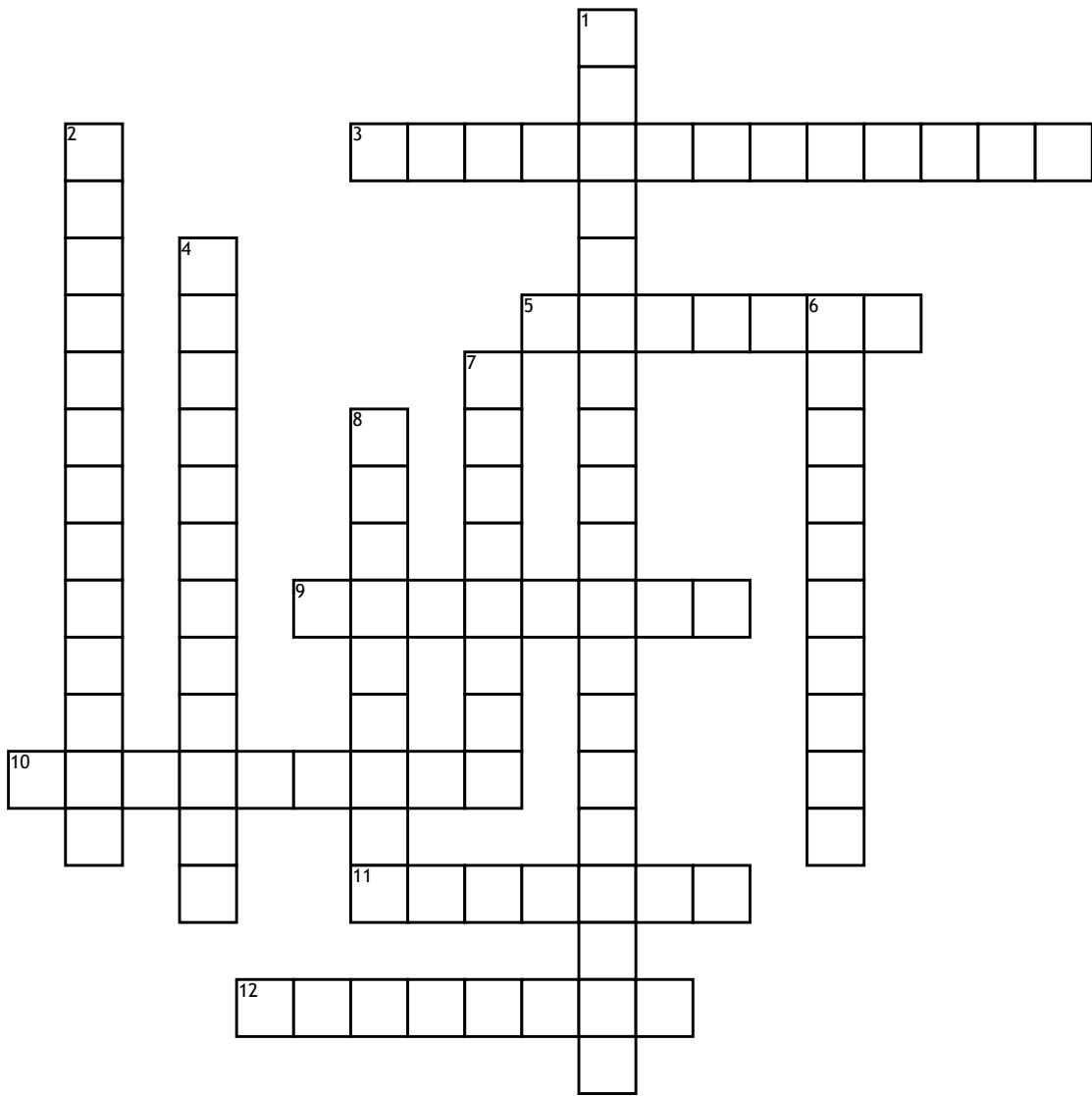


Name: _____

Gene Technology And Ethics



Across

3. Introducing a human gene, that codes for a medically required protein, into an animal with similar complex proteins
5. Uses GM micro-organisms to store living records of DNA and a source of DNA fragments for further study or GM
9. Cell gene therapy that involves inserting a healthy allele into an embryo or germ cell, immediately after fertilisation, so the individual can be born healthy and pass the allele to its offspring (Can be part of IVF)
10. A process of legal documentation that gives people the rights to their technology and techniques

11. Cell gene therapy that replaces the mutant allele with a healthy allele in the affected cells i.e. engineered plasmids into the nucleus

12. A change in DNA bases, chromosome sequencing etc.

Down

1. A technique that changes the characteristics of a plant, animal or micro-organism by transferring a piece of DNA from one individual to another
2. A generic name for issues such as excess CO₂ and pollution that affect the growth of crops

4. Adding or removing genes so animals develop certain diseases. Acts as models for developing new therapies

6. Gives GM crops a lack of sensitivity to insecticides, environmental changes etc and can be passed on for generations as a result of natural selection

7. The use of genetic engineering in animals to produce human medicines

8. A side effect of genetically modified crops due to the different proteins made