



Sterlington Stairlift Stories For Children

Aqueous Film Forming Foam

This is a story about AFFF.

When you read it to someone you can make shapes with your fingers and make sounds to go with the story.

Sometimes things start burning and cause a lot of damage, so if an unwanted fire has started we have to find ways to stop it.

A long time ago a man talked about the "Fire Triangle". He said that for a fire to start it needs three things: Fuel, Oxygen and Energy.

You can remember this because the initial letters of those three words spell FOE, which is another word for enemy.

Unwanted fire is certainly an enemy.

The energy can be heat, a flame, a spark, a chemical substance, lightning, or something else that makes the fuel get hot and start burning.

The man said that it was helpful if we thought of the three things as the three sides of a triangle. Then if we removed any one of them the triangle would collapse and there could be no fire.

Not surprisingly he called it The Fire Triangle.

If we had a fire in a waste bin where paper had started to burn accidentally we could pour water on it. The water would take the heat out of the fuel and the burning would stop.

If we had a wood bonfire in the garden and wanted to stop it we could get a rake and pull all the wood away from the bottom so there was no fuel left and the fire would die.

If the oil or fat in a chip pan in the kitchen starts burning we can put a fire blanket over it to stop any more oxygen getting to the fuel and the burning will stop.

Now to the juicy bit!

Sometimes substances like petrol spill and start burning. Or it may be an aeroplane on a runway that has crashed and fuel has spilled onto the ground and started to burn.

We can't use water because the fuel would float on top and oxygen in the water would make the fire worse.

We can't throw a blanket over it because there is too much and we don't have a blanket that big.

We can't rake the fuel away because it's liquid and is very thin.

But we can use foam!

This is a very clever idea. One type of foam is called protein foam and is made from bits of old animal hooves, horns, bones and that kind of stuff.

These bits, which are the protein, are ground down or crushed into a powder which is put in a big drum.

A fire hose which carries a lot of water is fixed to a special pipe and one bit of the pipe goes into the drum.

When the water is turned on it travels so fast through the hose that it sucks the protein powder out of the drum as it goes.

The powder mixes with the water in a special nozzle and what comes out of the end is the Aqueous Film Forming Foam.

This special Aqueous Film Forming Foam or AFFF is sometimes called "A-Triple F" by firemen.

The person in charge of the hose and nozzle squirts the foamy water to the far end of the spilled fuel then works back toward the hose.

The foam lays on top of the fuel and forms a thin bubbly film which stops oxygen from getting to the fuel.

When all the fuel is covered the burning stops.

Things that have water in them are called aqueous.

This foam has water in it and because it forms a film over the fuel it is called Aqueous Film Forming Foam.

If you say that very fast over and over you may start foaming at the mouth!

It is very clever stuff and has helped to save lots of people from being burned. So triple cheers for the man who thought of A-Triple F!

The End