

## Genetically modified organisms

### Answers

1. DNA/ genes
2. Cat
3. Spider silk
4. Match the animal
  - a. Papaya
  - b. Mouse
  - c. Goat
  - d. Cow
  - e. Corn and soybeans
  - f. Salmon
  - g. Mouse and aquarium fish
  - h. Mouse, aquarium fish, and cat
  - i. Pig
  - j. Corn and soybeans
5. Put the following stages of producing a genetically modified animal, such as a goat, in order:
  - a. Implant blastocyst into a pseudopregnant female goat   5
  - b. Isolate gene of interest, such as spider silk gene   1
  - c. Recombinant DNA is microinjected into an egg cell   3
  - d. Female has offspring that are transgenic   6
  - e. Pure population of transgenic cells are grown in a petri dish   4
  - f. Spider silk gene is ligated to an appropriate promoter in a plasmid   2
6. Golgi, bacteria
7. Knockout
8. Plants can be modified to produce:
  - a. Herbicide resistance
  - b. Pesticides
  - c. Antiviral proteins
  - d. Beta-carotene
  - e. Drought/ cold resistance
9. Golden rice
10. Bacillus thuringiensis (Bt), digestive tracts
11. Resistant
12. Ti
13. Drugs

- a. Clotting factors
- b. Erythropoietin
- c. Cancer drugs
- d. Arthritis drugs
- e. Human antibodies

14. Cross-pollination