

SCIENCE AND TECHNOLOGY



Science and its significance



- **Science** is knowledge which can be a system and which usually depends on seeing and testing facts, stating general natural laws.

Science is based on observation and experiment.

Science and its significance



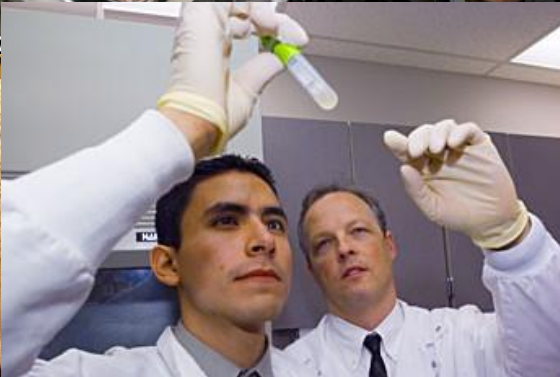
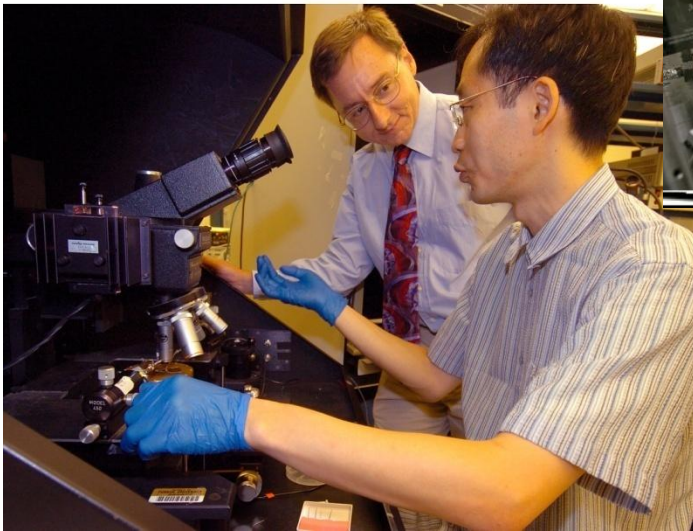
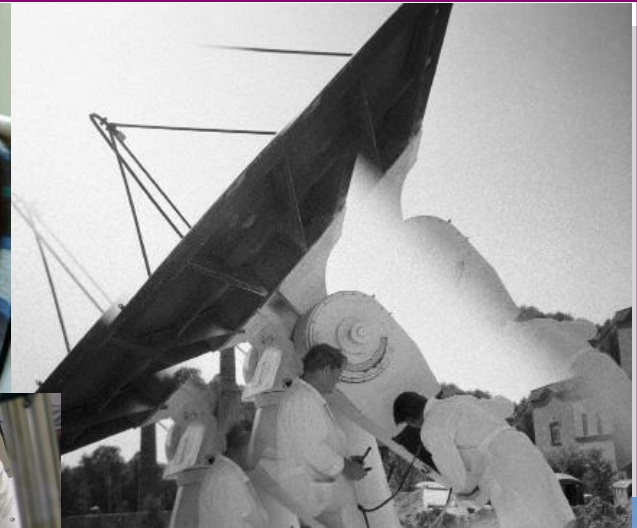
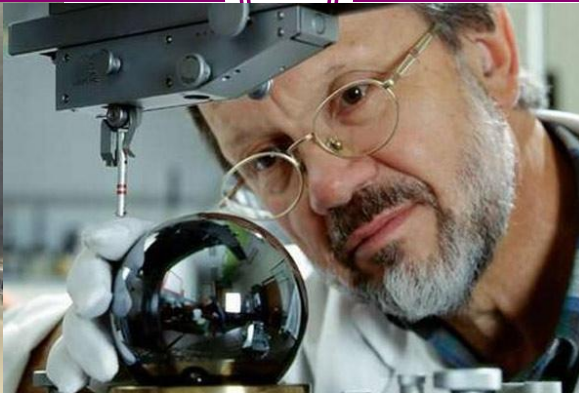
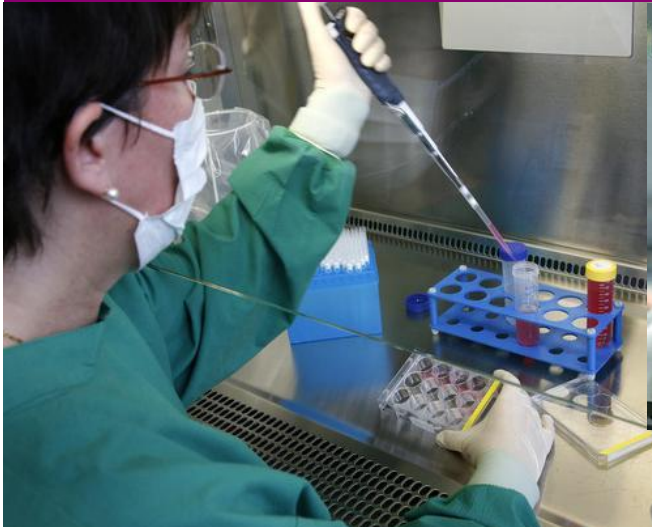
- Scientists aim to discover answers to the questions: «How?» and «Why?»
- They try to explain the world from the material point of view.
- They explore things that are mysteries to us and do research.
- They study physical objects and observe different processes and phenomena.

Science and its significance



- Then they analyze, systematize, classify them.
- After that they suggest new ideas, put forward theories and set out laws.
- Scientists make experiments and discover various facts .
- Finally, they state(establish) and formulate the principles of these theories.

Science and its significance



Science and its significance



- Thus, scientists develop and advance science and science progresses.
- In some centuries people mostly store, save and preserve information.
- But there are centuries that are rich in numerous important discoveries and inventions.
- For example, the 19th and the 20th centuries saw the greatest inventions indeed.

Science and its significance



- What inventions and discoveries *can be regarded as real breakthroughs*?

There is a legend that they are *the fire, the wheel and the alphabet* as they gave humanity *power over* matter, space and symbols relatively.

The other widely spread idea is that *the compass, (gun)powder and paper* are most influential inventions in the history of mankind.

But in fact there are lots of them.

Science and its significance



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|-------------------------------|------------------------------------|------------------------------------|--------------------------------|------------------------------------|----------------------------|
| Α Alpha (al-fah) | Β Beta (bay-tah) | Γ Gamma (gam-ah) | Δ Delta (del-ta) | Ε Epsilon (ep-si-lon) | Ζ Zeta (zey) |
| Η Eta (ay-tah) | Θ Theta (thay-tah) | Ι Iota (eye-o-tah) | Κ Kappa (cap-pah) | Λ Lambda (lamb-dah) | Μ Mu (m) |
| Ν Nu (new) | Ξ Xi (zie) | Ο Omicron (om-e-cron) | Π Pi (pie) | Ρ Rho (roe) | Σ Sigma (sig) |
| Τ Tau (tau) | Υ Upsilon (up-si-lon) | Φ Phi (fie) | Χ Chi (kai) | Ψ Psi (sai) | Ω Omega (oh) |



ПЕРИОДИЧЕСКАЯ СИСТЕМА ХИМИЧЕСКИХ ЭЛЕМЕНТОВ

| Группы элементов | I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII |
|------------------|----|----|-----|----|----|----|-----|------|----|----|----|-----|
| 1 | H | He | | | | | | | | | | |
| 2 | Li | Be | B | C | N | O | F | Ne | | | | |
| 3 | Na | Mg | Al | Si | P | S | Cl | Ar | | | | |
| 4 | K | Ca | Sc | Ti | V | Cr | Mn | Fe | Co | Ni | Cu | Zn |
| 5 | Rb | Sr | Y | Zr | Nb | Mo | Tc | Ru | Rh | Pd | Ag | Cd |
| 6 | Cs | Ba | La | Hf | Ta | W | Re | Os | Ir | Pt | Au | Hg |
| 7 | Fr | Ra | Ac | Th | Pa | U | Np | Pu | Am | Cm | Bk | Cf |

ЛАНТАНОИДЫ
АКТИНОИДЫ



Science and its significance



- Few people will *deny* the fact that we can't do without science nowadays.

There are **2 major reasons** for that.

Apart from those who *are keen on* receiving knowledge, getting new information just for the fun of it or to broaden their own horizons, we *can't ignore* the fact we live in a certain environment.

Science and its significance



- *No doubt* we should know ourselves and everything around us better. It is essential not to get into trouble, to provide ourselves with a healthy place to live in.
- Besides it is a well-known fact that science affects nearly every area of common people's lives *through technology*.

Science and its significance



- “Science can give us knowledge of our environment. It sets the scene in which we act. If it couldn’t do that, we’d be blind and ignorant and couldn’t act reasonably at all.”

(Magnus Pyke, a British scientist)

- “Science clears the fields on which technology can build.”

(Werner Heisenberg, a German scientist)

Science and its significance



- Now we are living *at a most exciting time* in the history of science. Modern methods of research enable us to understand many things that were mysterious to our ancestors. We are increasing our understanding of the universe.
- But the more we find out the more we realize how much there is still to learn.

Science and its significance



- Here are some urgent acute problems scientific minds are working at, to mention only a few:
- ❖ Finding alternative sources of energy
- ❖ Recycling and reusing materials
- ❖ Creating effective systems of communication

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