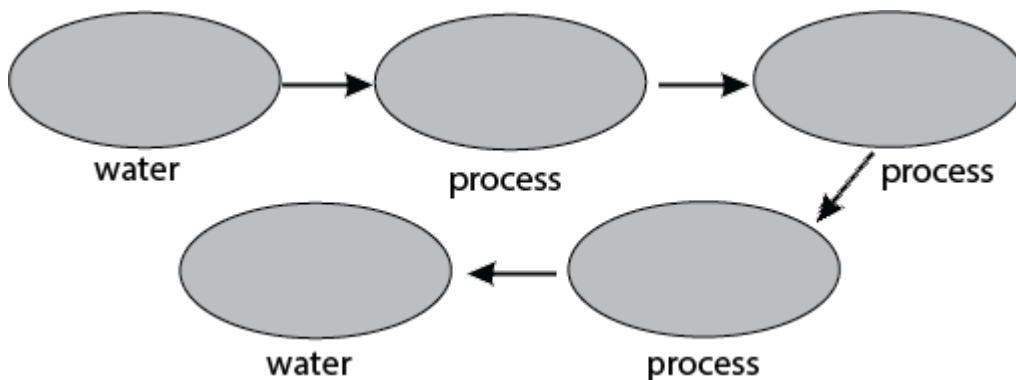


How water is purified

Water is made up of hydrogen and oxygen molecules, which are microscopic, whereas most molecules that contaminate water are very large. To purify dirty water, it must go through a filtering process. During this process, large, unwanted molecules are trapped and smaller water molecules are able to flow through.

The water purification process consists of three stages: filtration, reverse osmosis, and advanced oxidation. In the filtration process, sophisticated filtering procedures are used to remove bacteria, parasites, and small solid particles. Next, in the reverse osmosis stage, any remaining chemicals, hormones, viruses and bacteria are trapped using a very fine membrane. Finally, advanced oxidation is used to further treat the water and guarantee its quality. Dirty water has to pass through these three stages before it is considered to be pure again.



Batik

"Batik" is a traditional art technique which is believed to be at least 2000 years old. The basic process of batik is simple. The batik artist has to cover certain sections of fabric with wax so that the wax prevents dye, or colour, from penetrating that area. The uncovered sections, on the other hand, absorb the colour of the dye, providing a beautiful contrast of vibrant colour and pure white.

The technique of batik can be a demanding one, compared to other forms of art, such as painting. This is because the final design must be conceived before the picture is begun. The batik artist cannot complete one part of the design before moving on to another, as an artist painting in oils can. Nor can a batik artist paint over a mistake as a painter can. In batik, the correction of mistakes is impossible. For example, if several parts of the design are to be light blue, he or she must wax these parts at the same time. With each dye stage, the whole picture is built up.

Notes

- Traditional technique:
2000 years old.
- Process:
use wax to _____ & prevent penetration of _____.
- Comparison with painting:
in batik, must have a _____ before starting
& no chance for _____.

Sleep Deprivation

Sleep deprivation – or SD, as it is sometimes known - is a common problem in the 21st century. While doctors recommend that we sleep seven to nine hours a night, many people try to get by with six hours or less. Insufficient sleep has a dramatic effect on the body, causing performance levels to drop to those of someone with a blood alcohol reading of 0.05. Sleep-deprived people also become vague, forgetful, and irritable and their relationships at home and work suffer.

The good news is that sleep deprivation and the problems it causes can be easily addressed. A single long night's sleep can help people to feel better immediately, and two or three nights like this can bring about a complete recovery.

However, many people have forgotten how to get a good night's sleep. To ensure that you do, it is important to change your evening routine. First, make the decision to go to bed between seven and nine hours before you have to get up the next morning – and stick to this decision. Try to go to bed at the same time each night. Next, avoid eating two hours before bedtime, and avoid stimulants such as coffee. Before going to bed, have a hot bath or a warm drink of milk. Finally, make sure that your bedroom is dark, as your body associates light with daytime and being active. These small, but significant changes will result in a better night's sleep, and the end of sleep deprivation.

SLEEP DEPRIVATION (SD)	
What is SD?	<ul style="list-style-type: none"> - Normal: 7-9 hours - Sleep deprived: _____ hours or less
What are the effects of SD?	<ul style="list-style-type: none"> - Decrease in _____ - Problems with social _____
Can SD be cured?	<ul style="list-style-type: none"> - YES - Feel better in one night - Totally recover in _____ nights.
How can SD be avoided?	<ul style="list-style-type: none"> - go to bed at same time every night - don't drink _____ - keep room _____