

Space Technology

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Made in Space for Us – The Benefits of Space Exploration

Space technology is not limited to be used in space. There are many items that benefit us in our day to day lives which have evolved from equipment used and created for use in space exploration.

The following pieces of equipment have been developed and improved upon as a result of space exploration:

- **Artificial limbs** - Innovations in robotics and shock-absorption/comfort materials are inspiring and enable the private sector to create new and better solutions for animal and human artificial limbs.
- **Ear thermometers** - A thermometer which weighs only 8 ounces was developed which uses infrared astronomy technology to measure the amount of heat energy emitted by the eardrum, the same way the temperature of stars and planets is measured.
- **Water purification** - This system, makes use of available resources by turning wastewater from respiration, sweat, and urine into drinkable water. Commercially, this system is benefiting people all over the world who need affordable, clean water.
- **Heat resistant paints** - The spacecraft Apollo's heat shield was coated with a material whose purpose was to burn and thus dissipate energy during re-entry while charring, to form a protective coating to block heat penetration. This led to the development of other applications of the heat shield, such as fire-retardant paints and foams for aircraft.