

Explore: Genetics in the News

THE ACTIVITY

1. Answer the questions below for each of the four articles about genetics.

FOLLOW UP QUESTIONS

Answer the following questions in your notebook using complete sentences.

Kermode bear article

1. Is the trait that makes white black bears recessive or dominant? How do you know?
2. If the trait was dominant, what would we see more of? Why?
3. What is one advantage scientists think the white coat provides?
4. Complete Punnett squares and provide genotypes and phenotypes for the offspring possibilities for:
 - a. Two black bears that carry the recessive trait.
 - b. A black bear with the recessive trait and a white black bear
 - c. Two white black bears

Beauty is more than skin deep article

5. What do phthalates cause in animals?
6. Where are phthalates commonly found?
7. The cosmetics association cites a study from 1985. Is it still valid today? Why or why not?
8. Are phthalates dangerous to humans? Why or why not?

Dad's influence article

9. Give one example that shows fathers have an influence on the health of their children (born or unborn)?
10. Each year a man's sperm producing cells reproduce how many times?
11. Older fathers who reproduce have higher chances of having children with _____?
12. What are epigenetic changes?
13. Why can't scientists find an exact cause for epigenetic changes?
14. Do humans inherit genetic mutations from their fathers? Why or why not?

Hemophilia and royalty article

15. Which sex chromosome is hemophilia linked to?
16. Why can't fathers pass hemophilia on to their sons?
17. Is hemophilia recessive or dominant?
18. Create a Punnett square for Queen Victoria and Prince Albert and provide genotypes and phenotypes for their children.
19. Create a Punnett square for Prince Leopold (has hemophilia) and Princess Helena (non-carrier). Provide genotypes and phenotypes for their children.
20. Create a Punnett square for Prince Miguel (no hemophilia) and Princess Sofia (has hemophilia) and provide genotypes and phenotypes for their children.