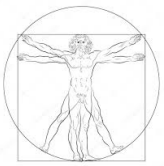
# Homo Superior





**EAE Learning objectives for this lesson**

Comparing and commenting on results and talking about performance.
Comprehension activities.

**Activity One: Ask and answer with your teacher or partner.**



1. Do you think that in reality, 'super humans' **could** soon be created?
2. If you **could** change one thing about yourself (or make one physical aspect of yourself 'superior'), what would it be, and why?
3. **Can** you think of ways in which we are already doing such modification today?
4. Do you think that it **would** be ethical to improve on humans and what ethical issues could it create if we started to use new technology in this aim?
5. Nietzche said "What is great in man is that he is a bridge and not an end". Or as the Indian philosopher Sri Aurobindo put it "As man emerged out of the animal, so out of man the Super human emerges." Do you agree that we **should** combine the biological and the technological to create Super-humans?

**Activity Two: Watch the video** and answer the questions about the lyrics.
David Bowie - Oh You Pretty Things



**Questions:**

1. Who do you think the 'pretty things' are?
2. Do you like the song and Bowie in general?
3. Who do we have to make way for?
4. What does he say about Homo sapiens?
5. What does he say about Home superior?
6. What does 'to make way for' mean? Use it in a sentence.

**Activity Three: Comparing results -** When comparing results, we can form comparatives or superlatives. We can also use some specific expressions.

**Comparatives** can compare two things or two people.

1. They can be formed by adding ER to the adjective (to all one syllable adjectives and some two syllable adjectives).

**Adjective = strong Comparative = stronger**

The Russian's exoskeleton is stronger than the American's exoskeleton.

2. They can be formed with the structure: more + adjective (for all adjectives with more than two syllables)

**Adjective = exciting Comparative = more exciting**

The opportunities for mankind are more exciting now than they were 10 years ago

**Superlatives** are used to highlight the difference between more than two people, countries or things

1. They can be formed with the structure: The + adjective + EST to (to all one syllable adjectives and some two syllable adjectives).

**Adjective = short Superlative = The shortest**

Out of all the countries, America has taken the shortest time to develop the technology for the 'super soldier'.

2. They can be formed with the structure: The + most + adjective (for all adjectives with more than two syllables)

**Adjective = serious Superlative = The most serious**

Research suggests that the most serious problem for genetic technology is the implications of genetic testing.

NOTE: To change something negatively, use LESS (comparative) and THE LEAST (superlative)

**Finance problems result in less opportunities for genetic technology growth.**

**USEFUL EXPRESSIONS:When presenting something visual, you can use the following expressions**

- As you can see from this graph…
- Let me draw your attention to…
- Let's look more closely at…
- This pie/bar/line chart shows…
- This pie/bar/line graph/chart demonstrates…
- This pie/bar/line graph/chart refers to…
- Here you can see…

**Expressions for talking about performance:** (constant /increase/ decrease / fluctuations):

Turbulent year (fluctuations)

Lots of ups and downs (fluctuations)

Gradual rise (increase)

Slight fall (decrease)

Sales rocketing (increase)

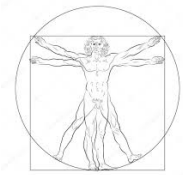
Peak (constant high)

Remained (constant)



**Activity Four**: How would homo superior perform? **Watch these real live 'super humans'.** https://www.youtube.com/watch?v=yq6p1fb9fQc

**Genetic engineers** want to pick and choose the traits from these types of people to build a better human. The Oxford dictionary of science fiction defines 'Homo Superior' as follows **- The species that will evolve or be developed from *Homo sapiens*, with greater intellect or physical abilities, and often possessing paranormal powers.**



1. Cite the different special traits each person possesses.
2. What are their Super Human titles?
3. Explain their special traits and how they experience them.
4. **Compare the performance of the different people.**
5. With a partner or your teacher, design your idea of Homo Superior. Then present your design as if you were showing a prototype. Talk about how it would **perform compared** to Homo sapiens.

**Activity Five:** **Read the expressions to help you share your opinion**

| | |
|---|---|
| ✓ ***Obviously,*** | ✓ ***I believe that,*** |
| ✓ ***Clearly,*** | ✓ ***I wonder if,*** |
| ✓ ***Essentially,*** | ✓ ***As far as I'm concerned,*** |
| ✓ ***In my view,*** | ✓ ***As for me,*** |
| ✓ ***To my mind,*** | ✓ ***I have no doubt that,*** |
| ✓ ***In my experience,*** | ✓ ***My feeling is that,*** |
| ✓ ***It seems to me that,*** | ✓ ***I wouldn't be surprised if,*** |
| ✓***I would say that,*** | ✓ ***In my point of view,*** |



**Activity Six** **- EXOSKELETONS – Where do they belong in our lives?**

**Read the extract** from this article done by the BBC and **give your opinions** to open the discussion with your teacher about where and how exoskeletons could be used in society. Use the expressions from activity five.
https://www.bbc.com/future/article/20140912-my-friend-and-his-robot-legs *(Complete BBC article can be accessed with this link)*

The Berkeley Robotics and Human Engineering Lab shepherded by robotics expert Homayoon Kazerooni leads the way with exoskeletons. His first foray into exoskeletons was in developing machines to help soldiers carry heavy loads in the battlefield, resulting in the HULC exoskeleton that's now been licensed to Lockheed Martin Aerospace company.

But in the last few years, he has turned his efforts to designing exoskeletons that help people with disabilities. In 2011, in perhaps his group's most high-profile achievement, they built an exoskeleton that allowed a paraplegic Berkley student named Austin Whitney to walk at his graduation.

"The overarching goal here is to create independence for people with mobility disorders and allow them to walk," says Kazerooni (his students just call him "Kaz."). For him, the exoskeletons are about more than ambulation. It's about giving people independence.

In addition to the practicalities of getting around, the exoskeleton makes human interactions more personal. "When you're in a wheelchair, you're in a bubble," says an exoskeleton pilot. "Because people are afraid to burst that bubble, they're reluctant to come close or to interact as they would if you were able-bodied".

So much of life is meant to be experienced standing up, he says. "That's part of the appeal of exoskeletons – a return to a more normal fit within society." Simply putting you at eye-level can change how people see you. "It improves the quality of life more through interpersonal communication," he explains. People don't have to bend down to shake your hand, for example. "If you stand up and shake their hand, it's a different meaning," he adds. "It feels different."

Kazerooni says, "I want to use everything I have in terms of knowledge and resources to get to that goal." "I'm not going to quit until it's done for people with mobility disorders – it's a part of my being; it's a part of my everyday struggle."

According to the US National Institute of Neurological Disorders and Strokes, there are 1,400 new cases every year of a disorder called transverse myelitis, and 33,000 Americans suffer from some sort of disability caused by the disorder. Some people fully recover while others remain disabled for the rest of their lives.

*(I recommend the Novel Klara and the Sun by Kazuo Ishiguro).*



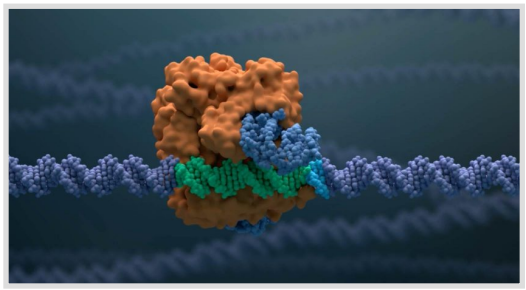
**QUESTIONS - Answer with your partner or to your teacher.**

1. **T**he first time Homayoon Kazerooni worked with exoskeletons, what was the project based on? What's your opinion of this project?
2. What is he focusing on now?
3. How does he describe the experience of being in a wheelchair?
4. How many American's suffer from a disability due to transverse myelitis?
5. How could an exoskeleton help someone to **perform** daily tasks better? Make

**Activity Seven** - **Read the article and then debate the issues.**

**Kazuo Ishiguro: 'We're coming close to the point where we can create people who are superior to others' (Source [https://www.theguardian.com/science/2016/dec/02/kazuo-ishiguro-were-coming-close-to-the-point-where-we-can-create-people-who-are-superior-to-others](https://www.theguardian.com/science/2016/dec/02/kazuo-ishiguro-were-coming-close-to-the-point-where-we-can-create-people-who-are-superior-to-others)).**

**Imagine** a two-tiered society with elite citizens, genetically engineered to be smarter, healthier and to live longer, and an underclass of biologically run-of-the-mill humans. It sounds like the plot of a dystopian novel, but the world could be sleepwalking towards this scenario, according to one of Britain's most celebrated writers.



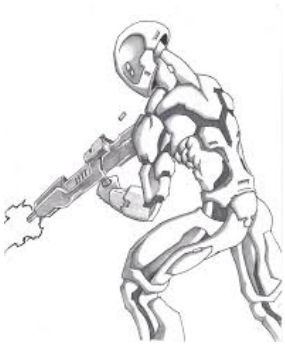
Kazuo Ishiguro argues that the social changes unleashed by gene editing technologies, such as Crispr, could undermine core human values.

"We're going into a territory where a lot of the ways in which we have organised our societies will suddenly look a bit redundant," he said. "In liberal democracies, we have this idea that human beings are basically equal in some very fundamental way. We're coming close to the point where we can, objectively in some sense, create people who are superior to others." Ishiguro cites three areas - gene editing, robotics and Artificial Intelligence - that he believes could transform the way we live and interact with each other over the next 30 years."We are on the brink of all kinds of discoveries that will completely alter the way we run our lives,"

What is Crispr? We still retain genes resulting from encounters Homo Sapiens had with Denisovans and Neanderthals.In historical terms, there being only a single hominid species is an anomaly. This is changing. We are about to face a world in which there are two species in the genus Homo—Homo Sapien and Homo Superior.

It is a world not imposed but being created as the result of CRISPR, a new genetic technology that allows scientists to edit genomes, including humans, with a precision unimaginable just a few years ago. Crispr, or to give it its full name, Crispr-Cas9, allows scientists to precisely target and edit pieces of the genome. Crispr is a guide molecule made of RNA, that allows a specific site of interest on the DNA double helix to be targeted. The RNA molecule is attached to Cas9, a bacterial enzyme that works as a pair of "molecular scissors" to cut the DNA at the exact point required. This allows scientists to cut, paste and delete single letters of genetic code.

"When you get to the point where you can say that person is actually intellectually or physically superior to another person because you have removed certain possibilities for that person getting ill… or because they're enhanced in other ways, that has enormous implications for very basic values that we have," said Ishiguro.



He also has concerns that in AI and robotics the bulk of intellectual capital lies with "the Silicon Valley masters of the universe" rather than universities or government-funded labs.

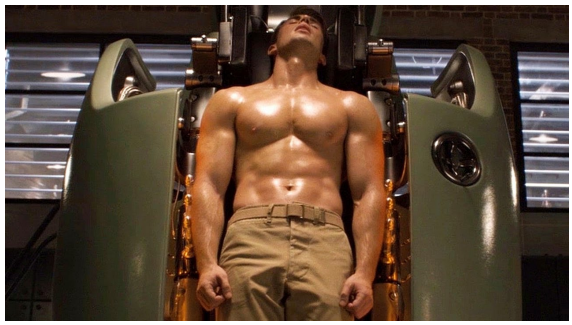
"There are some very powerful and rich people who want to do enormous research in this area," he said. "Some of them might want to come out with things that are very beneficial, but it's probably outside of regulation and so, yes, I think society as a whole needs to be more engaged."

**DEBATE**.

Argue in favour or against the legality of gene modification in France. If in groups, your teacher will divide you into 'FOR' and 'AGAINST'. If you are an individual, you must argue first 'FOR' the motion to make such modification illegal, and then 'AGAINST' with your teacher. Use the expressions to give your opinion, from activity five.
http://www.crisprtx.com/gene-editing/crispr-cas9 **If your are interested you can read more about this here.**

**ActivityEight** : **Super-humans in popular culture.**

**Watch** the following movie clip from 'Captain America'- the first avenger.
'The transformation of Steve Rogers'.
https://www.youtube.com/watch?v=F020aNi0wS0&ab_channel=TopMovieClips



Using the key words for talking about performance and the words for expressing your opinion, as well as the following expressions for introducing comparisons answer this question:

How does this character perform compared to other super heroes or compared to normal human beings? Make comparisons and talk about his performance. Think of other super heroes. With your partner, group, or to your teacher: Compare their performance to each other for various tasks.

## Expressions for introducing comparisons :

**Both X and Y share a number of key features/characteristics however X differs from Y in that…..**

- **There are a number of similarities between X and Y, however….**

**While W…., y…..**

**In contrast to X, Y….., Contrary x,**

**As opposed to x,**

**On the contrary,**

**X differs from Y in a number of important ways.**

