|  |
| --- |
| Activity 3.5.1: Innovation in the clothing industryMaterial: Worksheet 7 Tasks:  * + - 1. Rate the arguments into those in favour of using innovations in the clothing industry and those against it.       2. Find out about the underlying principle. Explain it. You may paint a model to explain the steps. (Search the internet for material and information)       3. List further pros and cons regarding the application/ usage of such chemicals or silver. Are there alternatives? Evaluate this new innovation. Take into consideration these various aspects regarding this topic. |

|  |
| --- |
| Worksheet 7: innovation in the clothing industry Some manufacturers use silver which is weaved into the textiles in the form of fine threads or the fibres are interspersed by silver particles. Silver ions kill the bacteria which has an antimicrobial effect. Products contain small amounts of the metal, in the form of nanoparticles that release ions slowly over time.  New high-tech textiles kill germs. Thus, body-odour is inhibited as the propagation of bacteria is inhibited.  There are different methods that are used to produce antimicrobial textiles. Some manufacturers use chemical additives such as quaternary ammonium salts, different kinds of the biopolymer (polysaccharide) Chitosan, or the antibacterial and antifungal as well as preserving agent Triclosan (not used anymore due to possible harmful impact to health).  **C:\Dokumente und Einstellungen\sunpn301\Lokale Einstellungen\Temporary Internet Files\Content.IE5\RDIL6AV5\MC900078711[1].wmf**  Silver can be very effective regarding neurodermatitis as it kills bacteria. Studies showed that by wearing antimicrobial textiles, the skin appearance improved in only a few weeks. The reason for that is that silver ions attack the staphylococcus aureus, a germ typically found with this skin disease.  Tests regarding the loss of silver during washing showed large variations in the amount of silver released in the first washing. Most of the silver was in the form of coarse particles of larger than 450 nanometers. This suggests that mechanical stress in the washing machine was responsible for most of the release.  There are concerns about antimicrobial textiles that the additives (e.g. silver ions) may harm the natural skin flora over a longer period of time. It is important to know if the antibacterial silver, e.g. in sportswear, harms the skin of healthy people as there are billions of bacteria and fungi on the skin which play an important role in the body's own infection defence and keep possibly pathogenic germs under control. |