WATER PURIFICATION WITH NANOTECHNOLOGY

NANOTECHNOLOGY IS THE SCIENCE OF THE VERY SMALL AND IT’S OPENING UP A WORLD OF NEW POSSIBILITIES – LIKE SAFE DRINKING WATER EVEN FOR RURAL COMMUNITIES.

HERE – THIS WATER IS SAFE. IT’S BEEN CLEANED USING NANOTECHNOLOGY.

TREATED WATER

NANO TECHNOLOGY WHAT’S THAT?

SCANNING ELECTRON MICROSCOPE (SEM)

1. The SEM shoots electrons towards the object we want to look at.
2. The electrons are focused using magnets.
3. When the electrons hit the object, they bounce back in different directions.

A DETECTOR COLLECTS THE SCATTERED ELECTRONS AND TURNS THEM INTO A PICTURE ON A COMPUTER SCREEN.

IN THE NANOWORLD Things BEHAVE VERY DIFFERENTLY

SCIENTISTS ARE COMBINING NANO SILVER PARTICLES WITH THE PLASTIC OF THE WATER BARREL. SO THE NANO SILVER STAYS IN THE PLASTIC AND DOESN’T GET INTO YOU OR THE ENVIRONMENT.

WATER BARREL

NANO SILVER KILLS BACTERIA BY STOPPING THEM GETTING OXYGEN. THIS HELPS SOLVE THE PROBLEM OF CONTAMINATED WATER.

GASP!

NANO CAREERS

NANOTECHNOLOGY IS OPENING A WORLD OF EXCITING POSSIBILITIES, BUT SCIENTISTS MUST KEEP LOOKING AT THE HEALTH AND SAFETY ASPECT.

• SPORTS EQUIPMENT
• HEALTH AND SAFETY
• ELECTRONICS INDUSTRY (E.g., CELLPHONES, TV’s, ETC.)

THE E. COLI BACTERIA IS ONE MICROMETRE. WE NEED TO GET SMALLER STILL.

THESE ALGAE ARE TWO MILLIONTHS THE SIZE OF THAT.

A FLY IS ABOUT ONE THOUSAND TIMES SMALLER THAN THAT.

NANO MEANS SMALL. VERY SMALL. LET’S TAKE A JOURNEY TO THE NANOWORLD.

10 mm (one hundredth of a metre) = 10 000 000 mm (one billionth of a metre)

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