

The Wonderful Wide World of Fibres



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Enviro-Stories

Enviro-Stories is an innovative literacy education program that inspires learning about natural resource and catchment management issues. Developed by PeeKdesigns, this program provides students with an opportunity to publish their own stories that have been written for other kids to support learning about their local area.

www.envirostories.com.au

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The Wonderful Wide World of Fibres

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Fibres and Fibre!

Do you know
what they are?



I am going to teach you that there is fibre and there are fibres. They are very different.

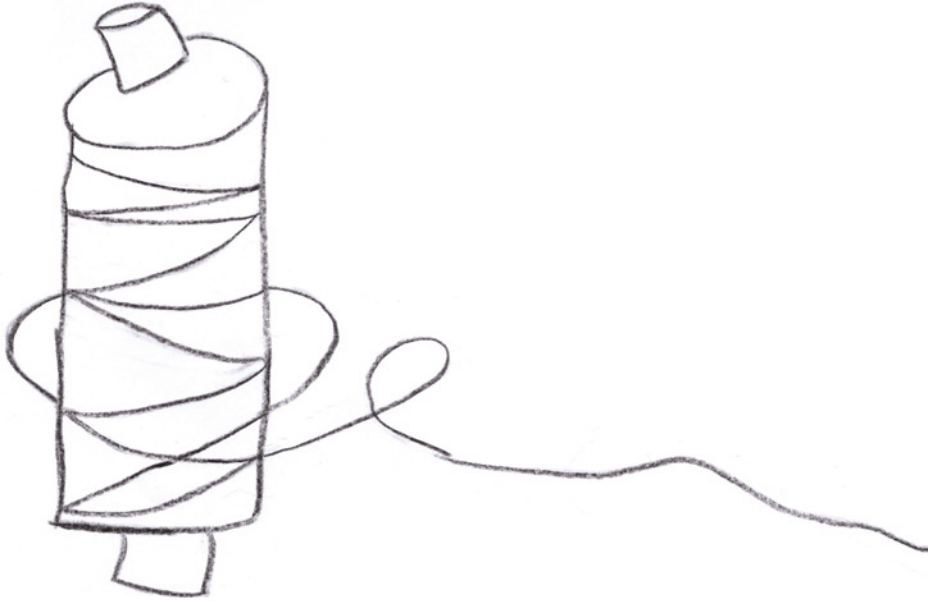
The first type I am going to tell you about are textile fibres. These are long, thin strands of material made by plants, animals, or humans. They play a huge role in our everyday lifestyle; from the clothes we wear to things like towels, rope, sheets, brushes, paper, and rubber.

The second type of fibre is something that our body relies on to live. This ingredient which is found in fruits, vegetables, whole grains, and legumes is imperative to keep our digestive system healthy.

If you don't understand much about fibre and fibres, then you should really pay attention to my story!

Now, to the first big question...

What are textile fibres?



The definition of fibres is – fine threadlike, flexible strands of materials, that can be combined together to make other things.

To elaborate, fibres are not very wide but exceedingly long which can provide strength when they are spun or woven together.

Fibres are a very old resource that have been used by people for tens of thousands of years.

Approximately 60% of our clothes are made of fibres. The main fibres found in our clothing are linen, silk, cotton and wool.

One crazy fact about fibre is that even banana and bamboo fibres can be used to make things like clothes!

Just take a minute to think about it... What clothes would be on our backs and in our wardrobe if we didn't use fibres to create them?



LINEN

Now let's learn some more interesting things about different types of fibres...

Linen is a fibre made from the flax plant, and it is usually worn during hot weather. Traditionally, the flax plant is pulled from its roots then dried. The seeds are then pulled in a process called rippling.

The dried flax is then retted (exposed to moisture) to separate the fibres from the woody components of the stalk.

The flax fibres can then be used to make linen.



Silk is composed mainly of sericin and fibroin, and is produced by certain insect larvae. Let's break it down! The key words in this sentence are sericin and fibroin.

Fibroin is the structural centre of the silk, while the sericin surrounds the fibroin in a sticky form. Sericin is a protein created by *Bombyx mori* (silkworms). About 70–80% of silk is fibroin and 20–30% is made of sericin.

Silk is one of the most well-known fabrics used across the globe!

Cotton

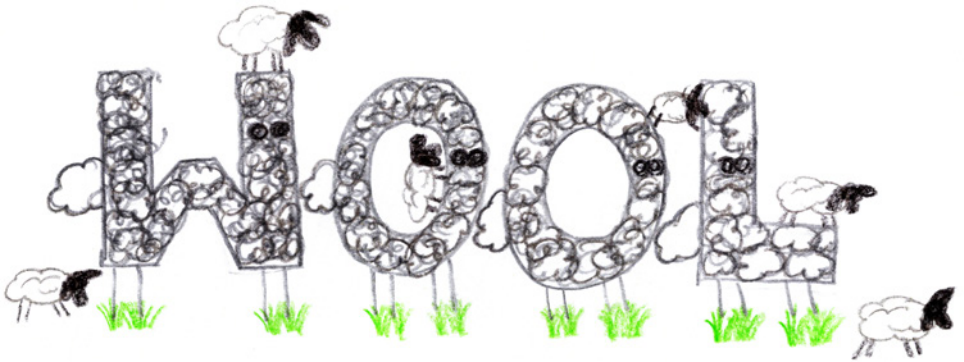


Cotton is a soft fibre that grows in a boll. The fluffy parts of a cotton boll protect the seeds inside.

A cotton fibre is like a thin hollow straw made of cellulose which is coated with wax.

Cotton grows in warm climates, and you can see many cotton farms around our area in Narrabri!

Many of our t-shirts, long-sleeve shirts and jeans are made of cotton, so you should be able to recognise them easily in your wardrobe!



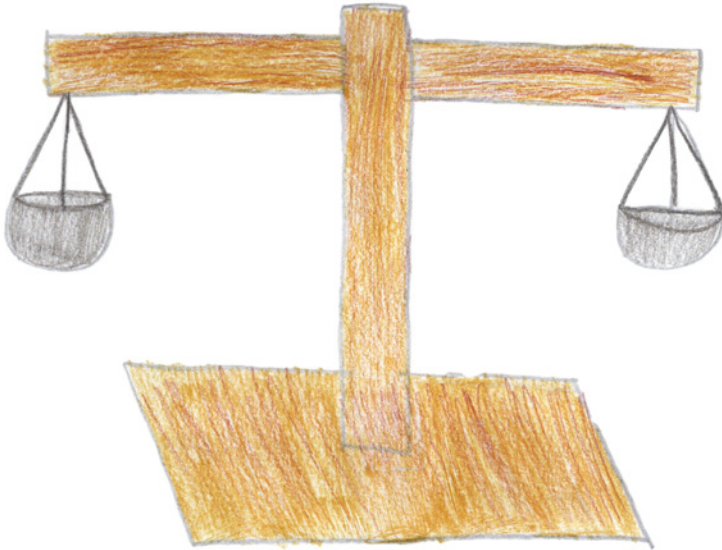
Many of you would know that wool is a fibre that comes from sheep. Wool consists of protein and a small percentage of lipids (fats).

Wool is made up of the protein keratin, this protein has also been located in human hair. There are many benefits of wool, it is biodegradable, renewable, breathable, easy to clean, doesn't wrinkle and it's static resistant.

Overall, wool is one of the most common forms of fibres found all over the globe!

From wearing fibres to eating fibre...

Let's look at dietary fibre



Fibre is the part of a plant food that is not broken down by our bodies during digestion. It is essential for a healthy digestive system and preventing diabetes, heart disease and bowel cancer.

The question is... do you know how much fibre you should eat? The average recommended intake of fibre is 20–30 grams per day.

If you're an adult you should have 25–30 grams daily. Children from 4–8 years old should have 18 grams of fibre daily, 9–18 year old (girls) should have 22 grams of fibre per day.



To be able to have the right balance you have to know which foods are full of fibre.

If you love seeds you are in luck because fibre is found in wholegrain cereals, wholewheat pasta, wholegrain bread, barley, oats and rye.

Fruits, such as berries, pears, melons and oranges, are also full of fibre.

Lastly, fibre can be found in vibrant vegetables like broccoli, carrots, avocado, potato with the skin on, sweetcorn, peas, beans, pulses, nuts and seeds.

It's good to keep these foods in mind when you are thinking of fibre!

There are two variations of dietary fibre – soluble and insoluble.

What do they mean?

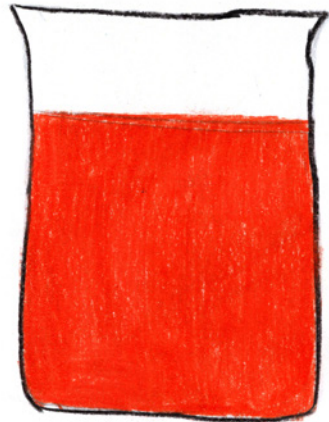
Insoluble



Insoluble fibre
is incapable of
being dissolved.

Wholegrains, root vegetables and fruits with seeds all have insoluble fibres.

Soluble



Soluble fibre
is capable of
being dissolved.

Soluble fibres are found in bran, barley, nuts, beans, peas and fruits.

There are important things about fibres that should really be considered, like the health benefits.

Fibre can help prevent many diseases, such as stroke, bowel cancer and type 2 diabetes. Fibre aids in the prevention of heart disease by lowering cholesterol.

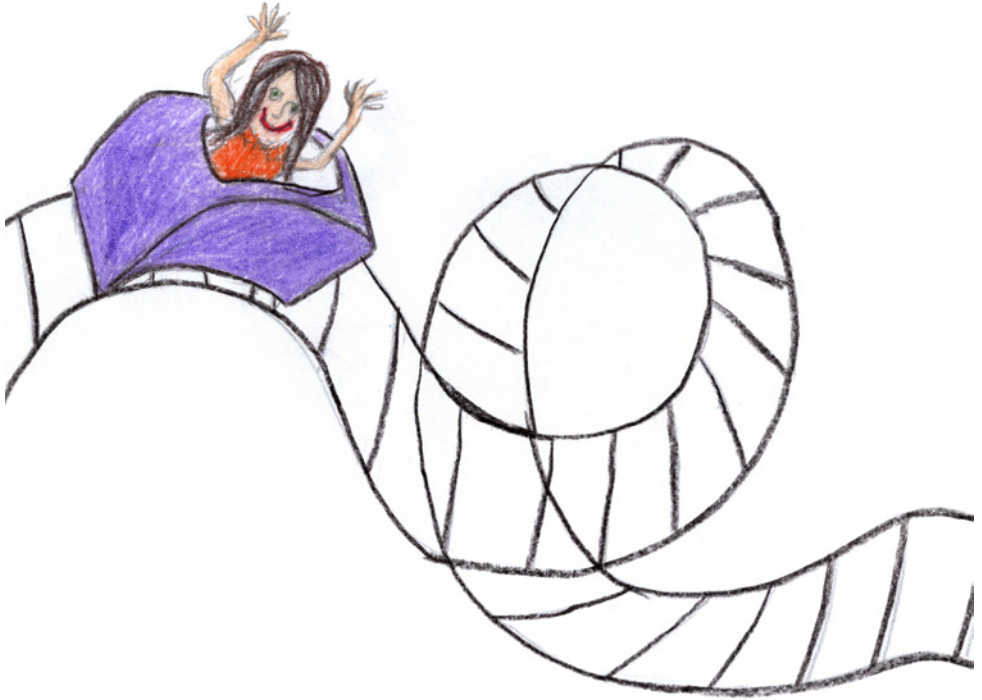
Including a variety of foods in your diet, such as fruits, vegetables and grains, means you are less likely to develop certain types of cancer.



Fibre is important for your health, not only because it prevents diseases but because it can help reduce constipation and weight loss.

Soluble fibre promotes overall fat loss by reducing your appetite. If you combine your soluble fibre intake with other lifestyle changes, such as making better health food choices and exercising more, you'll be on the right track!





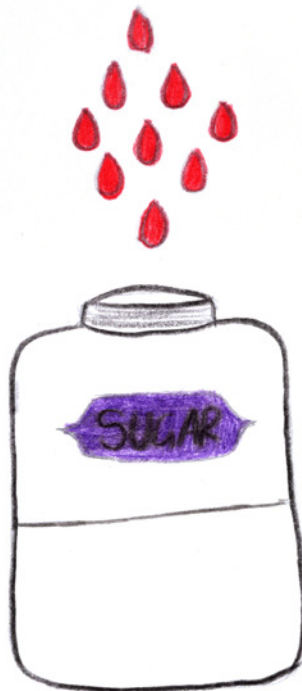
Now we've talked about all the positives of fibres but what about the negatives?

You need to keep an eye on your fibre intake because eating too much fibre too quickly can cause bloating and cramping.

You need to keep an eye on your fibre intake otherwise your roller coaster will only go downhill from here!

Five Fabulous Fibre Fun Facts!

1. You actually can't digest fibre.
2. Fibre acts like a sponge in the gut.
3. Fibre can help with blood sugar control.
4. Fibre can act like a broom by sweeping out the digestive tract.
5. Fibre has no calories and no nutrition.



I hope you have learned a thing or two about both textile fibres and dietary fibre!

I know it is a bit confusing but they're extremely important and imperative in our lives.

Fibre can warm our bellies and our backs. So now you know some facts about fibres you should really look at your choices in life and make sure you don't take our fibres for granted!





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