

Name(s): \_\_\_\_\_

Class Period: \_\_\_\_

# Genetic Apocalypse

Apocalypse - an event involving destruction or damage on an awesome or catastrophic scale.

For this week's big work, we are going to plan for an apocalypse (plan for, not just plan). In order to explore the scientific ideas behind genetics in a way that is authentic, we're going to think about this topic in the context of a civilization-ending event. All modern technology and conveniences will be destroyed and inoperable. We're going to prepare a book of knowledge in the event that an apocalypse comes to pass.

There are many ways that genetics could spell our doom, and many things we will need to remember and understand about our genetics to survive in our new future. Some newly genetic engineered crop or animal could escape the lab and cause untold damage (think about Scott Westerfeld's *Uglies* series). There could be an increase in the mutation rate due to an increase in radiation levels. An old disease could mutate and become a plague. Even if there's some other type of apocalypse, wouldn't you like to be able to enjoy an apple? Or be able to breed a dog that is useful in our new world?

Some possible topics for this activity include:

- Genetically modified organisms
- Genetically modified foods
- Human genetic engineering
- Why genetically altering adults is so hard
- Genetic bottlenecks
- How to grow apples
- Svalbard Global Seed Vault
- Genetic diseases (any)
- Human Genome Project
- Mutation rate
- Pedigrees
- Radiation and mutations
- Radiation and cigarettes
- Genetic hybrids
- Gene-altering tech
- Mules
- Radiation therapy for cancer
- Natural selection
- Cloning
- Dog breeding
- Domestication
- Gardening
- Plagues

It is highly encouraged that you research and come up with your own topic (especially if you have a particular example of a disease, post-apocalyptic food source, etc.) **Work in pairs is encouraged, work in threes or individually is tolerated.** See the back for assignment checklist.

**Your finished page for our book is due Friday.**

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- ☐ The topic is interesting to me/us.
- ☐ The topic would be useful post-apocalypse OR helps explain why the apocalypse happened.
- ☐ I/we have explained on our page how my/our topic relates to genetics.
- ☐ I/we made a draft or sketch before starting our final page.
- ☐ It would be easy for my classmates to get information from my/our finished page.
- ☐ Our/my finished page includes text, diagrams, and pictures.
- ☐ Our/my finished page is pleasant to look at.
- ☐ If we were a pair/trio, we each completed a group work reflection individually on google forms.

If all boxes are checked, you will earn an A.

If all but one is checked, you will earn a B.

Etc., etc.

Grade Earned: \_\_\_\_\_

Comments from students:

Comments from teacher: