1. Cloning-Read the following information and play the videos. Once you have an understanding of cloning, complete the activity by cloning the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. After Mr. Robinson has seen your clone, dismantle it for the next group of scientist coming to learn. Investigate on your own and find three advantages and three disadvantages of cloning.

<http://learn.genetics.utah.edu/content/tech/cloning/whatiscloning/>

1. Gene Therapy-Listen to the following D-News and discover what Gene Therapy can do for humanity. Once you have discussed with your group what gene therapy is find the defective gene in the DNA sequence. Using what you learn, pretend you are a vector and correct the
gene. Investigate on your own and find three advantages and three disadvantages of gene therapy.

<http://news.discovery.com/human/videos/how-does-gene-therapy-work-video.htm>

1. Selective Breeding-Read about selective breeding. Discover its purposes and use by clicking and following the link. Choose an animal or plant. I want you to consider what traits you would want the final outcome to have. Choose traits that are currently not in existence…explain how you would take step to get to your traits. This would be multi-generational. Using what you know about incomplete or codominance, show your punnette squares for F1, F2, and F3 generations. **Example: I want pink flowers with white lines in them. F1 Generation male has homozygous traits Red, while the Female has homozygous White. These flowers’ color will be incomplete dominant. This will produce F2 generation that is all pink. I cross the pink flowers with another species of flower that has a codominant trait for white. The resulting flower in F3 Generation will be pink with white in it. I will continue this mating pattern until the lines of white are more pronounced on the pink.**

Investigate and find three advantages and three disadvantages of selective breeding.

[**http://biologyselectivebreeding.weebly.com/index.html**](http://biologyselectivebreeding.weebly.com/index.html)

1. Hybridization-Click through the amazing 11 hybrid animals. Describe what hybridization is and what animal would you like to see hybridized and why. What characteristic would you want them to have? What could be a consequence to their crossing? Investigate and find three advantages and three disadvantages of cloning.

[**http://www.mnn.com/earth-matters/animals/photos/11-amazing-hybrid-animals/mixing-things-up**](http://www.mnn.com/earth-matters/animals/photos/11-amazing-hybrid-animals/mixing-things-up)