

Assignment Title: 5.3 Ethics of Scientific Advances

Unit 5: Perceptions of Science

Task 1 P4 - Report on Moral and Ethical issues related to scientific development

	Scientific development	Benefits	Moral and Ethical issues
1	Animal testing Animals are used to develop medical treatments, determine the toxicity of medications, check the safety of products destined for human use, and other biomedical, commercial, and healthcare uses.	Animals themselves benefit from the results of animal testing. If vaccines were not tested on animals, millions of animals would have died from diseases. It helps researchers to find drugs and treatments to improve health and medicine. E.g. vaccines, antibiotics, insulin. Alternative methods of testing do not stimulate humans in the same way. Animals are considered to be similar to humans. This helps researchers in recognizing limitations to improve medicines. This helps to ensure the safety of drugs before using on humans.	A lot of debate is being gone on whether using animals in research is "right or wrong?". This is because animals are kept in captivity or killed after their use. It is considered to be ethical as some religious treat animals to be sacred. Some people don't support animal testing for cosmetic use but they support its use in developments of new drugs and medicine. Some substances tested on animals sometimes never receive approval for public consumption. Many view this as a major negative.
2	Using children in research clinical trials Some clinical trials test the effects of potential new drugs, therapies, vaccines, vitamins, or procedures. These types of trials called randomized, controlled clinical trials, try to find the best treatment with the fewest side effects. They begin only after preliminary research has been conducted and there is a reason to believe that a potential new treatment is effective. All clinical trials are voluntary and information collected during them is confidential. Participants can withdraw from a trial at any time, for any reason.	Clinical trials are conducted in the hopes of finding a more effective treatment to give children a better quality of life and they're often very promising. This gives many families get a deep sense of satisfaction from the knowledge that their child is contributing to the development of better treatments for his or her illness.	Using children in clinical trials raise ethical issues whether it is safe to use children in research. This is because the new drugs, therapies, or treatments used in a trial might not be as effective as current treatment options or may not work at all. There is also a risk of potential side effects, all of which may or may not be known at the time of the trial. This could lead to complications or affect the child's health. It also disturbs child's day to day activities due a frequent visit to the clinic for monitoring.
3	Genetically Modified Crops GM crops are plants used in agriculture, the DNA of which has been modified using genetic engineering techniques. In most cases the aim is to introduce a new	There is a broad scientific consensus that food on the market derived from GM crops poses no greater risk to human health than conventional food. GM crops also provide a number of ecological benefits.	A key ethical concern about GM foods is safe to be eaten. As it has a potential to trigger allergies or disease in humans. There is also the fear that new allergies could occur from the mixing of genes from two organisms.