Student Sheet
    name_____

Title: Genetic Changes in Dogs and Cows

Introduction: Selective breeding (or artificial breeding) is the process of breeding animals with desired characteristics with similar animals in the hopes of getting offspring with these traits. This must be continued over many generations.

Selective breeding helps us produce:
  •   more beef – Selecting for the largest cows, best texture and appearance of meat.
  •   more milk – Choosing cows which give highest yield
  •   more chickens – Selecting for hens that lay the largest eggs and have more white meat
  •   more wheat – Growing disease and drought resistant wheat
  •   better flowers – Choosing the biggest and most colorful flowers

However, there are drawbacks
  •   The health of the individual animals may be reduced.
  •   The size gene pool is reduced because it is the same genes that are being selected each time. A smaller gene pool results in less adaptability.
  •   If a new disease strikes and one of the animals dies, then there is a high risk all the others will die because they are all related and live closely together.

Procedures:

1. Watch the video clips on:
http://www.pbs.org/wnet/nature/dogs-that-changed-the-world-full-episode-dogs-that-changed-the-world-dogs-by-design/8372/

2. Read "Dogs That Saved the World".
3. Answer questions 1-5 and write a summary paragraph.

Analysis:

1. How do humans change animals through artificial selection?

2. What are dogs natural traits that make them attractive to people?

3. What adaptations have sled dogs made to living in the arctic?

4. What traits have people artificially selected sheep dogs for?

5.What are physical and mental problems dog breeds may have?

Finish with a paragraph that starts with one of these statements:

1. It is a good thing that humans have artificially selected animals to serve their purposes.
2. It is a bad thing that humans have artificially selected animals to serve their purposes.

Support your statement with 3 examples from what you have just seen or read.