- **Nanotechnology can help create Interactive Food**: There have been plans in the food industry to create nanocapsules that release needed nutrients in the body when the body has vitamin deficiencies. Scientists are also creating interactive foods which can change flavour and colour, followed by nanocapsules that enhance food flavours or colours.
- **Nanotechnology can help Plants**: Nanoparticles capsules are being created which can be inserted in insects to stop them from contaminating plants followed by the creation of nanosensors and dispensers being used in farm fields for attending to the plants needs. For example, when these nanosensors and nanodispensers sense a deficiency in the plant, the nanosensors will detect this and nanodispensers will then release fertilisers, nutrients or water.

Concerns of Nanotechnology on Society

Why are some Individuals Worried about Nanotechnology?

Some individuals are worried about nanotechnology because of its beneficial advantages having a negative impact on our society. Such disadvantages are:

- **Job Losses**: If nanotechnology replaces the distribution of natural substances that farmers and factory workers depend on, it can cause these people to lose their jobs due to the shortage of natural substances.

- **Market Crashes**: If alternative sources of efficient energy lower the value of oil and diamonds due to products being created with molecular level, it can cause some cash markets to lower in value or crash.

- **Creation of Atomic weapons can be made easily**: Since nanotechnology has the ability to make stronger, lighter and more efficient products, this can also mean that dangerous atomic weapons can be made and be more accessible to the wrong hands. This advanced nano weapon technology could possibly cause a world war three and cause destruction to people's lives.

- **Nanoparticle Poisoning:** The nanoparticles that are used for nanotechnology are so small that it can be inhaled by humans and cause mass toxic health problems. For example, anti-bacterial silver nanoparticles stop the growth of bacteria, but if it's inhaled by humans it can cause good bacteria to be reduced, therefore, meaning a low immune system. Nanoparticles may settle on the lungs or brain and cause increased stress response and inflammation as well as the breakdown of organic matter used in water treatment. Since nanoparticles have large surface areas, this can cause macromolecules in a human or animal body to absorb them. Unfortunately, the nanoparticles would cause a defect in the biological process of animals, therefore, causing mesothelima and changing the force of nature permanently.

- **The Production of Nanotechnology is very expensive:** Although the products of nanotechnology are easy and cheap to make, the generation and assembling of particles in nanotechnology can be very expensive. With nanotechnology manufacturing being so expensive, it causes the finished nano products to be expensive too. Unfortunately this can also cause serious health issues, for example, nanotechnology medical equipment would be expensive. If a seriously ill individual needed that nanotechnology treatment, and couldn't afford it due to the price of it being high, it would mean instant death for them.

needs in special dietary individuals. For example, this smart food can create calcium molecules which can be used for individuals suffering from osteoporosis.

- **Cosmetic Industry:** With nanotechology being used in our cosmetic products, there are many cosmetic products which help older adults to keep their youth for longer. For example, there are nanotechology improving sunscreens which use titanium oxide with a coating of silica to block the suns UV rays. Also, there are anti-wrinkle creaming, containing nanoparticles, that pass though the skin, to the lower layers and creates a new production of cells.

- **Medical Industry:** Nano technology, in this area, has been seen as a great advantage because of the way drugs can be made using nanotechology. Therefore, with this nanotechology, new drugs can be created which help people to be cured from very fatal diseases, for example, diseases such as cancer, fatal poisoning Aids and diabetes. Nanotechology is even being used in new but complex health treatment areas, for example, these areas can be bone repair, tissue regeneration and strengthened immunity. A nano application that has come from nanotechology is nanorobots that could be programmed to repair specific damaged cells. The small devices used in nanotechnology have helped to replace abnormal or diseased cells with normal cells to stop the chances of diseases affecting a individual. For example, polymer nanobots covered with transferrin protein were used for a RNA interference experiment in order block proteins which cause cancer and blindness.

- **Fashion Industry:** Nanotechnology is even used in the fashion industry and the properties of these nanoparticles used are helping to create better, durable and long lasting clothes. For example, a design student called Olivia Ong, followed by fibre scientists, created two garments. One can prevent cold and flu, while the other destroys harmful gases and protects the wearer from smog and air pollution. The two garments were made with nanoparticles by being dipped into nanoparticles solutions. For example, the upper portion of the gold dress was dipped in negative silver nanoparticles which stuck to the positive cotton. Therefore it gave it anti-bacterial properties and deactivation of bacteria and viruses which means that the garment doesn't need to be washed. The denim jacket however has palladium nanoparticles embedded into its soft tweed cotton fibres which has now made it an anti-smog jacket. Therefore, this jacket could be useful for an individual with allergies because the jacket would be able protect them from harmful gases and antigens in the air. In nanotextiles, there have been many particles used in clothing materials to give beneficial properties needed by the fashion empire. For example, a few companies are using titanium oxide and zinc oxide nanoparticles to improve material surface and give them UV protection, static resistance, flame retardancy, thermal performance, stain resistance, wrinkle resistance and water resistance. Other nano material particles that are being used in the fashion industry are silver nanoparticles. They can provide anti-microbial and odour reducing properties. Carbon nano-tubes can improve toughness, flexibility and strength and nanotechnology has even created clothing that can detect and respond to temperature changes, therefore, the clothing would be described as having its own intelligence.

References
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