

# VIDYA BHAWAN BALIKA VIDYAPEETH

## STUDY MATERIAL SCIENCE

### CLASS-VIII

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#### ▸ Synthetic Fibre & plastics

### Rayon

Rayon is one of the most peculiar fabrics that is used commercially. Also known as artificial silk or simply art silk, rayon is not a synthetic fibre but a fibre made by modifying naturally occurring cellulose. It feels like silk and can be woven like silk but is cheaper. Rayon is usually classified as a manufactured fibre and considered to be regenerated cellulose. Rayon is also known as viscose fibre.

Rayon was first manufactured in 1880s in France, where it was originally developed as a cheap alternative to silk and was produced by the chemical treatment of wood pulp. It is a versatile fabric-it drapes well, is easy to dye and is highly absorbent like cotton. Rayon is used in a variety of textile applications, including clothes and appears in woven as well as knitted forms. It is an excellent alternative to silk and is frequently used in evening gowns and other garments. Rayon mixed with cotton is used to make bed sheets and rayon mixed with wool is used to make carpets.

## Nylon

Nylon is a synthetic fibre made from petroleum products. Chemically it is a polymer called polyamide a polymer of a group of chemicals called amides. It was developed in the 1930s as a substitute for silk and was the first fully synthetic fibre. Being lustrous, light and easy to wash, clothes made of nylon fabric have become very popular. Nylon can be formed into fine threads for use in stockings or into thick toothbrush bristles. Articles made from nylon, such as socks, ropes, toothbrushes, car seat belts, sleeping bags, rucksacks and curtains are used extensively. Nylon fabrics are very flexible and can be dyed. It is favoured by campers because it dries very rapidly. The high strength and elasticity of the nylon fibre makes it highly suitable for making parachutes, windcheaters and bulletproof vests. Solid nylon is used for making mechanical parts such as machine screws and gears for clocks and other components, which were previously cast in metal.