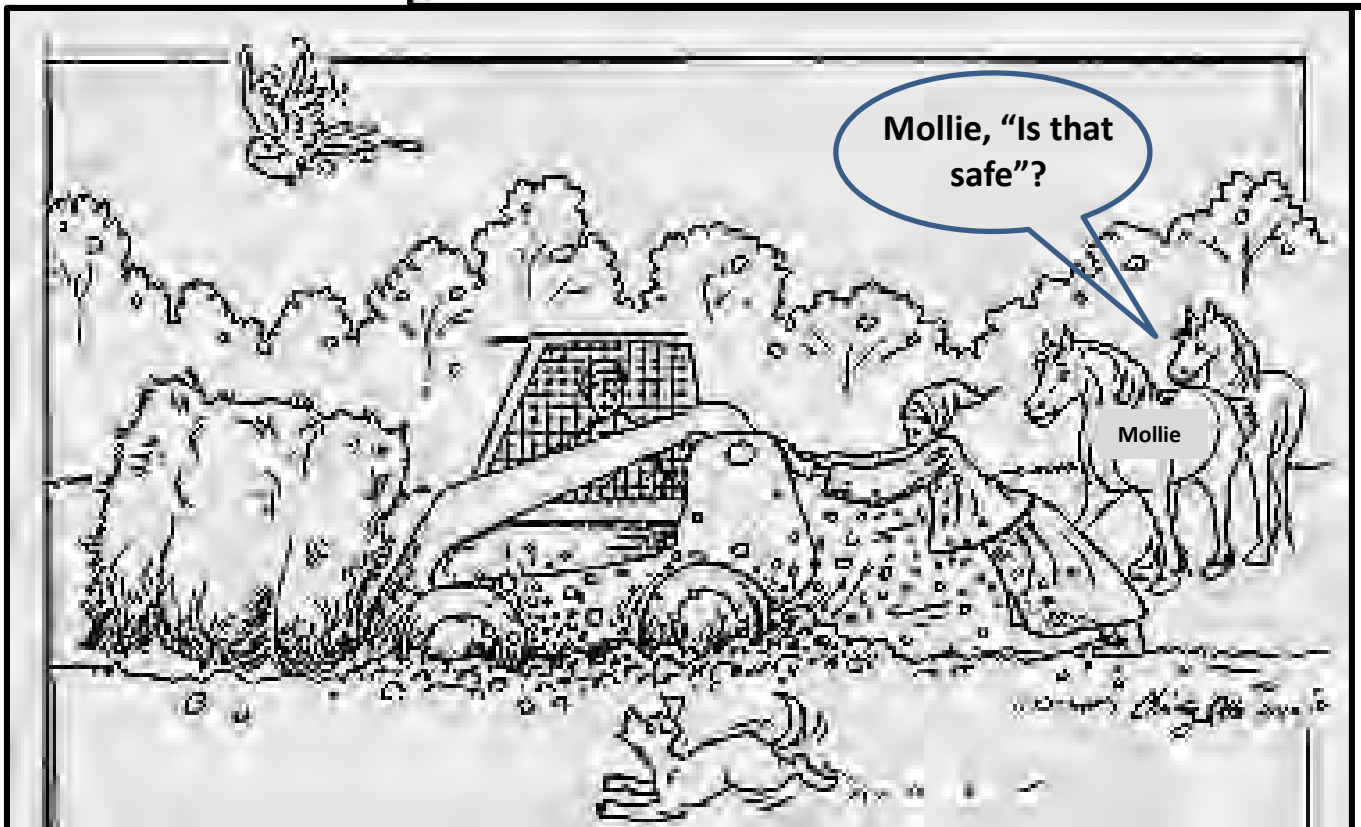
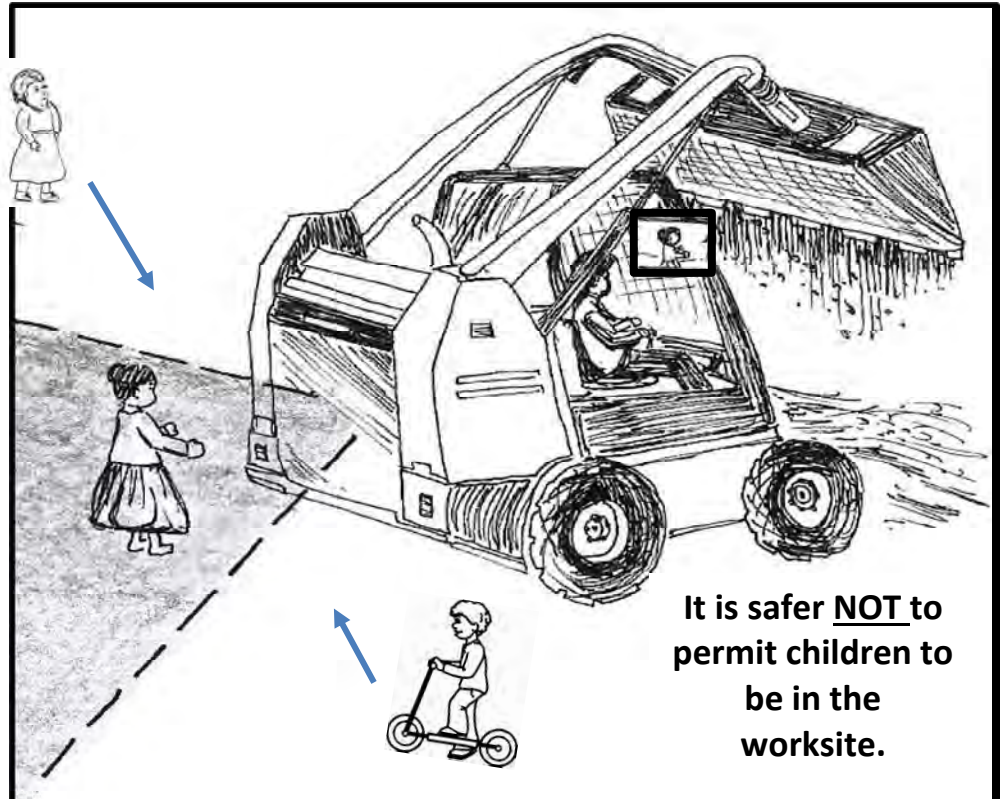
A REAR VISION MONITOR SAVES LIVES!



The driver stopped in time because he saw his child in the monitor.



The back-up monitor helped the operator of the skid steer loader see the girl standing behind the machine. However, the monitor will not show those walking or running from the far left or right of the equipment. The operator must turn and look over his shoulder to the left and right to make sure all is clear.

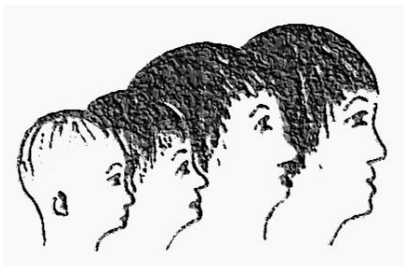


### Three Safety Stories: Different Ages Need Different Methods to Prevent Injuries and Deaths

#### **Children Are More at Risk of Being Injured by Hazards on a Farm Than Adults.**

Lessons learned growing up on a farm can help children develop family relationships and become hard working, independent adults. Farm life teaches children skills needed to run a business and be a good parent. A farm is a great place to live but a farm environment includes many dangers such as large animals, ponds and streams, manure and silo gas, and lots of fast moving farm equipment. These hazards can cause injury to both children and adults.





However, children and youth are more at risk of being injured than adults since children cannot understand the consequences of their actions. Most children and youth lack life experiences that help them to make good decisions. They are not physically or mentally able to cope with or respond quickly to unexpected happenings.



**The art of using self-discipline, controlling impulsive behaviors, and being able to look at the bigger picture are not fully developed until a person is 20 years old.**

Children learn by watching what their siblings, peers, and adults do around them. Children need parents and family members to protect them from injury by making safety a priority. Modeling safe work behaviors, creating simple barriers, establishing farm safety rules, and teaching safe work practices will promote a better living and working environment that will decrease farm-related injuries and deaths.

*The following three stories are about different stages of growth and development of children. Knowing more about what physical and mental changes occur at each stage of growth helps parents to increase their awareness of how to protect young children from harm. Before each story you will find information regarding the characteristics and causes of most farm injuries and suggestions to prevent injuries for each stage of growth.*

	<b>1. The First Story: Lancaster General Hospital Nurses Learn How Parents Protect Their Young Children on a Dairy Farm.</b>
	<b>2. The Second Story: Dr. Reihart Visits an Amish Dairy Farm.</b>
 	<b>3. The Third story: How a Mennonite Family Prevents Injuries on Their Vegetable Produce Farm.</b>

**See if you can identify some of the safeguards that protected each child as you read the stories!**

# 1. Lancaster General Hospital Nurses Learn How Parents Protect Their Young children on a Dairy Farm

## Understanding a Toddler's Growth and Development Can Help Parents Prevent Injuries and Fatalities.

Toddlers (0-5 years-old) don't understand that their actions have consequences. They run, climb, and mimic what others do. They put everything in their mouth because that is how they explore; they learn by touching and feeling. They will drink anything, even if it tastes bad, like gasoline. They have an active imagination. They are attracted to moving objects and noise, like a lawn mower and farm equipment. They will crawl into small spaces and they are attracted to water. They fall and trip easily since their muscles are not fully developed.

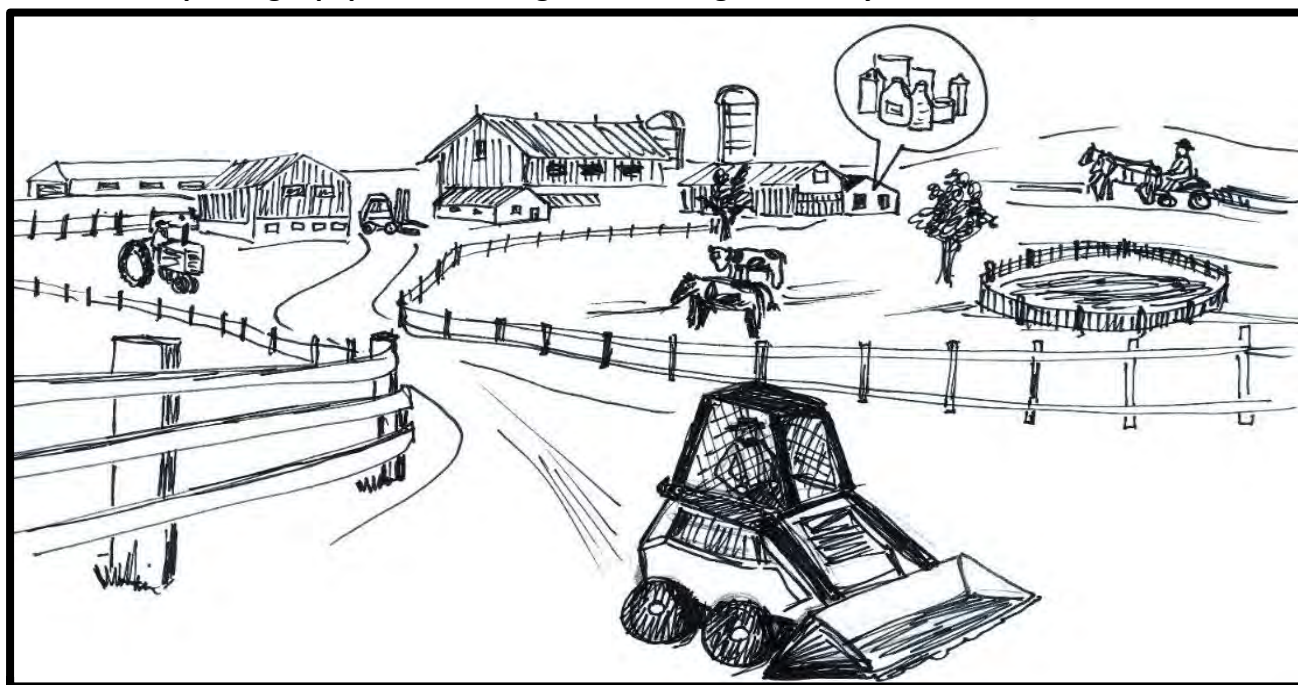
**\*\*\*Playing or riding on equipment, standing near machinery, running in back of or in front of farm equipment can result in a runover fatality.**

Characteristics 0-5 years	Causes of most farm injuries	Suggestions to Prevent injuries
<ul style="list-style-type: none"> <li>❖ Not able to understand cause and effect-(brain not fully developed)</li> <li>❖ Fascinated by movement, noise, fire and water</li> <li>❖ One track mind</li> <li>❖ Little awareness of danger</li> </ul>	<ul style="list-style-type: none"> <li>❖ Loves to climb but falls</li> <li>❖ Inquisitive and curious</li> <li>❖ Slips and falls easily (lacks strength--muscles not developed)</li> <li>❖ Poisoning-(they put everything in their mouth)</li> </ul>	<ul style="list-style-type: none"> <li>❖ Need for one-to one care</li> <li>❖ Use physical barriers: locks, fences</li> <li>❖ Keep matches, small batteries, marbles and farm/home chemicals out of reach</li> <li>❖ Need for a safe environment</li> <li>❖ Prohibit riding on machinery</li> </ul>

[Match Age, Abilities To Farm Chores - National Ag Safety Database...nasdonline.org/1263/d001067/match-age-abilities-to-farm-chores.html](http://nasdonline.org/1263/d001067/match-age-abilities-to-farm-chores.html)

### Background Information

This is a story about Amish parents (Eli and Lydia) who live on a dairy farm with their four young children: 9 year-old Mark, 7 year-old David, 5 year-old Susan and 2 ½ year-old Emma. Both Eli and Lydia grew up on dairy farms. They knew first-hand that farming was a high risk occupation because farms have: large animals, silo and pit gas, ponds and manure storage, chemicals, spinning equipment and large fast moving machinery.



## Eli and Lydia



Eli loved working in the fields on a bright sunny day with a breeze blowing on his face. He had time to look around and enjoy God's world. Eli felt that farming was not just a way to earn a living; to him, farming was a peaceful way of life.

Lydia loved helping her mother with the vegetable garden, cleaning the flower beds, canning and preserving food, and even doing barn and field work. She enjoyed rocking on the porch, reading a good book or sewing a new dress.

Eli and Lydia knew that a farm was a dangerous environment. As they were growing up, there were many adults and children who were injured or killed doing farm work. Some were neighbors, and some were even relatives.

Eli often heard his dad talk to his friends about hazardous worksites like: construction operations, woodworking shops, and businesses that use forklifts and/or skid steer loaders to handle the heavy work. The men said that each year there are some workers who are severely injured and/or killed. One of the men, named John, mentioned that owners and employers of businesses have a huge responsibility to protect their employees and provide a safe workplace for their workers.

Eli's dad said, "I never thought about how similar a hazardous industrial worksite was to a farm worksite. The hazards may be different, but both worksites (business and farms) have dangerous areas where workers can be hurt if safety is not made a priority. What do business owners do to increase their worker's safety?"



John said, "I know Cargill Animal Nutrition is one company that works hard every day to protect their workers and to provide every employee with a safe working environment. It's important to Cargill that their injury rates are as low as possible. They may have one incident in a year, in contrast to similar companies who may have eight."



"How does Cargill keep their injury rates so low?" asked Eli's dad.

John answered, "I heard that they:

- Train and monitor each new worker to do their job safely.
- Provide safety training each month for all employees.
- Meet with all the workers and supervisors after a near-miss incident to discuss what happened and how a similar incident can be prevented from happening in the future.
- Safety posters are posted throughout the shop.
- Safety decals are on equipment and machines.
- Workers are supervised and reminded to follow safety rules.
- Supervisors monitor employees' use of Personal Protection Equipment (PPE).
- Workers are rewarded for using safe work practices.
- Cargill cares about the safety of their employees as well as their clients and families whom they serve. When a safety hazard is spotted on a farm visit, Cargill employees take time to discuss and provide helpful information so the farmer can eliminate or isolate a hazard before someone is seriously injured or there is a fatality.



**Safety Matters!**

His dad added, "Sounds like some of the things Cargill does to decrease work-related injuries and deaths would protect and prevent injuries and deaths of us farmers and our family members."

Several years later, Eli asked Lydia to marry him. Lydia was excited and knew they had much work and planning ahead. After talking a lot together, they decided to buy a dairy farm. His dad approved and they started looking for a farm. Eli's dad told them he would pay the down payment for their wedding gift. While they were looking for a farm close to his dad and Lydia's parents, Eli and his dad had time to talk together as the horse trotted along.



It took some time but they finally found a dairy farm close by. Both Lydia and Eli were happy but a little nervous at the same time. One bright sunny day as Eli and his dad were on their way to view the farm one more time, they started talking about farming. Eli asked his dad, "What things can make or break a successful farm operation?"

His dad said, "It's important to keep good records so you know where your money goes. Record all your pesticide use after spraying. That way you will have the up-to-date records to show a pesticide inspector. Good pesticide records help me decide what chemical worked or didn't work. That saves me money."

Eli replied, "Dad that is good advice. Anything else Lydia and I should keep in mind?"

His dad said, "You may want to think about getting a hired-boy to help with the field work until you have children who are physically able and old enough to help with some of the work. We will help you when things get busy."

Eli said, "Dad, what does it take to make farming successful?"

His dad thought for a few minutes and then said, "Besides hard work, long hours, and a keep-at-it attitude, your mom and I tried to always work with safety in mind. If someone gets hurt, they may not be able to work for weeks or months. An injury may require medical and/or hospital expenses which really can affect farm income. Sometimes people think it takes more time to do things the safe way and they cut corners."



Eli said, "Like the time I was only going to weld one small spot or two so I didn't take time to put on my welding shield. I did get weld flash and my eyes really hurt. It's good you took me to the doctor because without care I could have gotten an infection and lost some vision. The drops he gave me helped the pain and healed my burned eyes. I could have avoided all the pain and medical costs, if I just had taken a few seconds to grab my welding shield."



"One thing your mother would say is to remember that children watch everything a parent does. If we choose to work unsafely, they will follow what they see us do and they could be injured or killed," added his dad.

**Ten years later.**

**Eli and Lydia have been doing well. They have four young children. They like living and working together on their dairy farm.**



**Today is a special day; two nurses from Lancaster General Hospital are coming to visit their farm to see how young children can be provided safe surroundings to live and play by using barriers and farm safety rules.**

Lydia was washing the dinner dishes when she saw a blue car drive into their lane. She thought it must be the nurses that called asking to come and visit. She hurried out the door to welcome them. The nurses got out of the car and walked towards Lydia. Lydia greeted them, "Hello, I'm Lydia and here comes my husband Eli. Welcome to our farm."

Mark &amp; David



**Mary said, "Hello, I'm Mary the safety nurse from Lancaster General Hospital and this is Sue. As I explained on the phone, we want to observe what a family can do to protect young children from being injured at home or on a farm. Thanks for letting us visit you."**

Sue added, "These must be your children; please tell us their names."



**Eli said, "This is Mark, he is our oldest son. He is 9-years-old."**

Lydia added, "This is David and he is 7-years-old. This is Susan who is 5-years-old."


Susan



Emma



**Eli pointed to little Emma. "Show the nurses how old you are."**

Emma put up two fingers and replied, "I'm  **2."**

**Sue stated, "Emma is at that age where they learn by exploring. They want to find out how everything works. What do you do to help protect them and prevent injuries?"**

Lydia commented, "It's not always easy; she is very curious and fast. Let's start upstairs."

**As they went up the steps, Mary said, "I like your gate. That's a good barrier."**



Eli replied, "I installed a gate at the bottom of the stairs to prevent her from climbing up the stairs and falling down."



**Lydia added, "I really like the gate here at the top of the stairs. The gate keeps her from falling down the steps when I am making beds or cleaning. I can't expect Susan to watch her. This is where Emma sleeps and Susan sleeps over in the next room."**

Sue looked at Emma and said, "Emma, you have a nice room. I like your crib."

**Lydia commented, "She sleeps in her crib at night and at nap time. That way she can't get out and fall down the steps."**



Mary said, "I don't see any blankets or crib padding."



**Lydia responded, "That's because I heard that young children can get caught under a pillow, blanket or the crib padding and may not be able to breathe."**

Sue continued, "You are correct, especially infants. Some children are found dead in their cribs because covers or blankets prevent them from breathing. The American Academy of Pediatrics reports that approximately 3,500 infants die annually in the United States from sleep-related deaths, including sudden infant death syndrome (SIDS); ill-defined deaths; and accidental suffocation and strangulation. <https://www.aap.org/.../american-academy-of-pediatrics>



**Mary asked, "How do you keep them warm in the winter?"**

Lydia replied, "I use a blanket sleeper so she doesn't need a blanket. They never keep the blankets on anyway. Actually, the boys use sleeper blankets when it's very cold. They stay warmer. Our doctor told us never to put an infant to sleep on their stomachs like my mother did. He said that a child could smother."

**Mary stated, "Yes, Infants sleeping on their bellies may turn their heads and get their nose and mouth into the sheets preventing them from breathing. The Academy of Pediatrics recommends keeping children safe by:**

- **Putting the baby on his or her back on a firm sleep surface (crib or bassinet) with tight fitting sheets.**
- **Avoiding the use of soft bedding, crib bumpers, blankets, pillows and soft toys. Keep the crib bare.**
- **Having the baby in the parents' room but not on the same sleeping surface. Use a small crib or bed and have it near the mother's side of the bed until the baby is six months old or turns 1 year old."** <https://www.aap.org/.../american-academy-of-pediatrics>

Mary asked, "How do you keep her and Susan safe in the kitchen?"

**Lydia said, "Let's go downstairs and I'll show you. Here is Emma's high chair. When she is buckled in, I know she can't fall out. She sits higher in her high chair so she can be part of our family at meal time. I can give her some toys on the tray to play with while I wash the dishes."**



Sue remarked, "I see you have a play pen here in the living room, just off the kitchen."

**Lydia explained, "Emma is so fast. It's safer to have her in the play pen when I am cooking, carrying hot jars or working in the back pantry or laundry room. We tell the older children they need to stay 3 feet from the hot stove, but Emma and Susan can't understand the dangers around hot stoves, ovens, and kettles."**



Mary said, "You are right, it's just safer to have them in a separate area, especially when you are distracted while doing your work."

**Lydia added, "Last week it dawned on me that the play pen could be a safe place for them in an emergency."**

Sue continued, "Tell us more."

**Lydia replied, "Well, a few weeks ago Eli went to a pesticide-use training meeting and was away for several hours. It was just me and the girls. I got to thinking about what I would do to keep the girls safe if suddenly the barn caught on fire. I planned to call 9-1-1 and then start getting the cow out of the barn. That's when I realized if I put the girls into the play pen, they would not only be safer but couldn't follow me to the barn."**

Sue said, "That's what I call thinking ahead. It's good to plan what to do before there is an emergency or fire. Planning helps everyone to make better choices when there is an emergency."

**Mary added, "Planning can save lives and/or property."**

Sue asked, "Lydia what made you think about using the play pen?"

**Lydia answered, "Well, a few weeks ago Susan and Emma were playing quietly with their toys on the living room rug. I decided to wash up the kitchen floor and I guess Emma saw me get my big yellow bottle of cleaning liquid out from under the sink and pour some in my bucket."**

Sue asked, "What happened?"

**Lydia replied, "I wasn't scrubbing long before I realized I needed to go to the bathroom. So, I told Susan and Emma to stay and play, I would be back in a few minutes. When I got back, Susan told me Emma scooted across the floor and was pulling on the cupboard door. She couldn't get it open because I keep it locked."**

Mary said, "It's a good thing you lock the door. A lock is an easy way to prevent children from being exposed to dangerous chemicals."

**Sue added, "Some chemicals have a signal word on the bottle (danger, warning, and caution). Signal words on a container indicates the chemical could harm a child even if they drink only a small amount."**





"I didn't realize that," said Lydia.

Mary volunteered, "I will get you a poison control sticker to put near your phone; I have some in the car. If you ever need to find out what to do for someone who is exposed to a chemical or medication, you can call that number. Help is as close to you as the 1-800-222-1222 phone number. There are qualified staff available 24 hours a day."

Lydia said, "We tell our children never to open the cupboards under the kitchen and bathroom sinks, but I know that some children are just more curious than others."

Sue added, "Some children do not remember or they can't understand the dangers. Putting a lock on the cupboard doors is a way to prevent our children and/or a visitor from being exposed to cleaners."

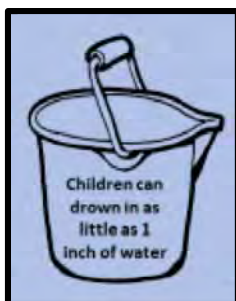
"Yes, that is why Eli and I got some locks for the kitchen and bathroom cupboards at the store. They didn't cost much and I have more peace of mind, especially when we have a lot of visitors," said Lydia.

Mary stated, "Good thinking, small children can't read labels. Bathroom chemicals, like toilet bowl cleaners and Clorox all have the Danger signal word on the bottle, which means it's very toxic. Even a small amount can harm a child."



Lydia added, "You know, later in the day I realized that Emma could have gotten into my bucket of wash water if I hadn't put it in the sink when I went to the bathroom. My mother always put a bucket with wash water in the sink when she had to leave the room. I guess I saw her do it so many times that I automatically put my wash bucket in the sink out of reach."

Sue stated, "That is a good habit. Children love water and can drown in only 1-3 inches of a liquid. Young children are what we call top heavy--their body is heavier at the top because they have short legs. That makes it easy for them to fall into a bucket and have trouble getting out. Good thinking, Lydia."

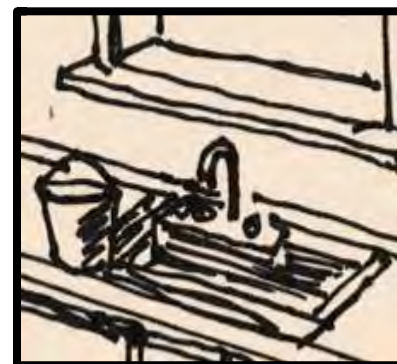


Lydia replied, "That day, I realized that it would be smart to put her into the play pen when I am so busy and may have to leave the room. The play pen or our safe play room with a gate at the door keeps the girls safe until I'm done working. Then I can read to them or play with them."

Mary added, "We have children who are exposed to farm pesticides, milk line cleaners, gasoline, fuels and even rat poisons. Children come into the

hospital for treatment after they taste or eat a chemical or medications."

Eli said, "When we go out to the milk house, I will show you the barrier we use to prevent the children from getting into our pipeline cleaners and chemicals."



Sue replied, "I can't wait to see how you created a barrier that prevents children from being exposed to milk house chemicals. We have many children who burn their mouth or esophagus (the tube that goes to their stomach) by drinking a milk house cleaner."



Lydia said, "A few weeks ago, Emma was almost burned by scalding hot liquid from one of the kettles on the stove."

Mary asked, "What happened?"

Lydia answered, "The girls were playing nicely on the living room rug, so I started cooking supper on the stove. I needed some flour in the pantry and I was gone longer than I expected because I knocked over the canister and had to sweep up the flour."



Mary asked, "Then what happened?"

Emma pushing the chair to the stove to get the pot handle.



Lydia continued, "When I got back, Emma was pushing a chair to the stove. Susan told me Emma was reaching for the handles but couldn't get them (I turned them to the back of the stove). That's why she was pushing a chair over to the stove. Just think, if she had pulled on the handles or had gotten the chair to the stove before I got back, she could have been severely burned."



Sue added, "A play area with a gate or a play pen can prevent children from being burned at stoves, fireplaces, coal stoves, and wood stoves."

Eli said, "From now on when mom is cooking, Emma must play in her play pen, unless I am in the house and can entertain the girls. When we are extra busy with farm work, Lydia's mom or my mom comes just to care for the children. They enjoy a day with their grandchildren and we get more done without worrying about their safety."



Susan and Emma playing in the sandbox.



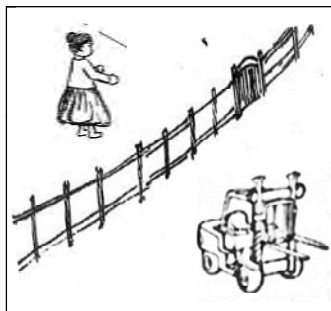
Lydia remarked, “Emma and Susan are so young that they can’t understand the dangers here on the farm. I remember one day, Susan and Emma were playing in their sand box and I told the girls that I was going in to get the last load of wash to hang up on the line. I wasn’t gone long, and as soon as I came out the kitchen door, Susan told me that soon after I left, they heard a loud “quack, quack, quack.”



Susan loudly added, “Mom, as soon as Emma heard the ducks, she ran towards the ducks and the pond. I told her to stop because you and dad won’t let us go to the pond. I told her you said the pond is deep, whatever that means.”

**“A barrier like a fence protects small children from drowning in ponds and manure pits. It doesn’t cost a lot, and a fence can also keep young children away from large animals and machinery like the skid steer loader,” stated Sue.**

Lydia agreed, “I was so glad for the fence. If she had gotten to the edge of the pond, she could have slipped in and not been able to get out. She could have drowned. Our pond is 10 feet deep and one acre in size. Eli put a fence around the pond the next week to be extra safe. We can’t be too careful.”



Eli said, “Our fence around the yard has helped us keep the children safe more than once. One day I was working out in the barnyard and I started the forklift. Emma came running to the gate but she couldn’t get to me or run in front of my forklift. The gate and fence stopped her. You know, I just can’t see little ones like Emma, especially when I’m busy watching what I am doing with the equipment.”

Lydia added, “Lately, there has been an increase of young children being run over by skid steer loaders, tractors, and/or forklifts on farms. The children are injured and some die because the driver didn’t realize they were nearby. Children are fast and close to the ground, making it very hard for farm equipment operators to see them and stop in time. If a fence prevents one injury, the cost of materials and the effort to put up the fence are well worth it.”



**As they all walked towards the barn, they could see the big pond. “No wonder you put up a fence around the pond and here in the yard. That’s a big pond,” said Sue.**

Lydia added, “We put up the fence around our yard when Mark was only 2 years-old. He heard the noise of Eli’s tractor start up to grind some feed. I had just turned my back a few minutes to fill my watering can. He must have heard the noise of Eli’s tractor and then ran towards the noise. It was a good thing that Eli saw him before Mark got to the PTO. That machine spins so fast, it’s very dangerous. Eli put the fence up later that week with a latch that closes by itself.”



Eli opened the milk house door and said, “Mary and Sue, go right in, our 50 gallon jugs of milk house chemical are hidden behind the white panel. The children can’t see or touch the jugs, yet I can reach over the top and get the cleaners I need. I can open this latch to exchange the empty jugs for full ones.”



A solid white panel of ½ inch poly board hinged to the wall of the milk house provides:

1. A barrier to dairy chemical drums (pipeline cleaners and bulk tank cleaners).
2. Prevents children from exposure to these caustic chemicals.
3. Allows easy access for adults to pump out the chemical or to replace the barrels as needed.

The solid white panel fence is mounted to the wall with hinges at one end. A pull pin is placed at the other end which is placed on the inside of the panel so only adults can open up the barrier.



Sue remarked, "Eli, this is a great idea, would you write down some directions so we can make copies to give to other farming families?"

Eli said, "I will be glad to do that."

"Let's go in the barn, the girls want to show you their special safe play area," said Lydia.

Susan said, "Come, Emma and I will show you."

Mary looked at the play area and said, "Emma and Susan, this is a great place to play."

Susan said, "Dad made it. We like to play with our dolls out here while mom is busy."

Then Mark and David arrived home from school. Mary asked, "What chores do the boys do?"

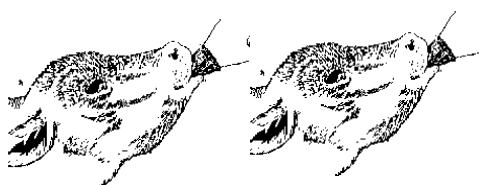
Eli answered, "They help with feeding the calves and the cows while we milk."

"They feed our chickens and help me in the garden," added Lydia.

Sue said, "Mark, what chores do you like the best?"

Mark answered, "I like feeding the cows their grain and hay."

David added, "Well, I love to feed and care for the calves most of all."



Eli explained, "As the boys grow physically stronger and bigger, they will be allowed to do more but for now we want them to work near us."



Lydia said, "We created a few safety rules for our family to follow."

Mary asked, "Mark, can you tell me one rule?"

Mark replied, "No extra riders on any farm equipment."

Sue said, "David, what about you?"

David answered, "We need to let mom or dad know where we are going."

Mark added, "No playing in the barn. It's dangerous even if all the hay holes are covered."

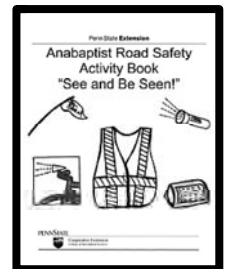
Eli said, "We encourage the children to let one of us know if they see anything that they think is not safe or could cause an injury. That way, I can fix it before there is an accident."

Sue stated, "We learned a lot. Mary and I want to thank all of you for this afternoon and for sharing your great ideas on how to protect young children who live on a farm. We brought you a few safety items in appreciation for your help. We hope you will use them and please keep thinking and working with safety in mind."

Mary said, "Come with us to our car and we will see what we have for you. Thanks again."

The nurses gave them:

- A slow-moving vehicle emblem
- A pony cart flag
- Reflective tape for scooters and their buggy
- A hay hole cover
- Safety vests for everyone
- Some fun coloring activity books



Then Mary and Sue got into their car and Eli, Lydia, Mark, David, Susan and Emma waved them good-bye as they drove out the lane. Lydia said, "Let's go in and have a sandwich before we start milking. We can have some ice cream and cake when we are finished with all the chores."



**Safe Children: Happy Families**





## 2. The Second Story: Dr. Reihart Visits an Amish Dairy Farm

### Awareness of the Stages of Growth of School-aged Children Can Prevent Injuries and Deaths.

Children (5-9 Years-old) continue to learn about their world by watching what is happening around them and observing older peers and adults. They have limited knowledge about how to avoid danger and are not able to understand cause and effect. They do not fully recognize dangerous circumstances.

They want to be involved with adults and therefore get too close to moving machinery, not fully understanding they are in a risky situation. If they spot danger, they may not have enough control of their muscles to get away in time.

Their attention may be focused on one thing at a time. In the excitement of playing, someone may fall through a hay hole, stand too close to a large animal, and/or get too close to a skid steer loader, forklift, or tractor.

Characteristics 5-9 years	Causes of most farm injuries	Suggestions to Prevent injury
<ul style="list-style-type: none"> <li>❖ Hand &amp; eye coordination is not fully developed (can't catch balls midair) until about age of 10.</li> <li>❖ Inconsistent use of reasoning.</li> <li>❖ Wants to seem skilled and self-reliant so may not ask for help or ask questions.</li> <li>❖ Wants adult's approval.</li> <li>❖ Unaware of hazards.</li> <li>❖ May not be able to see the bigger picture.</li> <li>❖ Limited understanding of cause and effect.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Slips and falls.</li> <li>❖ Machinery including: ATV, skid steer loader, forklift, and tractors.</li> <li>❖ Being struck by a large object or a large animal.</li> </ul> 	<ul style="list-style-type: none"> <li>❖ Be a good role model.</li> <li>❖ Provide consistent safety rules and directions.</li> <li>❖ Discuss safe behaviors frequently while working.</li> <li>❖ Assign simple farm chores.</li> <li>❖ Observe them as they work.</li> <li>❖ Remind them of safety rules.</li> <li>❖ Tell them when you notice them doing safe work practices.</li> </ul> 

[Match Age, Abilities To Farm Chores - National Ag Safety Database](https://nasdonline.org/1263/d001067/match-age-abilities-to-farm-chores.html)

[nasdonline.org/1263/d001067/match-age-abilities-to-farm-chores.html](https://nasdonline.org/1263/d001067/match-age-abilities-to-farm-chores.html)

**This is a story about an Amish Family (Jacob and Rachael) and their three daughters and two son. They own and operate a 70 acre dairy farm. The family works together each day milking 50 cows, caring for horses, calves and planting and harvesting crops.**



Jacob and Rachael have been farming for over 15 years, ever since they were married. They both grew up on a farm and felt that a farm is one of the best places to raise a family. Growing up on a farm helps children become honest, hard working individuals who value land and water, and who care for each other.



One day Jacob found a message on his answering machine. The message was from an emergency room doctor (Dr. Reihart) who works at Lancaster General Hospital. Jacob listened and then went in the house to tell Rachael that an emergency room doctor wanted to come and visit their farm to find out more about farming and farm equipment. One of the nurses gave him our phone number. She lives near-by and often stops at our roadside stand. He left his cell number for me to call him so he can give us more information.

Rebecca replied, "Maybe you should call him and find out a little more."

Jacob called Dr. Reihart that afternoon. Dr. Reihart explained that he cares for many patients who are injured on farms by equipment, animals, and even by falling through hay holes. Knowing more about how and what causes injuries on a farm would help him to provide better medical care for his patients. Jacob said, "We would be happy to show you around our farm and talk with you. When would it suit you to come for a visit?"

Dr. Reihart answered, "Would this coming Wednesday work, I have off that day?"

Jacob thought a few minutes and then said, "Yes, after lunch on Wednesday will work for us. We will look forward to your visit." After Jacob hung up the phone, he went in and told Rachael and the children that Dr. Reihart was coming on Wednesday. The children could hardly wait.

Finally Wednesday arrived and the children watched as a car drove in their lane and parked near the house. As Dr. Reihart got out of his car, Jacob and Rachael met him and shook his hand. Jacob said, "Hello, I'm Jacob and this is my wife Rachael. You must be Dr. Reihart. We are so glad you could come."

Dr. Reihart replied, "I'm happy to meet you both. Thanks for allowing me to make this visit."

Rachael stated, "Oh here come our children. Dr. Reihart, meet our three daughters. This is 12 year-old Katie. This is Mary who is 10 years-old, and our youngest daughter is Lydia who just turned 3 years old this week."



Jacob added, "Dr. Reihart, this is our youngest son Amos. He is 8 years old. This is Jason, our oldest son, who just turned 14."

Dr. Reihart said, "It's good to meet all of you. I think this visit will help me provide better medical care to the many patients I treat in the emergency room."



Rachael suggested, "Dr. Reihart, please come and sit down on the porch. Mary went in to get us some ice tea. We can talk here a bit, and then Jacob and the children can show you our farm, if that is OK with you."

Dr. Reihart answered, "That sounds great. Cold ice tea will hit the spot. Now, Jacob tell me more about yourself and your wife. How long have you been farming?"

Jacob replied, "I wanted to be a farmer ever since fourth grade, just like my dad. I rushed home after school to help with the milking and to work with the horses. I was the last of my siblings to marry and leave home. Then dad decided it was time for him to retire and enjoy making wooden toys in his workshop."

Rachael added, "We knew his parents and my parents would be supportive and help us in busy times, but we were a little anxious. We wondered if we could run the farm ourselves. It's a big responsibility."



Jacob commented, "As Rachael said, it was a little scary but I soon realized that I learned a lot by watching dad take apart and repair machinery, milk the cows, plant and harvest crops, care for sick horses and cows, and grow and harvest crops."

Rachael added, "It wasn't long before the first problem arose and Jacob did what he thought his dad would do and it worked. From then on, I think Jacob felt a little more at ease."

Jacob remarked, "Yes, I realized that I had stored a lot of knowledge somewhere in my head."

Dr. Reihart said, "It's good that you have a father who shows you how to solve problems, repair equipment and demonstrate by example how to work with safety in mind."

Jacob added, "Yes, dad worked hard. He was a great role model for me and all my brothers and sisters. One time, I remember that it was going to rain and we still had a row or two of hay to bale, but dad told us that we needed to stop even though we weren't done. The hay was not worth anyone being struck by lightning."

Dr. Reihart said, "Sometimes we parents forget that our children watch everything we do and say. Being a good safety role model is very important."

Jacob remarked, "Yes, they say our actions speak louder than words. I only realize how true it is now that I am a parent. What a blessing it was to grow up with parents who cared about safety."



Dr. Reihart asked, "Jason, what chores do you do here on the farm?"

Jason replied, "My sisters and I help dad with some of the field work. We use horses rather than tractors. We don't plow the ground, we are no-tilling. That means instead of plowing the ground, we harvest the grass or stop its growth with a chemical. Then the seeds are planted into the sod."

Dr. Reihart asked, "Why do you choose not to plow?"

Jacob explained, "When we don't plow up the ground, more of the soil will stay in the field rather than run out of the field after a hard and fast rainstorm. More of the rain soaks into the ground which increases crop growth."

Jason added, "Even though today's chemicals are tested and proven to be much safer than 30 years ago, dad is careful not to spray chemicals close to our pond. Chemical can pollute the water. He keeps the cows from contaminating the water by keeping a fence around the pond."



Jacob said, "Amos, tell Dr. Reihart what chores you do every day here on the farm."

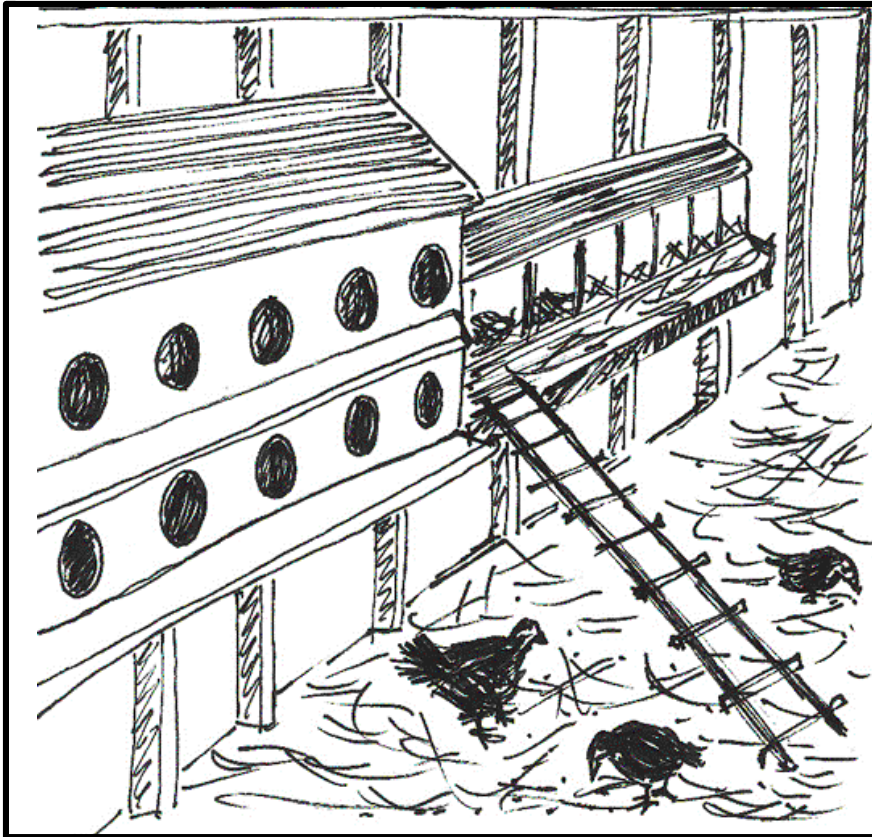
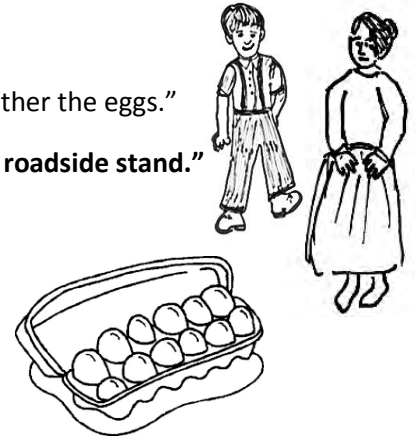


Amos said, "Well, Katie and I take care of feeding the chickens and then we gather the eggs."

Katie added, "We wash the eggs and put them into egg cartons to sell at our roadside stand."

Amos explained, "When Katie helps, the work gets done faster."

Katie said, "One day Amos opened the door to the wash room and there was water all over the place. Amos didn't know what to do, so he called me over and together we shut off the main water valve just like dad showed me."



Amos added, "Then I got dad and later he let me help to fix the leaking pipe."

Mary said, "I help Katie and Amos feed the calves each morning and night."



Amos added, "We put the milk in a bucket with a big nipple."

Our calves are put in their own small pen which makes it easier and safer to feed them. New mother cows can be dangerous. They could charge after you if they think you are going to harm their new calf," said Katie.

Dr. Reihart said, "That's interesting. I have had some patients who were



struck or kicked by horses and cows. I didn't know "new" mother animals are so protective."

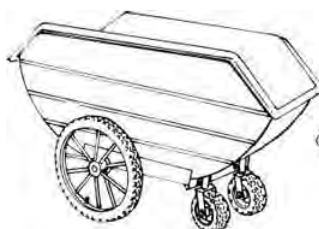
Katie stated, "Yes, they are. Dad says any animal is unpredictable. We have to work around them with safety in mind. He tells us never to go in the back of their stall; we stay near the gate so we can get away if they get spooked."



Mary added, "Katie and I help dad milk the cows. We wash off the cows, put on the milking machines, and wash up the milking equipment. It takes dad over 4-5 hours to milk the herd alone. The sooner milking is over, the sooner he can work in the fields."



Jason said, "You have to watch that you don't get stepped on. Cows weigh over a thousand pounds. That's why we never milk without wearing good shoes."



Amos added, "I use a feed cart and give each cow some grain while they are being milked. Then Katie and I give them some hay in their trough to eat."

**Katie said, "Yes, we go up on the top part of the barn to get the hay. Come with us and we will show you how it's done."**

Amos added, "I know you want to see a hay hole. We have 6 hay holes, Dr. Reihart. Just follow us to the back of the barn."

**Jason said, "Dr. Reihart, here is where I put the bales of hay down into the stable below."**

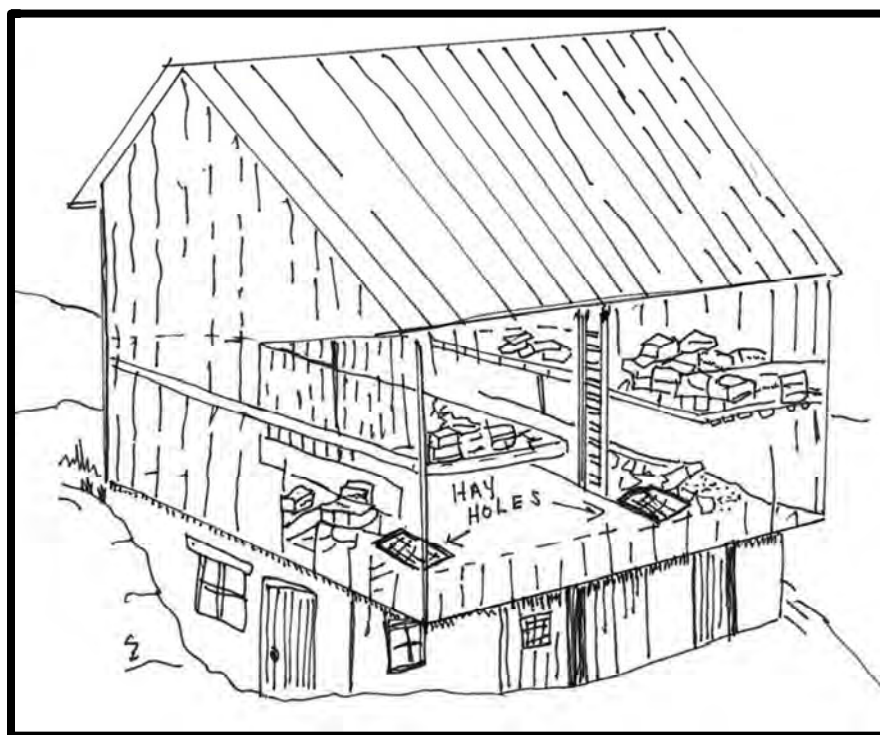
Dr. Reihart exclaimed, "So, this is a hay hole. It's nothing but a hole in the floor. I see a lot of children

who are injured and come into my emergency room for care after falling through a hay hole. Many hit their head and have head injuries, and some break a bone. Now I can see why that happens; it must be about 10 feet to the cement floor below."

**Jason added, "Yes, it's about 10 feet to the stable. The bales weigh a lot so we yell down "hay coming" before we drop the hay bale."**



Mary said, "Our new hay hole cover is made of conduit pipe and nylon netting. It is screwed to the barn floor and we just lift the cover to put hay down."



**Katie explained, "We keep the hole covered all year long."**

Mary added, "In the winter we put this black tarp on top. That keeps the heat down in the barn, but during the summer dad wants air to ventilate throughout the barn, so we roll up the black tarp and secure it with this bungee cord."

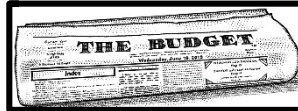


Jason said, "Dad and mom don't allow Lydia to be in the barn and we are not allowed to play with our friends in the barn. Someone could be injured, that's what mom always tells us."



Mary explained, "One of Mom's sisters (Susan) fell through a hay hole when they were growing up and she was in the hospital for 3 days. I think that's why dad asks us each time we come down from putting the hay bales down, if we are sure the hay hole is covered."

Katie added, "Sometimes we read about farm-related accidents in the newspapers like the Die Botschft, the Budget or the Lancaster Farming."



Then dad and mom try to help us understand what happened and they explain what and how we can prevent that from happening here. Dad calls it a teaching moment about safety."

Jason added, "Dad says that most workshop businesses will stop what they are doing to discuss a near-miss incident."

Amos asked, "What is a near-miss incident anyway?"

## Near Misses & Close Calls

Jacob said, "A near-miss incident is when something happens that is unplanned. No one is hurt, but someone could have been injured seriously. The workshop bosses and all the workers take time to discuss what happened and talk about what they can do to prevent a similar incident."



Dr. Reihart asked, "Does talking about true accidents help you to be more careful when working on the farm?"

Mary said, "Yes, true stories help me to realize the danger and be aware that the same thing could happen to one of us."

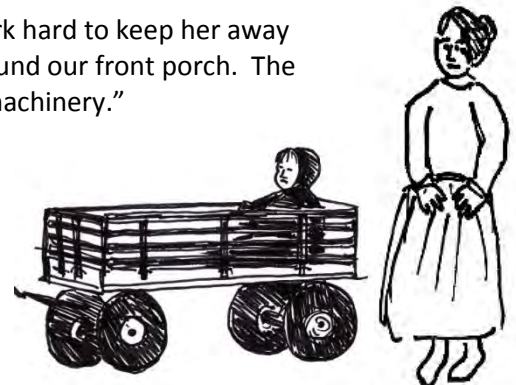
Jason added, "Talking about close calls helps me understand how to better manage unexpected happenings. I think talking about accidents helps all of us make better choices when something similar occurs around here."

"Dad says it takes a family working together to make farming a success. I think it takes everyone in the family working together to prevent injuries and fatalities," said Katie.



Rachael added, "I worry about Lydia because she is so young. We work hard to keep her away from the barnyard and the animals. That's why we put a fence all around our front porch. The fence stops Lydia before she can get hurt by animals, the stream, or machinery."

Katie said, "Mother sometimes puts her in a wagon with some toys while she is working in the garden. But that won't work much longer because Lydia is really growing."



"Sometimes when we are all busy milking, one of us will put her in a stroller and push her around the barn. That keeps her safe," said Mary.



Katie added, "When mom needs to work, one of us girls cares for Lydia. We don't do any work, just watch and play with her because she can quickly wander off."



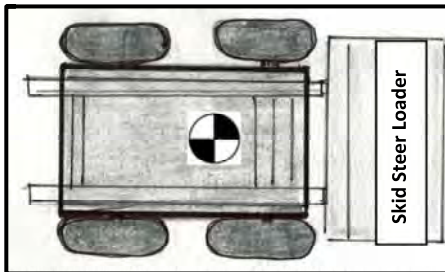
Rachael said, "Now we have the forklift to worry about. You know, as soon as young children hear the noise of any machinery, they run towards the noise, especially the boys. I guess they want to see what is happening and they want to be with their dad."



Jacob stated, "When we were growing up, we didn't have forklifts. It's only been in the last four or five years that farmers are buying forklifts to help with the heavy work on a farm like moving big bales of hay and straw. So, I went into the dealer and asked for some instructions about driving safely."



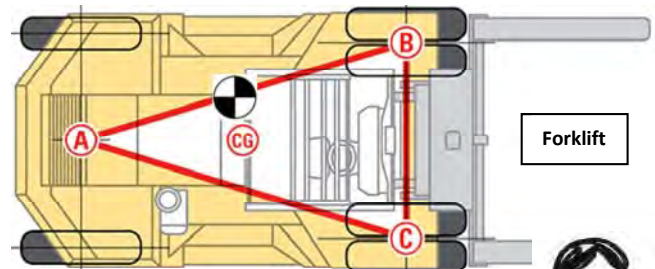
Rachael asked, "Don't forklifts drive like a tractor or a car?"



Jacob answered, "No, forklifts are mostly front-wheel drive. They can roll over easily, especially when the operator turns too quickly, slams on the brakes, or carries a heavy load too high. A forklift is less stable than a skid steer loader which has a square baseline. A forklift usually has a triangle stability baseline. Here is a picture."

Rachael asked, "Why does a forklift have a triangle stability baseline?"

Jacob answered, "Well, a forklift will stop running if one of the wheels comes off the ground. The forklift undercarriage is attached in the center of the rear axle which allows the front wheels to maintain contact when going over uneven surfaces so it doesn't stop moving."



Rachael said, "That's interesting, I didn't know that. Dr. Reihart, do you have people coming into the emergency room with an injury caused by a skid steer loader or a forklift?"

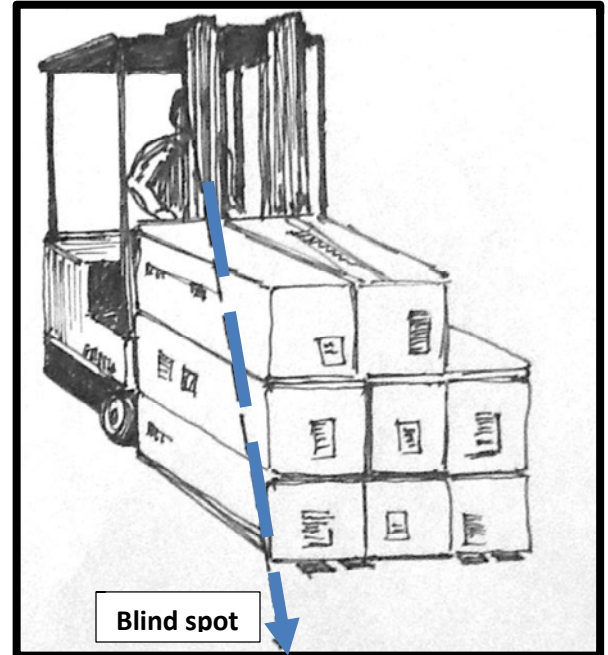
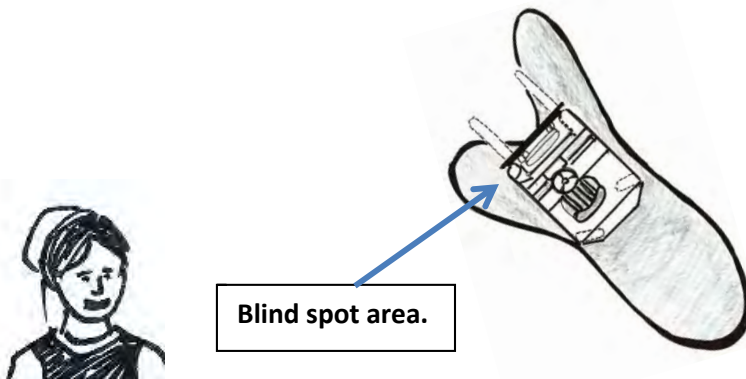
Dr. Reihart quickly replied, "Yes, we treat workers from industrial warehouse businesses. Some are struck or hit by a forklift truck. We also treat children and youth from farms that are injured by skid steer loaders and forklifts."

Rachael asked, "Why do most of the farm-related injuries occur?"

Dr. Reihart answered, "Many fall off of machinery, like the 14-year-old boy who was riding on the forks of the forklift. His dad was driving the vehicle when they hit a bump and the boy fell under the front wheel. His left foot and leg were severely injured. He needed several surgeries before they could repair all the muscle and skin damage. Lately there are more young children who are runover by equipment."



Jacob said, "One reason for injuries is that there are blind spots around all farm equipment, like the propane tank that is directly behind the forklift truck. Older equipment may lack the newer safety features like an open mast."



Rachael remarked, "Blind spots are a concern and the boys have been asking when they can drive the forklift. Jacob, when do you think we should allow them to operate the forklift?"

Jacob said, "I found in the forklift operational manual this list of physical abilities needed by an operator. The list includes:

1. Able to reach all controls with the seat belt fastened.
2. Has good side vision---can see someone's finger at their shoulder level while looking straight ahead.
3. Has good dexterity skills---able to move feet and hands with coordination.
4. Able to react quickly. When our children are physically ready to operate the equipment, I will train them and be there to observe and monitor them."

Rachael said, "One of my concerns is the number of children being injured by skid steer loaders and/or forklifts. Some operators assumed the child was not in the area, but children slip away from a parent or older sibling and are struck by equipment."

Jacob added, "Dr. Reihart, that's why ever since we bought the forklift, I make sure to tell Rachael when I'm going to use the forklift. Lydia is so young. She could easily run in front or in back of the equipment and a forklift can't stop quickly."

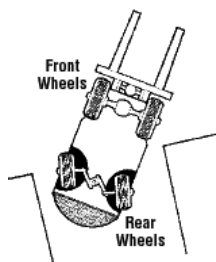
Racheal added, "We can't be too safe. It does take a little more effort but we know that she doesn't understand the dangers of being around farm equipment. She just wants to go to dad."



Katie said, "Mary and I help watch Lydia when mom and dad are both busy. We know she doesn't realize. She won't be so little forever."

"Let's take Dr. Reihart over to see the forklift and show him how fast it turns in a circle," said Mary.



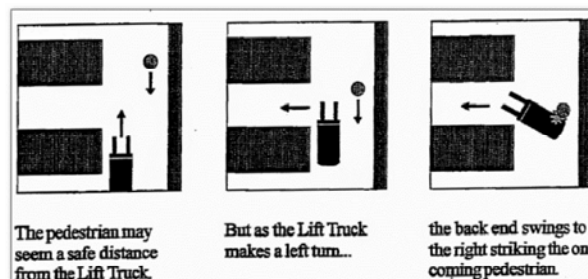


Jacob said, "OK, we'll have to go this way." Jacob drove the forklift around for Dr. Reihart.

**Dr. Reihart couldn't believe how easy the back of the forklift spun around. He said, "No wonder there are many who are injured and need emergency care. I can see how someone might think they are standing far enough away but are struck by the equipment."**

Amos added, "It will tip over easily, especially when we carry a heavy load up high. Dad says that's because the center of gravity can easily go out beyond the wheel base, especially if we go too fast or stop suddenly."

**Dr. Reihart stated, "I really did learn a lot. I now realize there are many dangers that farming families face when working on a farm. It is important to keep safety in mind and use safe work practices all the time to prevent injuries and deaths."**



Jacob said, "Thanks for coming; I hope this visit will help you to better care for your patients."

**Dr. Reihart answered, "Thank you, it's been a great help to see all of this. Say, I hope you take time to have some fun. What fun things do you like to do?"**

Jason answered, "I love to play baseball."



**Mary said, "I love to go swimming in the pond and I like to sew."**

Amos added, "I love baseball, but I like to play hockey and go sledding in the winter."

**Katie said, "I like to play volleyball with my friends and bake cookies and pies."**



Rachael added, "Jacob and I love to see how Lydia and the children are growing and learning to be good stewards of our land and water. Our family has a lot to do, but we work together. We enjoy spending time together laughing, singing, reading and/or playing games."



**Dr. Reihart said, "Well, I must be going and I know you need to get to the milking. Thanks so much for your time. I've gained great information and I better understand how hard farmers work to provide people with milk and produce. A farm has many dangers and hazards, but I am glad that you and your family are making safety a family priority. I think I'll stop at your roadside stand and buy some eggs and bread for my family. Thanks again."**

Jacob added, "Thanks for coming to find out more about farm safety. Call or come back at any time with questions. Bring your wife and children along next time. Your visit made us all realize how important it is to think safety. It takes a little more effort and time, but the end result is that we are all together and safe. Please drive carefully; the roads have a lot of fast cars and dangers as well."

The family waved goodbye as they watched Dr. Reihart slowly drive out their lane.



## Farm Equipment Safety

## Search-A-Word!

E	L	E	O	Y	G	O	S	L	O	W	L	O	J
R	N	K	T	I	S	R	U	N	O	V	E	R	S
T	S	R	E	V	O	L	L	O	R	S	O	S	S
R	E	T	B	E	E	F	N	F	O	S	L	C	S
I	O	R	E	S	E	I	R	U	J	N	I	R	U
A	R	O	D	R	I	V	E	L	O	W	L	I	E
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E	S	R	T	O	P	S	D	N	I	L	B	I	O
R	R	T	N	E	V	E	R	P	T	S	T	E	I
S	G	S	N	T	O	R	R	I	D	N	R	D	R
E	I	N	R	E	G	N	A	D	I	I	I	B	S
S	K	I	D	S	T	E	E	R	Y	V	S	R	I

Prevent  
Injuries  
Stability  
Danger  
Drive Low  
Blind Spot  
Runovers  
Rollovers  
Triangle  
Go Slow  
Tractor  
Skid Steer  
Forklift



Safe Children: Happy Families

### 3. How a Mennonite Family Prevents Injuries on Their Vegetable Produce Farm

#### Understanding the Growth and Development of Youth Can Prevent Injuries and Deaths.

Children aged 10 to 14 are maturing physically and mentally. They will pressure adults to give them adult responsibilities. They follow simple operating methods but may lack experience when the unusual happens. They want to work around livestock, use mechanical feed carts, operate a skid steer loader or forklift equipment. They also like to mow lawn and use a string trimmer. Sometimes they are given responsibilities above their growth and development abilities which can result in injuries or a fatality.

#### **Characteristics of 10-14 years      Cause of most farm injuries      Suggestions to Prevent injury**

- ❖ Stronger physically & mentally.
- ❖ Physical changes are seen more than mental & emotional growth.
- ❖ Wants to use new skills without the constant eye of a parent.
- ❖ Wants peer approval and respect.
- ❖ Seeks new ways or uniqueness
- ❖ Often takes risks.

- ❖ Animals.
- ❖ Tractors, skid steer loaders, and forklifts.
- ❖ Bike, Scooters, ATVs



- ❖ Enforce consistent rules with consequences and rewards.
- ❖ Expose youth to machinery by letting them "help" you maintain equipment.
- ❖ Talk about farm-related incidences and discuss cause and prevention.
- ❖ Take advantage of "Teachable Moments" to discuss need to use safe work practices.

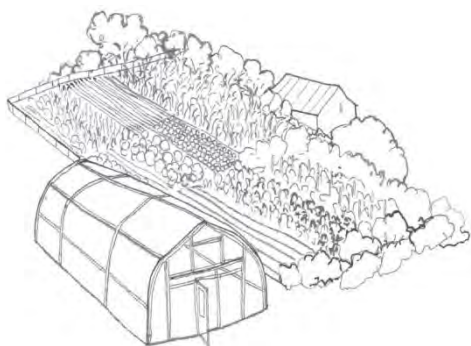
[Match Age, Abilities To Farm Chores - National Ag Safety Database ...](http://Nnasdonline.org/1263/d001067/match-age-abilities-to-farm-chores.html)

[Nnasdonline.org/1263/d001067/match-age-abilities-to-farm-chores.html](http://Nnasdonline.org/1263/d001067/match-age-abilities-to-farm-chores.html)

**John and Sarah**



This is a story about John and Sarah and their young Mennonite family who recently decided to take on the task of operating a roadside produce stand. John and Sarah knew that caring for several greenhouses and ten acres of land would involve hard physical work, many long hours and a new and different lifestyle. John did not grow up on a farm; he is a carpenter by trade, but this was Sarah's parents' homestead and they would be there to help during busy times.



**Sarah's Dad and Mother had developed good contacts with their local Cooperative Extension office. Sarah knew that Jeff at the extension office would be willing to provide them with advice and educational materials about pesticide safety, pest control and plant health.**

John and Sarah took some time to think about all the pros and cons. Then after a lot of discussion they decided that working as a family to grow plants and produce would teach their children valuable life lessons. So they decided to take on a new adventure and moved to their new home. Let's meet this family and find out how they are doing.

Hi! I'm David and I'm 14.

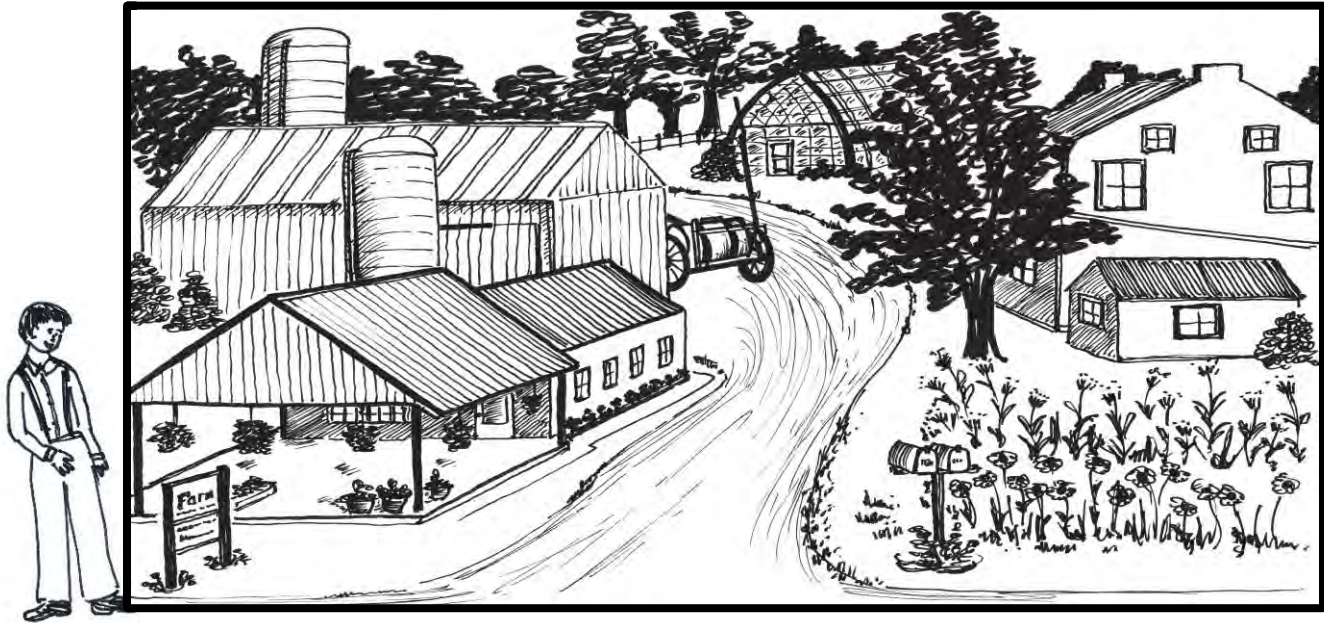
I'm Lily and I am 11.

I'm Sadie and I am 9.

I'm John Jr. and I am 2.

Hello! I'm Daniel and I am 15 years old.





**"Hello! I'm David and I am 14 years old. Welcome to our produce farm and roadside stand. We have several greenhouses and grow vegetables on 10 acres of land. I live with my mom, dad, my brother Daniel who is 15 years old and sisters, Lily who is 11 years old and Sadie who is 9 years old. Oh! Yes I almost forgot my brother John Jr., who has just turned 2 last week."**

**"We grow many different kinds of vegetable plants and flower plants in the greenhouses for local customers," added Daniel.**

**David continued, "I like to work in the greenhouses best, especially transplanting young three-leaf plants into bigger pots."**

**"Lily and Sadie help mom take care of customers at our roadside stand. They are very busy since they also bake pies, cookies and homemade bread to sell," remarked Daniel.**

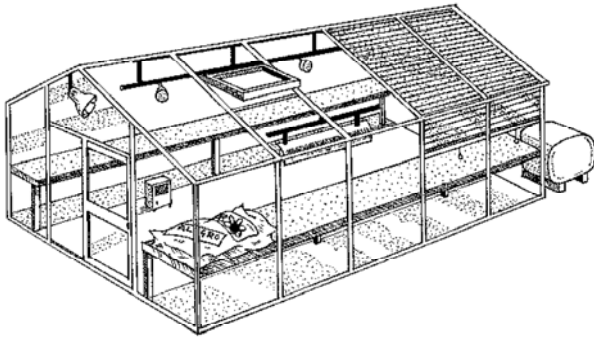
**David said, "You forgot the great homemade root beer mom makes and sells. It tastes so good after a long hot day in the fields. Oh! Here are Sadie and Lily. Sadie, tell our visitors more about our produce stand. "**

**Sadie explained, "Well, our produce stand is open most of the year from 7 am to 7 pm except Sundays. We also sell bags of soil, mulch, vegetable and flower plants, as well as planter pots and garden tools.**

**Lily added, "Yes, we try to supply customers with fresh produce, plants, and garden supplies all in a one-stop shopping experience. Dad buys some additional foodstuffs to sell at our stand when he goes to our local produce auction on Wednesdays."**

**David explained, "Dad takes the tractor and wagon and drives to the produce auction each Wednesday to sell our surplus produce. Dad purchases flowers, vegetables and fruits that we don't grow like: watermelons, cantaloupes and hanging flower baskets. The produce auction sells vegetables and fruits to local food stores, restaurants, and other businesses."**





Daniel said, "There is a lot to do between the greenhouse work and caring for the crops in the fields. Springtime is especially busy. We spend much of our time planting, cultivating, and picking produce. We move heavy bags of soil, fertilizer, and even mulch."

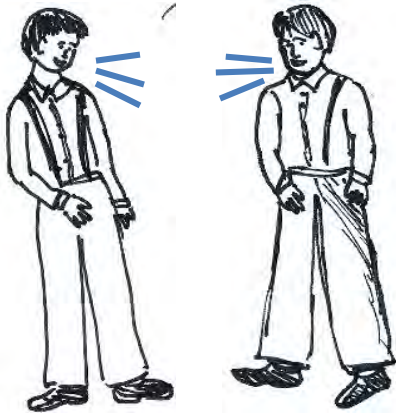
"Dad uses a skid steer loader to do some of the heavy work but Daniel and I use a wagon, a wheel barrow or the two-wheeled cart. I can't wait until I

can drive the skid steer; it will be more fun and exciting than a wagon or cart. Most of my friends already drive a forklift or skid steer loader, but dad and mom say no, not until we are tall enough to reach the controls and see out the back window," remarked David.

**Daniel said, "Yes, dad always tells me that I'm not big enough, whatever that means."**

David asked, "Daniel, why do you think that dad and mom are so strict about us operating the skid steer? I can stretch my head up to see out the back."

**Daniel answered, "Well, I heard dad tell mom that the skid steer loader turns around so quickly and he is concerned about all the blind spots."**



"What is a blind spot?" asked David.

**Daniel said, "Well, I think a blind spot is an area where a driver can't see what is in front, back or near the sides of farm equipment."**

David said, "Remember when Sam, the little 7 year-old boy down the road, was runover by a skid steer loader that his dad was backing at the time."

**Daniel remarked, "Yes, his dad didn't see him until it was too late. Sam needed several surgeries and missed a lot of school."**

David added, "I think Sam's accident did affect dad and mom along with the recent increase in the numbers of runovers we read about in the papers like Die Botschaft. I think dad was going to let us start driving until Sam was hurt."

**"You know," Daniel added, "I think you are right. Mom and dad were even more uncertain after reading about the 17 month-old boy who died of head trauma. I guess he slipped away from his mother and ran behind the skid steer loader as his dad was backing up."**

David remarked, "Yes, that child was about the same age as our John Jr."





**“That must be why dad doesn’t operate the skid steer loader until one of us has John Jr.’s hand and all the customers are gone,” said Daniel.**

“You know, if dad does need to use the loader, he prevents people from getting close by putting a gate across like they do at the hardware store,”

added David.

**Daniel said, “I think dad is doing what he tells us to do, think safety first. He put carbon monoxide detectors in all the greenhouses. He makes sure the fire extinguishers are working. He uses safe work routines even if it takes longer to get something done.”**



“Hi boys, “I see you got all the weeds pulled here in the cabbage patch, it looks great. Say, it looks like you were both in deep discussion. What’s happening?” asked their dad.

**David spoke first, “Well, we were just talking about why you and mom won’t let us run the skid steer loader. We think it might be due to the recent accidents we read about in the papers.”**

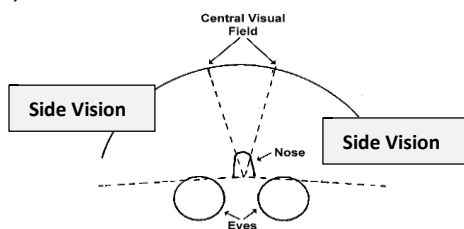
His dad replied, “Yes, that is a big concern and often the article says **“it happened so fast”**. However, the reason to wait is more than that. It’s difficult even for me to see out the back window. **You are both small for your age, and the height of an operator can limit the field of vision compared to a taller operator.** John Jr. is too young to understand the dangers of being close to moving equipment, and he does not realize there are blind areas around the skid steer loader where we can’t see him.”

**“Dad, we were talking about that, just what is a blind spot?” asked David.**

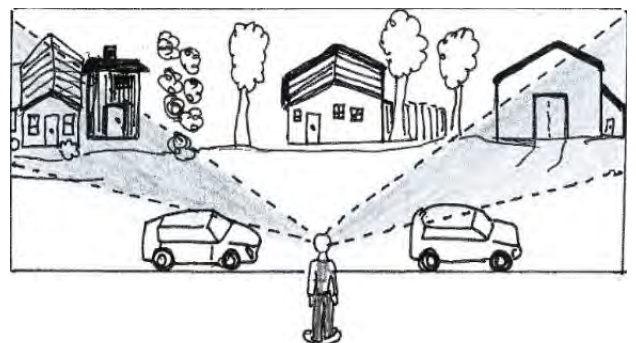
Their dad answered, “Blind spots are areas around farm machinery that we cannot directly observe while sitting at the controls.”

**David said, “Dad, in school an educator from the cooperative extension talked about peripheral vision and told us that peripheral vision is what we call our side vision. What exactly is side vision?”**

Their dad replied, “Stay here, I’ll be right back, I have a handout on my desk that I got at our last farmers’ meeting. I think the drawings will help you understand.” He was back in a few minutes. Their dad said, “As you can see, central vision is what we see when we look straight ahead, and side vision is what we see out of the corner of our eyes.”



**Daniel asked, “What else did the speaker say?”**



He continued, "The speaker also told us that the constant motion of our eyes causes us to see a sharp, clear view. But, when we look straight ahead, our eyes can scan only about 50% of our possible view. Our side vision is not as clear as central vision, but it is sensitive to movement and light. There are studies that show a youth's field of vision is limited compared to an average adult. He gave us this side vision activity to do here at home to test our side vision."



David said, "Dad, can you also show us more about blind spots?"

Dad answered, "OK, our skid steer loader is near the machine shed, let's go."

They walked over to the machine shed and dad said, "I have the key so the skid steer loader can't go anywhere. Now, David, let me see you sit in the seat with the seat belt secured. Look, your shoulders are about two inches below the top of the back seat, making it hard for you to see out the back."

Daniel said, "Let me see how I do!" His shoulders were about an inch below the back seat.

Their dad explained, "You both have grown but it's still difficult for you to see out the back window. Now let's test your side vision. Daniel look straight ahead and pretend you are the operator."

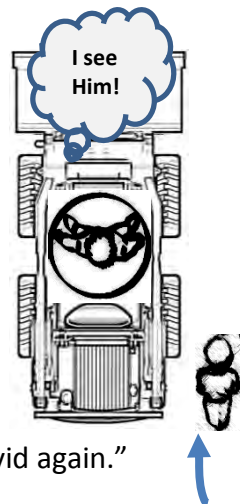
David asked, "Dad, what should I do?"

*His Dad answered in a whisper, "David, when I give you a nod, walk slowly up the right side towards the bucket of the skid steer loader."*

"Now Daniel keep your head still and look straight ahead. Tell us when you see David come into view," directed his dad.

David walked slowly up the side of the machine and when he was almost at Daniel's seat, they heard Daniel yell, "Stop, I see David."

Their father marked the spot with a box and said, "Ok, now tell us when you spot David again."

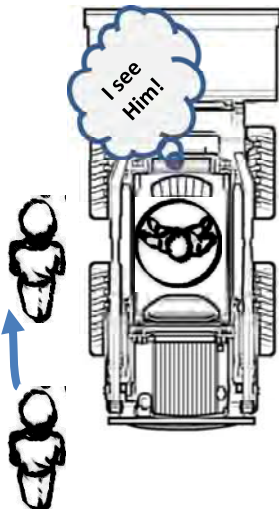


*This time David was directed to walk up the right side of the skid steer loader. David was almost at Daniel's side when they heard Daniel say, "Stop, I see him with my left eye."*

His dad marked the spot and then said, "Now, David, it's your turn."

David got in the seat and they tested his side vision just as they had done Daniel's. They found Daniel had better developed side vision skills than David.

Their dad explained, "A young child needs to develop hand and eye coordination and side vision skills. Daniel, when you were about 8 years old you were upset that you could not catch a ball easily coming through the air."



Daniel remarked, "I remember that, but as I got older, it got easier to catch the balls. I guess my hand and eye coordination needed time to develop."

His dad replied, "Yes, you are correct. As we grow, the shape of our face and head changes and allows us to see more from the side. The age and height of the person does affect our ability to catch a ball flying through the air as well as operating machinery. The shorter the operator, the more likely they will have limited fields of vision compared to a taller operator."



Daniel said, "I get it now."

Dad said, "Ok, Daniel, climb back up on the seat, we'll find the blind area in back of the skid steer loader."

As Daniel was getting into the operator's seat, his dad had David squat down behind the machine. He said, "Now, Daniel, look behind to the back of the skid steer loader. Can you see David?"

Daniel answered, "No, dad, I can't see him even when I stretch up as high as I can."

His dad said, "Ok, look in your rear view mirror. Can you see him now?"

Daniel replied, "No, where is he? Then David jumped up and Daniel said, "Now I see him."



Dad continued, "There are blind spots in the front, on the sides and directly behind the skid steer loader. There are blind spots around all vehicles including: buggies, cars, trucks, forklifts, and a tractors."

"OK, David, it's your turn," said his dad.

David quickly realized he also could not see Daniel especially when his brother bent down towards the ground. David said, "Thanks, dad, for taking time to do this activity. I now realize how difficult it is to see someone behind the loader, especially like little John Jr."

His dad replied, "Glad this helped, now we better get washed up, it's supper time."



During supper Daniel said, "Dad, now I understand why you want us to wait to operate the loader and why you want someone to hold John Jr. when you are operating the loader."

David added, "When Daniel was bent over behind the skid steer, I couldn't see him. That must be what it would be like when a small child is standing close to farm equipment."

Their father said, "Now you can see that it's a big responsibility operating equipment, especially with young children living here. Safety must come first."



Daniel said, "I think we should show Lily and Sadie."

Dad agreed, "We can do that later tonight. It's important they understand why it's never safe to be around farm equipment."

David said, "Thanks, dad."

Just then dad said, "Sarah, I just noticed that Binkley and Hurst have a sale on rearview monitors. A monitor extends the operator's view of what is directly behind the loader. I think I'll find out how they work."



Sarah asked, "What does it cost?"

John replied, "Well, it's about \$190.00, much less than a doctor or a hospital visit."

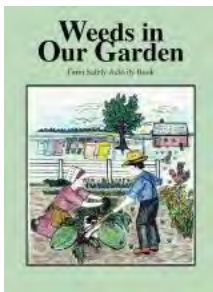
Sarah said, "John, we should do all we can to prevent injuries and/or loss of life. Sounds like a monitor will provide better vision of what's behind the loader and will increase safety as well."

Several months later as they were eating an evening snack, Daniel said, "Dad, some people say accidents just happen and there isn't much anyone can do to prevent them. However, you put a rearview monitor on our skid steer loader, we follow our family safety rules, and you and mom remind us to use safe work habits. I think we are making safety a family priority."

His mother added, "I think you are right. We can prevent accidents from happening but we all need to do our part by working and living with safety in mind."



His dad said, "I was looking at the booklet you girls brought home from school, the green Weeds in Our Garden Activity Book. On the inside cover the Indiana Rural Safety and Health Council who created this activity book wrote a few sentences. I like what they wrote. Here, Sarah, you read it to all of us?"



Sarah took the book and looked at the page and then said, "I think their message is saying that even though we don't plant weed seeds in our gardens, some will sprout anyway. If we don't pull them out, they weaken the good plants. It also says that unexpected injuries (some say accidents) –just like weeds-- can, in many situations, be prevented. Just like the weeds in our garden; we should work at keeping our lives as free as possible from accidents and injuries."



John said, "Around here safety is important and safety is everyone's responsibility. If any of you see something you think could cause an injury, please let us know right away. Mom and I can't prevent injuries without your help. It takes a family to run this produce farm and it takes each family member to make safety our first priority."



Safe Children: Happy Families

## What a Parent or Grandparent Can Do to Prevent Injuries and Deaths

### Children Learn About Safety by Watching What We Do.

Children learn attitudes about safety from the adults and/or older siblings in their lives. Children watch everything we do. Role modeling safe behaviors says more to a child about using safe work practices than using a lot of words.

Remember, *"Actions speak louder than words."*

Many woodworking shops, construction businesses etc. take time when there is a near-miss incident to talk with their employees about what happened. Employers realize that the time it takes to discuss what transpired and identify ways to prevent a similar injury is well worth the cost in time and effort. Employers do not want to *lose their trained workers, incur lost time or pay huge hospital bills when an injury or a death can be prevented.*

Parents can promote and encourage the use of safe work practices by not missing a "Teachable Moment"--time to discuss safety after a near-miss incident. Farm family safety discussions can increase children's awareness and knowledge of risk behaviors and promote safer work habits that will benefit the entire family.



### Three steps to promote safety on the farm include:

#### 1. Know the job:

- Understand how equipment operates and how to use equipment safely.
- Arrange for training as needed---machinery today is more complex and technical.
- Perform tasks using safe behaviors so children automatically adopt safe habits.

#### 2. Know the hazards:

- Recognize potential dangers and hazards, then take time to isolate or eliminate hazards that cause the most injuries and deaths!
- Stay alert!
- Increase awareness of how a child thinks and learns. Assign chores that fit the child's abilities.

#### 3. Know how to prevent injuries and what to do in an emergency:

- Have an emergency plan and farm safety rules to follow.
- Encourage everyone to let mom or dad know if they think there is a safety issue or concern.
- Be prepared to teach everyone:
  - How to call 9-1-1
  - How to do CPR and give first aid if needed.
  - Where and how to shut off the power, water, gas etc.
- Make sure that fire extinguishers are working. Learn how to put out a small fire by using a fire extinguisher.



**Safe Children: Happy Families**



## How Older Children and Youth Can Prevent Injuries and Deaths

**DON'T OPERATE FARM EQUIPMENT if you can't reach the controls while wearing the seatbelt!**

**DON'T OPERATE FARM EQUIPMENT If you are not able to move your hands and feet with coordination.**

**DON'T OPERATE FARM EQUIPMENT if you don't have good side vision skills.**

**DON'T OPERATE FARM EQUIPMENT if you can't react quickly.**



Keep a Safety Eye \_\_\_\_\_ out for young children!



**Just Say "NO" to anyone asking for a ride!**



**Always WEAR YOUR SEAT BELT on ROPS protected equipment.**



**Make sure to LOOK BACK and AROUND machinery!**



**Take a WALK AROUND equipment before backing or moving!**

**KEEP THE LOAD LOW and always GO SLOW!**

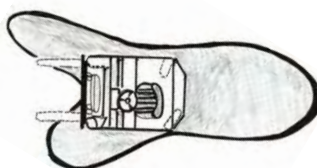
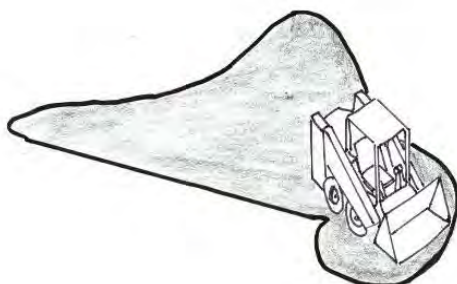


**STOP and TELL SOMEONE when something does NOT work as it should or as it once did!**

**It's Always Safer to Ask!**

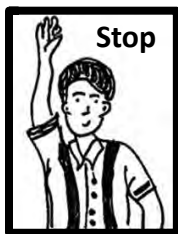
**KNOW WHERE the BLIND SPOTS are located on your own family's farm machinery.**

**See page 38 for a family blind spot activity**



**Safe Children: Happy Families**

## How Older Children and Youth Can Prevent Injuries and Deaths Continued

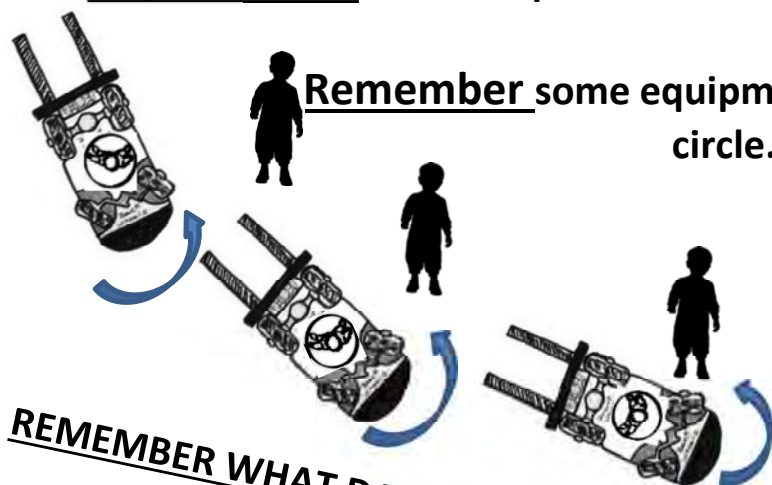


**Don't walk** in front of or in back of a skid steer loader, tractor, or forklift.



**It's safer** to talk with operators on farm equipment standing away from noisy and dangerous machinery. See page 89 to make a set of farm safety hand signal flash cards.

**Pay attention** to back-up alarms, horns, or other warning signals.

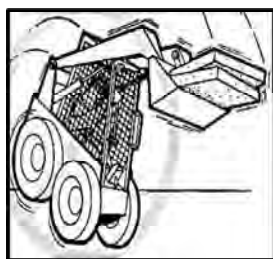


**Remember** some equipment spins around in a circle.



Note: as the forklift below turns left, the back end will swing to the right. Anyone standing nearby can be struck by the equipment causing injury.

**REMEMBER WHAT DAD and Grandpa SAY**



"YOU'RE GOING TO ROLL IT CARRYING THAT HEAVY A LOAD."

"SLOW DOWN".



"DON'T TURN THE CORNERS THAT FAST".



## Strategies That Can Prevent Farm Equipment Rollovers and Runovers

### Strategies to Prevent Rollovers and Runovers:

- There is only **one seat** for the operator.
- Never start allowing a child to be an extra rider. If they have been allowed to take rides on equipment, explain why and make a new safety rule which says:

**No One is Allowed To Be an Extra Rider on Any Farm Equipment!**

### Dangers include:

- Riders on equipment may be struck by foreign objects or thrown off the machine and run over.
- Riders obstruct the operator's view resulting in the machine being operated in an unsafe manner.
- Children fall asleep and could easily fall off.
- Children may be thrown off by a hole or bump in the terrain and land under the wheel or trailing equipment.

[http://manuals.deere.com/cceomview/OMM144025\\_H0/Output/144025h04.html](http://manuals.deere.com/cceomview/OMM144025_H0/Output/144025h04.html)



Just Say **NO!**



Just Say **NO!**



Just Say **NO!**

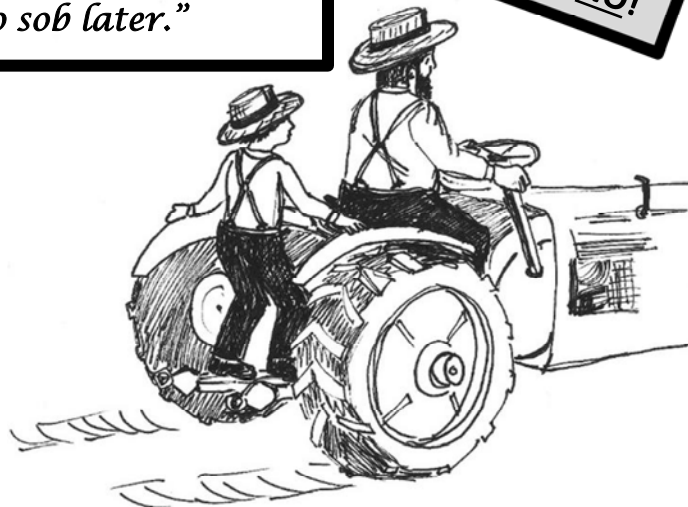


Just Say **NO!**



*Someone once said,  
"They may cry when you say NO,  
but that is better than  
for you to sob later."*

Just Say **NO!**



**Safe Children: Happy Families**

- Don't allow untrained persons to operate farm equipment. Someone in the family should take a class and then they can train others to use the equipment safely.



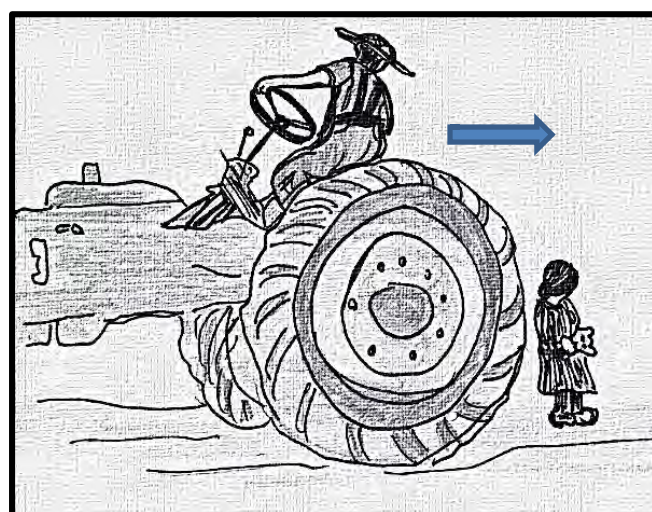
Skid Steer Loader  
Training –This Way



- When busy with farm work, find someone such as grandma, grandpa, neighbor or an older sibling to care for a small child. Providing one-to-one care will allow you to finish your work more quickly with less stress and worry about their safety.



- Stay alert to the presence of children.
- Never assume that children will remain where you last saw them. Children are fast and they are attracted to noise and movement.
- Make children more visible. Have them wear a bright safety vest when playing outside.



- Protect children from falling down a hay hole by making sure all hay or feed holes are covered all year long.



Safe Children: Happy Families

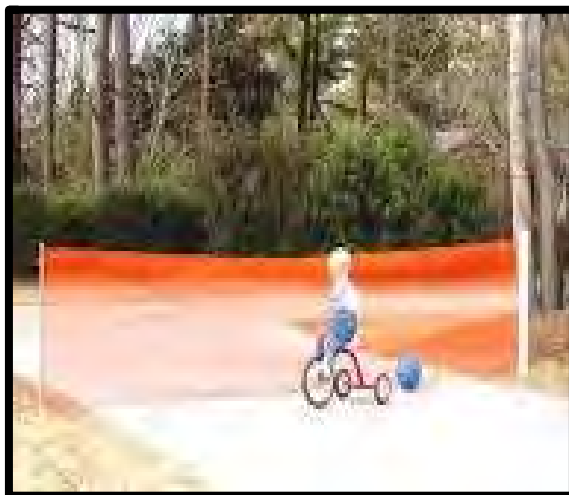
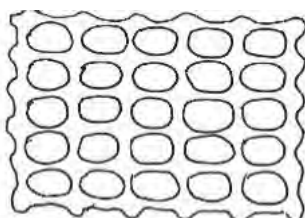
- Use a barrier to separate children from hazardous situations such as a “new” mother cow and her calf, manure pits, ponds, pesticide storage or large animals.



- A barrier could be part of a building, bushes/hedges or a fence.



- A roll of plastic-coated mesh can be used to make a temporary fence. Some temporary fences can be purchased like the one shown below across the driveway.



- You could put a gate across the barnyard or worksite as some stores do to keep their customers safe.

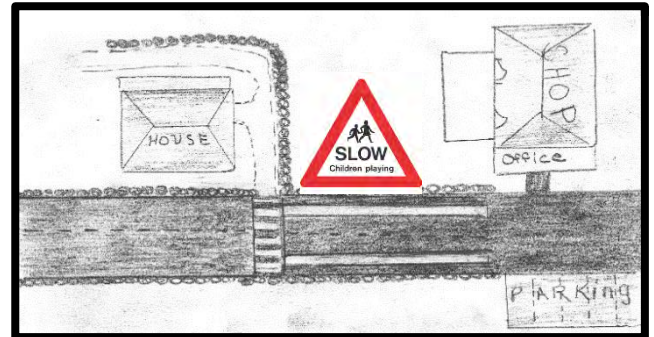
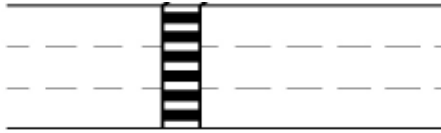




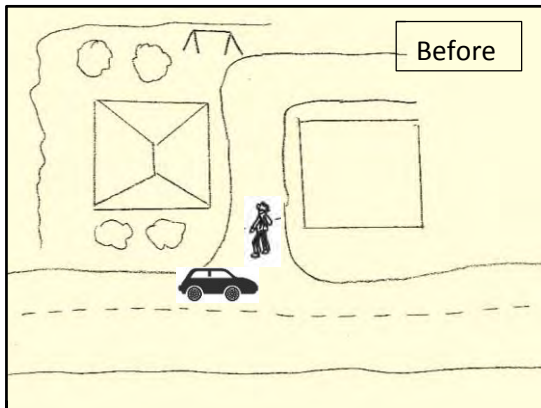
- Tell milk truck or feed truck drivers not to bring your children candy or treats which might tempt them to run in front or in back of a vehicle.



- Paint a crosswalk on your driveway with white paint and put up a safety sign to alert drivers.

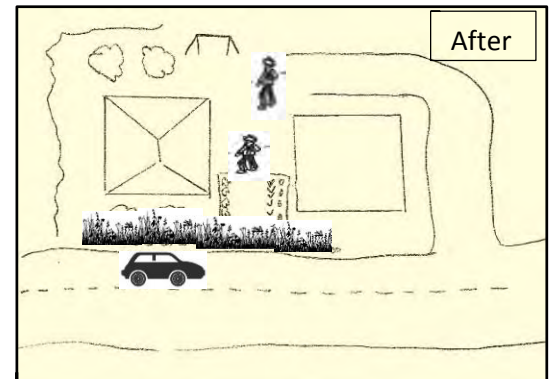
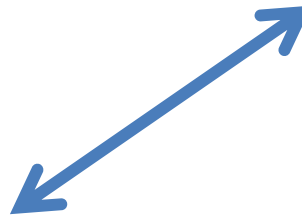


- Block the old driveway with a fence, garden, or even re-locate a driveway so that children can play safer.



Before: Children could easily dart out on the road after a ball and not be seen by a vehicle until it was too late.

Before: Vehicles going into the driveway may not see a small child in time to stop.



After: Putting in a fence, a garden and re-locating the driveway increased the safety for this family.



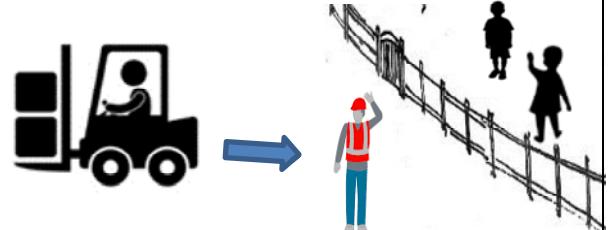
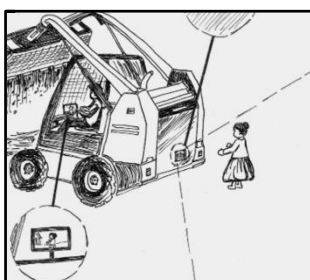
### Don't back unless:

- Someone has the hand of your child.
- You have a gate or barrier around the worksite.
- You have a spotter.
- You have a back-up monitor.
- You have a back-up beeper.



Q. Which one is the most important when children are living and/or working near-by?

A. All of the above, someone once said, "One can't be too careful when children are around!"



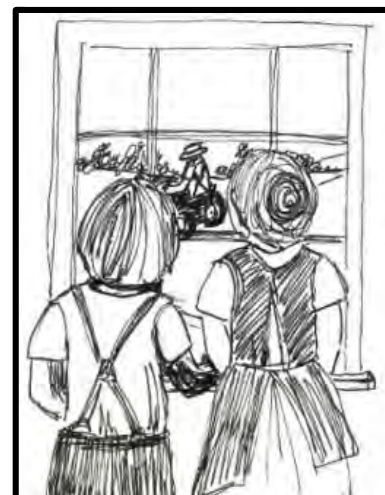
**Safe Children: Happy Families**

- Children can help pick up things in the yard before someone mows, but then they must stay out of the yard when mowing begins.
- If a child or person comes near while you are mowing,



**the mower!**

- When something different happens while mowing, stop the mower and get mom or dad to come and see what is wrong. It's smarter and safer to ask for help rather than be injured or hurt.



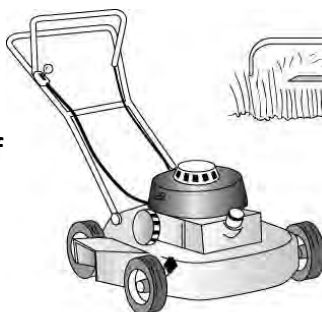
**"Dad"**



- Always wear shoes, eye and hearing protection when mowing or weed whacking!



- Don't fuel a hot running mower. A gallon of gasoline has the power of 7 sticks of dynamite!



- How fast do you think a small toy, rock, or an object can fly out of a lawn mower or riding mower discharge chute?  
The answer is 200 mph for 50 feet.

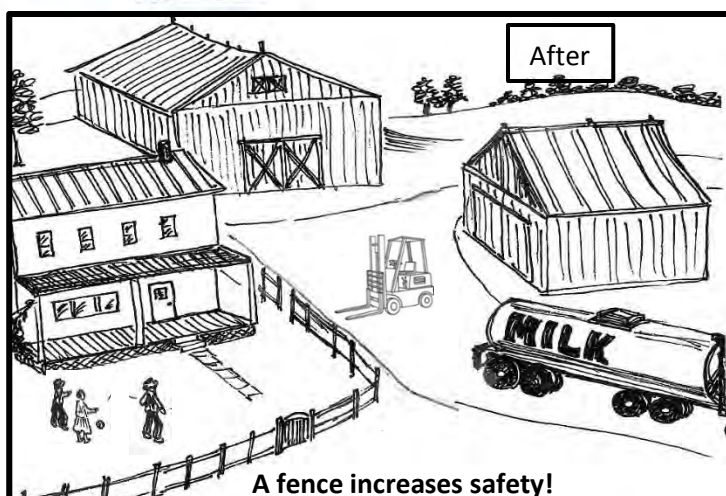


**200 mph for 50 feet!**



**Safe Children: Happy Families**

Complete the Dot-to-Dot fence so the child can't get near the working skid steer loader.



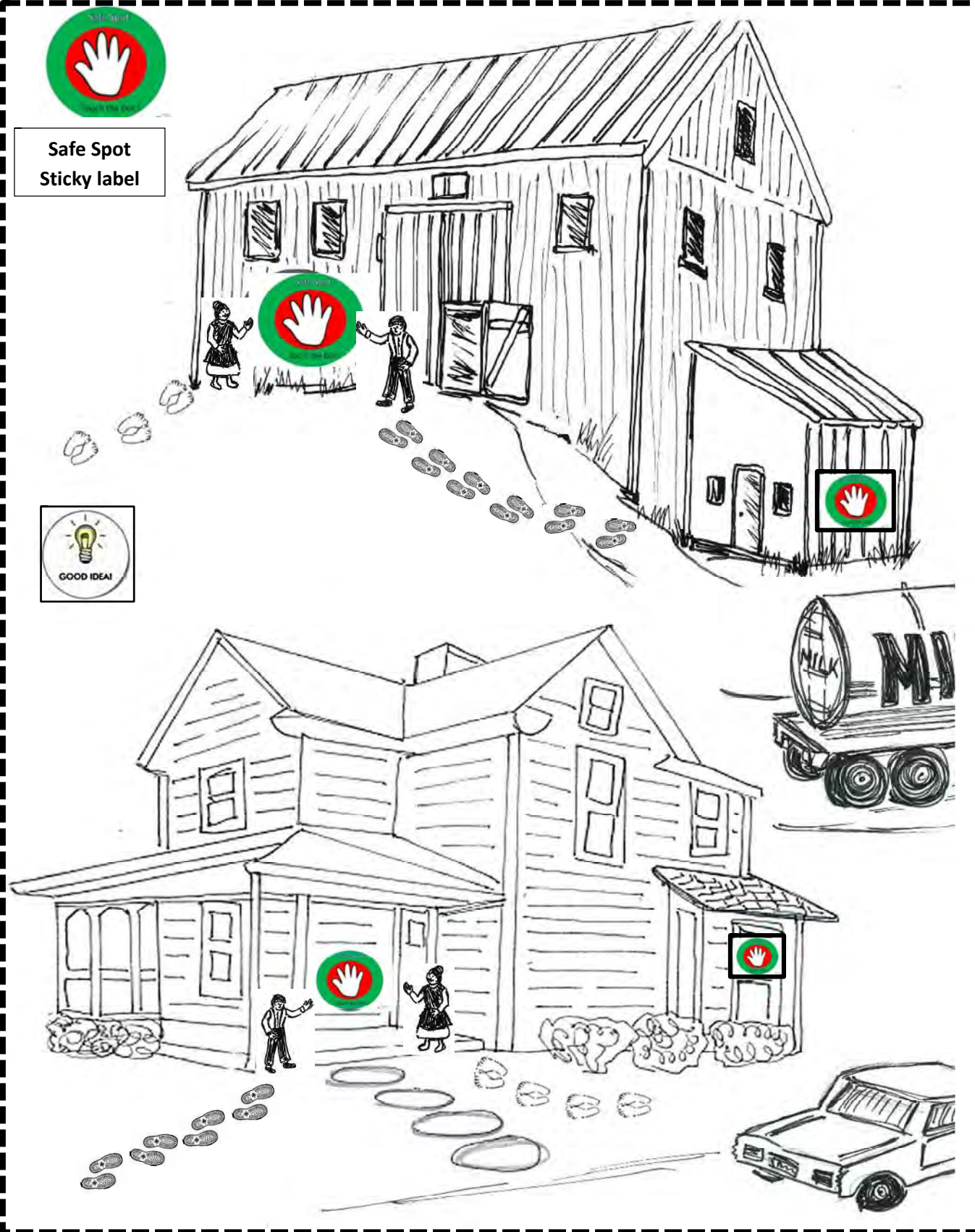
- In the driveway, post signs to alert vehicle operators that children are playing.
- Some home business use a sign that alert drivers not to go beyond this point.



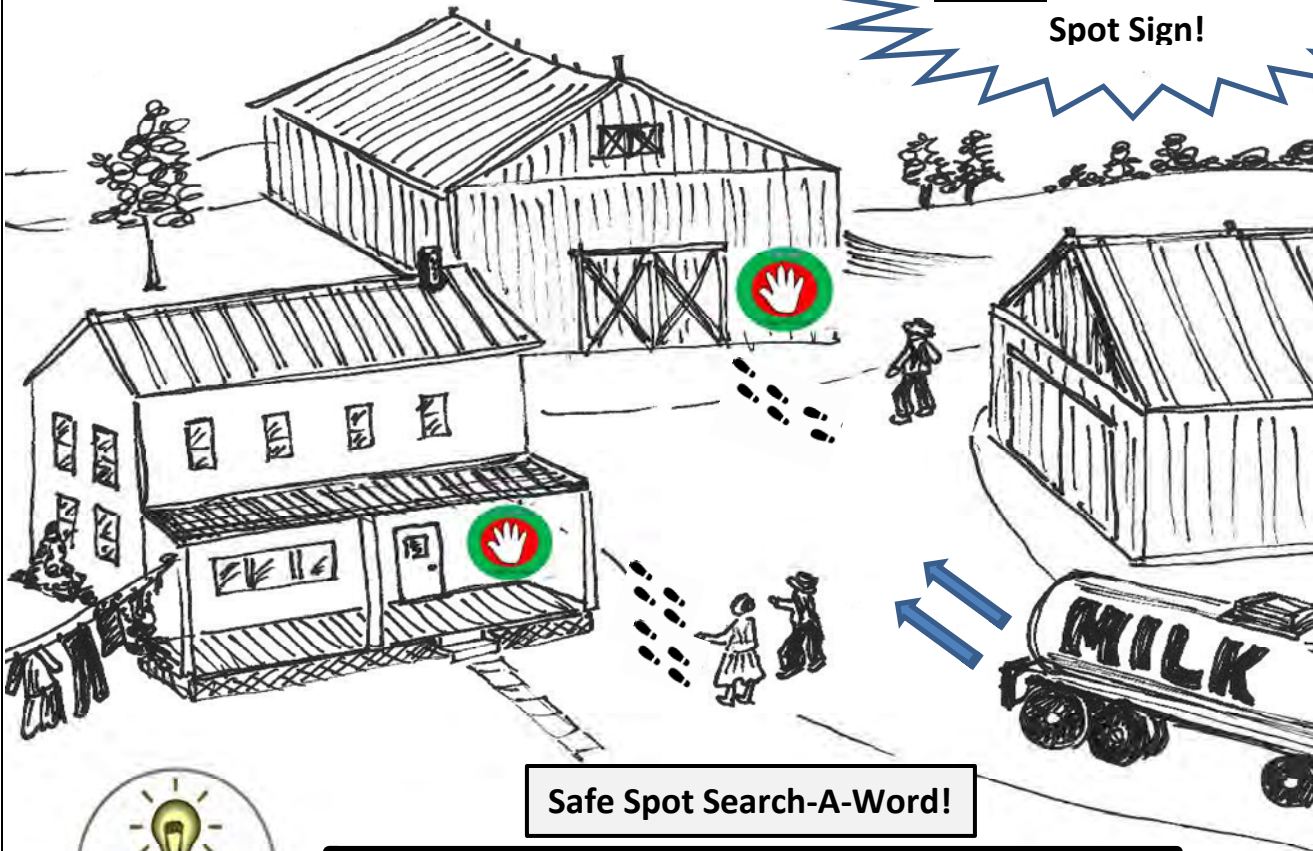
When you see a vehicle coming in the driveway, go and touch the nearest Safety Spot!



Safe Spot  
Sticky label



**Be safe--Touch Your Safe Spot Sign!**



### Safe Spot Search-A-Word!



**Parents:**  
Put a Safe Spot decal on the porch railing, porch post, shed or barn so children can go to the nearest Safe Spot when a truck, car, or equipment comes into your driveway.

S	A	F	E	T	C	U	E	R	P	I	N	B	R
C	U	P	E	Y	B	K	T	K	K	B	C	U	T
T	U	I	T	C	B	U	C	R	S	Y	O	N	R
A	R	B	S	T	I	R	T	O	E	P	E	U	T
I	S	Y	A	R	S	Y	A	C	O	M	O	S	R
T	R	P	E	B	T	S	H	E	P	R	O	T	S
N	A	B	I	C	U	E	F	I	N	I	O	C	E
F	C	R	Y	E	O	E	U	U	E	N	R	R	H
T	U	S	U	N	R	Q	T	E	T	Q	C	G	B
S	U	K	R	T	E	B	A	L	I	N	N	Y	O
N	U	C	S	O	B	R	U	L	O	R	E	T	Y
T	S	U	L	U	R	R	R	Y	S	T	B	K	H
R	S	R	C	C	U	I	M	A	E	T	T	O	L
A	U	T	T	H	G	S	O	T	I	U	N	Q	C

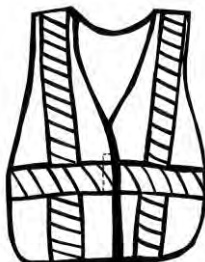
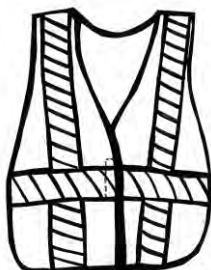
TOUCH  
SAFE  
NEARBY  
BOY  
RUN  
EQUIPMENT  
GIRL  
CARS  
TRUCKS  
SPOT



## Stay On The Grass When a Car, Truck, or Farm Equipment Comes into the Driveway.



David and Sadie would be noticed even quicker by their dad, if they wore a safety vest.  
Color a vest for David and Sadie.



## Strategies to Keep Children Safe Around the Barn and Home

- Create a safe play area in the barn. When you don't have a person who can be responsible for a small child, the child can see what's happening but stay safe.
- Some parents use a play pen in the barn to keep small children safe while adults are milking or feeding the cows.
- Some families, at milking time, have an older child care for the young child by taking them around in a stroller.

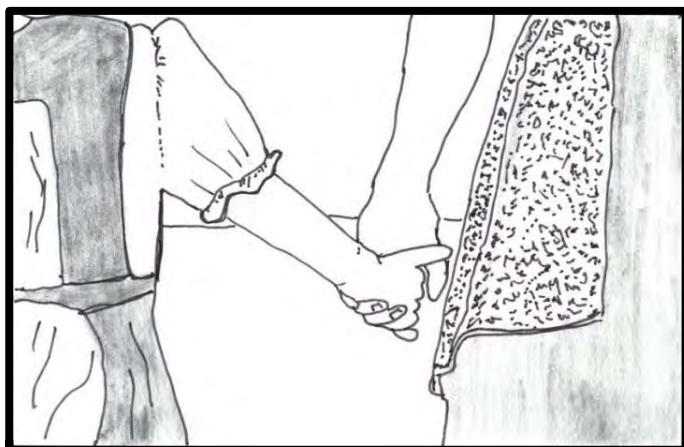


**Safe Children: Happy Families**

- When working in the garden, put small children in a big wagon. They can play with toys while you pick beans, plant seeds or hoe.



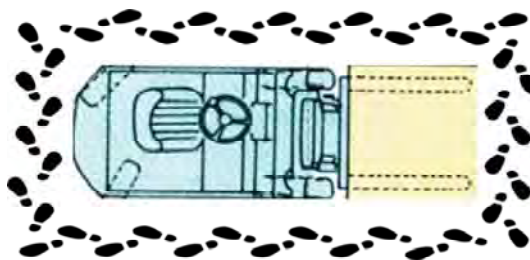
"I'm going to use the forklift to move some feed. Can you care for Katie?"



**Safe Children: Happy Families**



- Do a “Walk around” to make sure that all bystanders are safely away from the equipment.



If an adult allows a child to ride as an extra rider -- just one time -- the child will be excited whenever the engine starts and could run in the way of the equipment, risking injury or death.

Question: When can you start taking a child for a ride on a lawn mower or farm equipment?

Answer: NEVER! NEVER! NEVER!



*Saying “NO Riders”  
can save a life or prevent a  
lifelong tragedy.*



Safe Children: Happy Families

- Create, as a family, several safety rules for your farm.
- Make the “No Extra Riders Rule” one of your family safety rules for all machinery used at home and/or on a farm.

### “Our Farm Safety Rules”

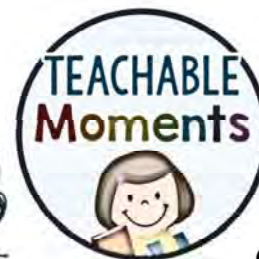
1. No Extra Riders on any equipment.
2. Tell an adult where you are going.
3. No playing in the barn.
4. No one operates equipment without training and supervision.



Family Safety Meeting.



- Don't miss a teaching moment; it may save a life.
  - Take time to talk about safety issues when someone is injured slightly or when you hear or read about someone being injured.



- Affirm children and reward them when you see them using safe work practices and behaviors.
- Never start a motor or any equipment when standing beside machinery. You could be run over. Always start farm equipment when you are securely sitting in the seat.
- Do not drive close to slopes and ditches. If the ditch is 2 feet wide, you should not drive any closer to the ditch than 2 feet or you could roll your equipment.

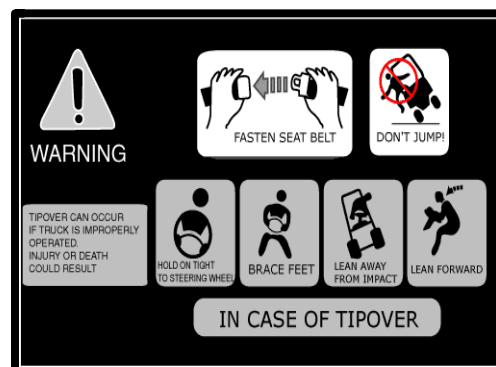
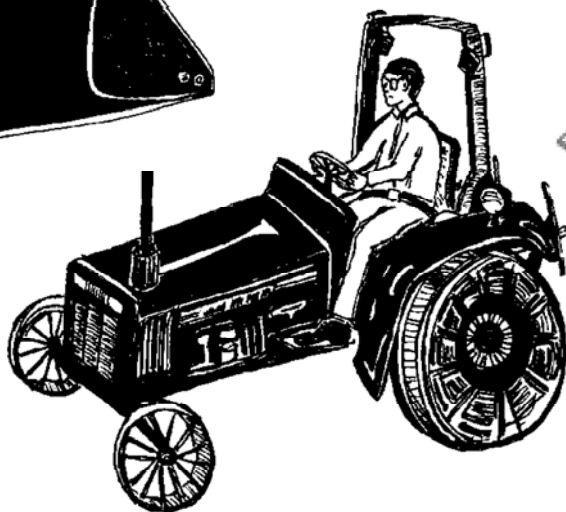
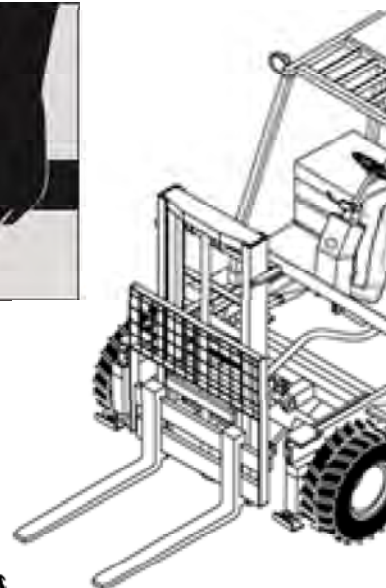
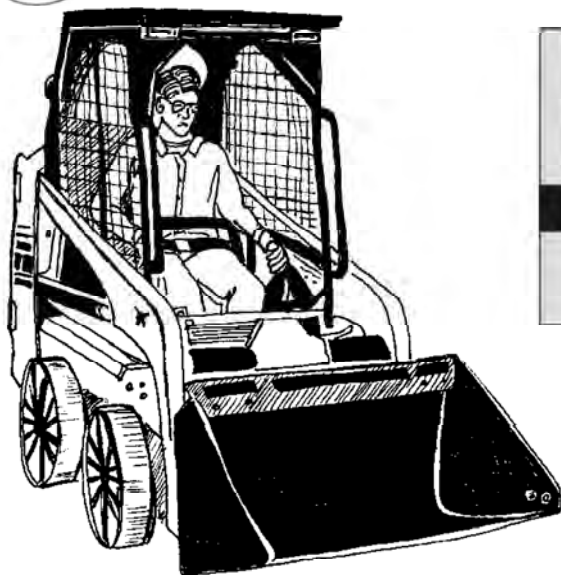


**Safe Children: Happy Families**

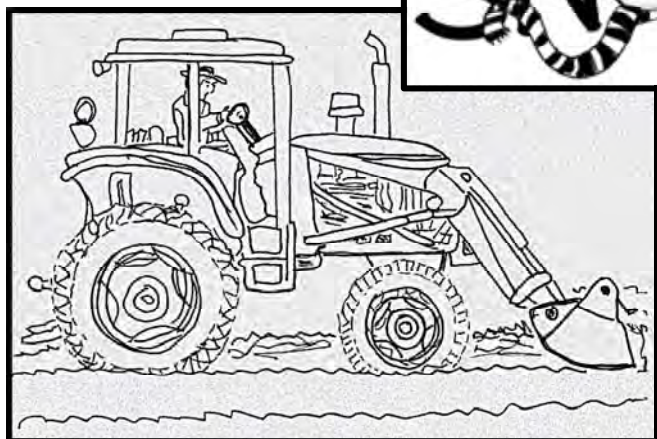


- If the equipment has a ROPS, make sure to wear a seat belt.

**It could save your life!**



- Slow down and drive with caution over rough, wet or icy surfaces.



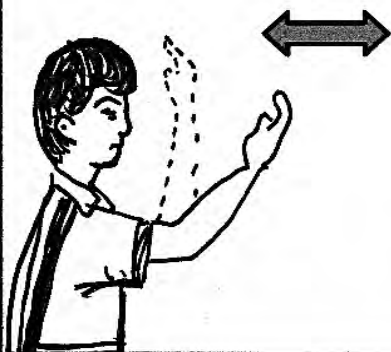
**Safe Children: Happy Families**

**Increase Your Safety. Use Hand Signals.**



Copy the cards to card stock paper. Children can color them in and use them as flash cards.

**Move Toward Me**



**Come To Me**



**Start Engine**



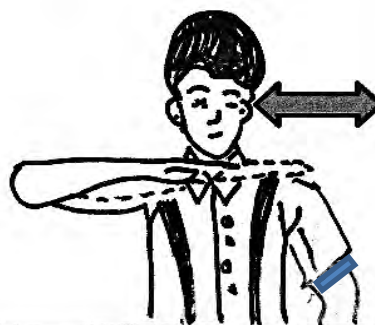
**Speed Up**



**Stop**



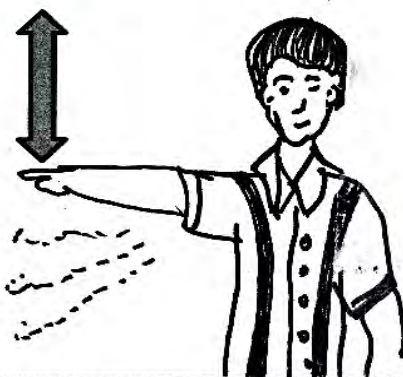
**Stop Engine**



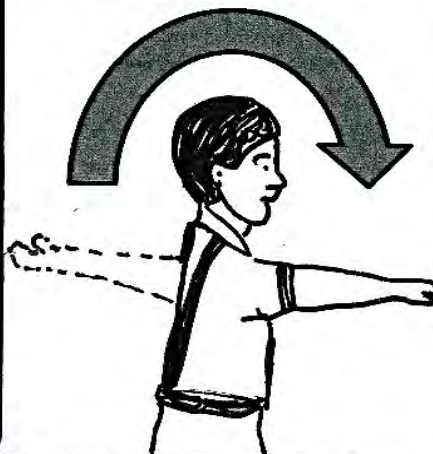
**This Far To Go**



**Slow Down**



**Take Off**



These signals were developed by the Indiana Farm Safety Council, refined by the National Institute for Farm Safety and then adopted by the American Society of Agricultural Engineers as ASAE Standard ASAE S351, Hand Signals for use in Agriculture. <https://extension.umaine.edu/publications/2335e/>

- Teach family members how to use hand signals. They can tell an operator of farm equipment what they want without getting close to dangerous farm machinery.

Activity Page: Draw a Line From Each Word to the Correct Hand Signal.



Stop Engine

Take Off

Come To Me

Start Engine



Move Toward Me

Speed Up

This Far To Go

Slow Down

Stop



Use Safety Signals.

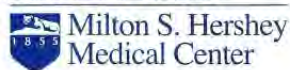


Check your answers by looking at the previous page.

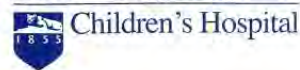
## Prevent Injuries When Children Are Doing Chores: PennState Hershey Fact Sheet.

Assign chores that children are physically, mentally, and emotionally capable of doing. Keep safety in mind by using the Penn State Hershey, “Farm Safety for Children” guideline below to choose a safe job according to each child’s ability and development.

PENNSTATE HERSEY



PENNSTATE HERSEY



### Farm Safety for Children

#### **Toddlers and Preschoolers (under age 5)**

Injuries to toddlers and preschoolers tend to occur when playing on the farm or when riding on farm equipment.

Toddlers and preschoolers can climb, walk, and run. This age group has a very short memory and likes to test reality. They learn by trial and error. Preschoolers have a fascination with moving parts, for example PTOs, belts, and moving corn in an auger.

##### **Types of Injuries:**

- Falls from tractors
- Falls from heights, for example, silos, ladders, and hay holes
- Kicked and stepped on by animals
- Ingestion of chemicals

##### **Prevention:**

- Never have a child as an extra rider
- Keep ladders out of reach
- Keep chemicals in locked storage
- Oversee the activity of preschoolers
- Provide a fenced play area away from farming activities

#### **School Age Children (ages 6–11)**

Injuries to school-age children occur at both work and play. This age group likes to explore and be creative. Parental attention and praise are very important. School-age children generally try to complete any assigned task to please their parents, even though the task may not be appropriate for them. They do not feel they can tell their parents, “No,” even if the children know the task is beyond their capability. This attitude results in many accidents. For example, a tired or weak child is more likely to become entangled in farm machinery.

##### **Types of Injuries:**

- Falls from barns
- Auger amputations and entanglements
- Tractor roll-over
- Suffocation in grain

##### **Prevention:**

- Restrict play areas
- Evaluate child’s physical and mental maturity for a given task

- Have proper protective devices on equipment, such as ROPS and shields
- Warning decals on hazardous equipment or locations
- Set aside time to discuss farm dangers with children

#### **Adolescents (ages 12–16)**

Most adolescents participate in farm labor. Therefore, their injuries are commonly work-related. This age group is greatly influenced by peer pressure. Adolescents do not like to look like failures; they want to impress others and tend to believe they are immortal. Many risky behaviors, intended to impress, result in accidents.

Age should not be used as the sole measure of maturity. Some other variables that distinguish individual adolescents are judgment and body size. Experience and observation help to improve judgment. A parent who takes proper safety precautions is the best teacher. Improper behaviors that parents perform automatically, for example stepping over a moving PTO, will likely be copied by a child.

There is a tremendous difference in the size of adolescents. Growth occurs in spurts and varies between siblings. A task that was appropriate for one son or daughter at age 12 may not be appropriate for his/her brother or sister at the same age.

##### **Types of Injuries:**

- Tractor roll-overs
- Amputations from PTOs
- MVA (motor vehicle accidents) with farm equipment on roads
- Suffocation in grain bins




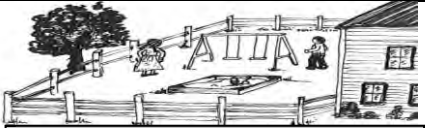
























##### **Prevention:**

- Evaluate the child’s physical and mental maturity for a given task
- Install the proper protective devices on equipment
- Have children complete the necessary safety courses for operating farm machinery
- Teach children to use personal protective equipment
- Set aside time to discuss farm safety with children
- Be a good role model

## Match Game: Find Methods to Prevent 16 True Runover Injuries and Deaths.

Choose one or more of the injury prevention methods described below that you feel could have been used to prevent the 16 Injuries found on the next page. Put the letter for your choice or choices (you may have more than one answer) in the shaded column after each of the 16 injuries/deaths on the next page. The first one is completed. When everyone is finished making their choices, take turns discussing why you think your answer would prevent a similar injury or fatality.


### Safety Barriers & Safety Methods To Reduce Farm-Related Injuries

A	<p>Make safety a family priority!</p> 	<p>Encourage every family member to look for safety hazards. Then isolated or eliminated them before someone is injured.</p> 	
B	 <p>Prevent a child access to barnyard</p>	<p>A barrier is a fence; shrub or building that blocks movement from one place to another. Barriers can protect children from injury by preventing them from getting to machinery, animals, chemicals, or sources of water.</p> <p>Use a barrier to create a small play area outside the kitchen window!</p>	
C	   <p>Provide 1-1 child care</p>	<p>Have someone assigned to care for small children.</p> <p>Arrange off-farm childcare. Have a child cared for by a responsible older sibling, grandparent or neighbor during busy times. The child has more fun and adults can work more efficiently.</p>	
D	   <p>No extra rider Rule!</p> <p>Do not ride on forklift</p>	<p>Don't allow children to ride on any equipment.</p> <p>Teach children machinery is NOT to be played on, even if not in use. Don't start taking them for rides on equipment. When the motor starts, they most likely will run to the equipment and you may not see them in time to stop.</p>	
E	  <p>No playing in the barn &amp; cover hay holes</p>	<p>Say <b>NO</b> to allowing children in the barn unless someone is focused on caring for them.</p> <p>Children fall off of machinery or are exposed to chemicals. Covering hay holes prevents head trauma and serious injury.</p>	
F	<p>Increase a child's visibility</p>    	<p>Make children more visible to vehicle drivers.</p> <p>Put safety signs up to alert drivers to slow down. Wear a bright-colored vest on small children --drivers of tractors, horses, cars, trucks, forklifts, &amp; skid steer loaders can't see small children easily.</p>	
G	<p>Fence in water, slurries, &amp; pits.</p>   	<p>Keep children away from water hazards!</p> <p>Fences around ponds, pools, manure pits, and ditches prevent children from drowning. It only takes 1"-3" (enough liquid depth to cover their face) to drown. Don't swim alone. Wear a flotation vest. Use a heaving jug and blow 3 short blasts on a whistle to get help fast.</p>	
H	 <p>Check before moving--Do a 360 !</p> 	 <p>Walk around machinery and horses before driving.</p> <p>If a child comes near you when you are using machinery, <b>STOP</b> the machine to prevent an injury.</p> 	
I	  <p>Know what to do in an emergency!</p>	 <p>Make a plan. Know what to do before you have an emergency or fire. Plans save lives and property.</p> 	

**Note:** This is a list of 16 true events that happened to children under 6-years-old from 2011-2013 in the United States. All of the 16 happenings involved the severe injury or the death of a child. They were run over and injured by a tractor, a skid steer loader, or a forklift.

The clippings can be found at <https://cultivatesafety.org/>

Put your  
answers  
here.



Put your preventive suggestions in the shaded column on the Left. The first one is done.

A B C D would help prevent this type of incident	1.	A <u>2 ½-year-old</u> died after she was run over by a tractor at her home.	October 2013
	2.	A <u>50-year-old</u> man and his grandson died after the tractor they were riding flipped over backwards on top of them. They were going through a ditch from the yard to the road.	August 2013
	3.	A <u>2 ½-year-old</u> girl died when she was run over by a forklift that was backing.	August 2013
	4.	A <u>5-year-old</u> boy was fatally injured after falling from the bucket of a skid steer. The driver could not stop the equipment in time to avoid the accident.	August 2013
	5.	A <u>5-year-old</u> girl was pinned between the barn and a skid loader. The girl climbed onto the right rear side of the loader (under the arms of the bucket). The driver did not know she was there until it was too late to stop.	December 2013
	6.	A <u>6-year-old</u> boy was helping to haul wood when he fell from the tractor. The tractor equipment ran over the child causing a fatal injury.	July 2013
	7.	A <u>toddler</u> was riding a tractor with her dad and two brothers (1 & 4 years old) planting a cover crop. The cab windows were open to help ventilate the heat of the sun and the toddler fell from the tractor and was fatally injured.	July 2013
	8.	A <u>6-year-old</u> boy lost his left leg after falling off a tractor that was pulling a mower. His legs were severely damaged but the doctors were able to save his right leg by doing surgery.	July 2013
	9.	A <u>2-year-old</u> was fatally injured when the arm of the skid steer controlling the bucket struck the boy on his head.	May 2013
	10.	A <u>4-year-old</u> boy died when he fell off a tractor he was riding. He lost his balance and the tractor driver tried to catch him but could not. The tractor tire struck him.	March 2013
	11.	A <u>2-year-old</u> child was injured after falling off a skid steer loader. He was severely injured and died later of a massive head injury.	November 2012
	12.	A <u>3-year-old</u> boy was playing on a tractor. He accidentally started the tractor which caused him to fall from the tractor. It ran over the child and also hit another child causing minor injuries.	September 2012
	13.	A <u>19-month-old</u> child was run over by a skid steer operated by a family member who was moving round hay bales. The driver did not see the child until it was too late to stop.	September 2011
	14.	A <u>5-year-old</u> boy died when a tractor backed over him. Bystanders believe the boy ran behind the tractor and the driver did not see him until it was too late.	July 2011
	15.	A <u>3-year-old</u> boy was run over by a farm cab tractor he was riding with his 5-year-old brother and his father. The incident happened while they were plowing a field. The tractor hit a bump and the boy grabbed the door handle next to him causing him to fall out of the tractor. He was run over by the rear tractor tire.	April 2011
	16.	A <u>4-year-old</u> boy died when he fell from a large, dual-wheel-drive tractor. As the tractor was being turned around, the cab door flew open and the boy was thrown out of the tractor and was fatally injured.	April 2011



# *A B Cs of Farm Equipment Safety!*



A	<u>Assign</u> chores keeping in mind a child's growth and developmental stages.
B	<u>Blind spots</u> are areas near a vehicle that cannot be adequately seen by the driver.
C	<u>Center of Gravity</u> must stay inside the stability baseline of equipment or it will topple over.
D	<u>Don't</u> carry a heavy load on farm equipment high in the air: stay low and go slow.
E	<u>Equipment</u> is never safe for children to ride on, climb on, or play nearby.
F	<u>Farm safety rules</u> save lives: decide on one or two that everyone must follow.
G	<u>Gates, fences, shrubs and buildings</u> can be a barrier to prevent injuries and fatalities.
H	<u>Hand signals</u> can tell an equipment driver what you want them to know while you stay safe.
I	<u>It's never safe</u> to use a tractor, skid steer loader or forklift bucket as a ladder.
J	<u>Just say NO!</u> Never allow any extra riders on farm machinery.
K	<u>Keep</u> children away from farm worksites by providing one-to-one child care.
L	<u>Look</u> behind when backing farm equipment, you can save a life of a child.
M	<u>Monitors and mirrors</u> on equipment can increase the visibility of a child standing near-by.
N	<u>Never</u> start machinery unless on the seat; some try and end up injured or dead.
O	<u>Operators</u> of farm equipment should do a walk around their equipment before moving.
P	<u>Prevent a fatality</u> : wear your seat belt when operating ROPS protected equipment.
Q	<u>Questioning</u> how to do a job safely is smart; it may prevent an injury or save a life.
R	<u>Remember</u> : actions speak louder than words and a child is always watching.
S	<u>Stability baseline</u> is an imaginary line drawn from the tires that touch the ground.
T	<u>Touching the safe spot decal</u> when vehicles drive in the driveway can prevent child runovers.
U	<u>Understand &amp; read</u> the operation manual before turning on the engine: it may save a life.
V	<u>Visibility of a child</u> is increased by wearing bright safety vests on the road and in the driveway.
W	<u>Warning decals</u> remind equipment operators to use safe work practices.
X	<u>Xercise</u> the use of safe work procedure: to prevent injuries and fatalities.
Y	<u>Young children</u> should never be allowed to be in the worksite: it's too dangerous.
Z	<p><u>Zero injuries and fatalities</u> happen when everyone uses safe work practices and barriers are in place to protect and prevent young children from being injured.</p> <p>Make safety a priority every day at your home or farm!</p>



**Safe Children: Happy Families**



## Farming Is:

- ❖ A very busy lifestyle.
- ❖ Caring for land and water.
- ❖ Doing many chores.
- ❖ Family fun and learning time.
- ❖ A family working together.
- ❖ Long busy hours.
- ❖ Working around cows, horses & mules.
- ❖ Working with tractors and powered equipment.
- ❖ Working with skid steers or forklifts.
- ❖ Working in a high risk environment.



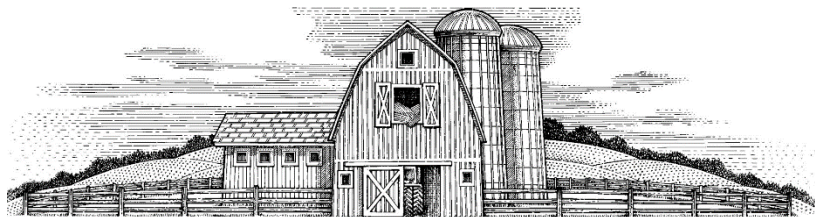
*Farming is working as a family to prevent injuries and fatalities by making **SAFETY** a priority every day!*

### Prevent Injuries and Fatalities by:

1. *Identifying major hazards that cause injury death.*
2. *Managing hazards by using barriers or methods to reduce, isolate or eliminate danger.*

*This project was funded by the National Children's Center for Rural and Agricultural Health Safety, (NIOSH 2U54OH0095681) Marshfield, WI*





**A**

**F**

**E**

*Only You Can Make Ag Safety A Lifestyle!*

*Prevent Child Runover and Rollover Injuries and Deaths: Follow the SAFE Steps.*



**Spot a Hazard:**

- Sit on the porch, in the yard and note areas that could cause a child runover incident.
- Sit near a shed, barn, workshop, greenhouse, or other nearby buildings and observe for runover hazards.
- Note lack of fences, gates or barriers that could enhance prevention.
- Recall experiences of others who have been injured in surroundings like yours.
- Put yourself in the position of a child and ask what would attract a little one.

**Assess and Locate Top Risk Areas:**

- As a family:
  - Identify areas of concern for your home, business, or farm.
  - Discuss what could be done to prevent access to the barnyard.
  - Pick areas that have the highest potential to cause injuries/deaths.
  - Discuss how to avoid, isolate, or eliminate high risk areas.

**Fix or Change High Risk Areas:**

- Determine what needs to change first (greatest concern).
- Buy supplies or equipment if needed.
- Ask other family members and/or neighbors to help with your work frolic.
- Change habits that enhance safety:
  - Create family farm safety rules.
  - Put safe spots on a house, barn, shed to prevent child runovers.
- Make safety a family priority every day.



**Evaluate--How's That Working?**

- Did the changes effectively decrease the risk of a child runover or rollover incident?
- Are there other hazards that should be eliminated or isolated?
  - If yes, repeat the SAFE Steps.

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**Safe Children: Happy Families!**