Genetics worksheet



Associate Program Material Genetics Worksheet Review the images below and answer the follow-up questions. Key: male affected with cystic fibrosis unaffected male female affected with cystic fibrosis unaffected female Generation I II III IV V Pedigree showing inheritance of cystic fibrosis A Key: male affected with cystic fibrosis unaffected male female affected with cystic fibrosis unaffected female Generation I II III IV V Pedigree showing inheritance of cystic fibrosis A Questions: 1. According to the pedigree, is cystic fibrosis inherited as a dominant or as a recessive traitKey: male with Huntington's Disease naffected male female with Huntington's Disease unaffected female Generation I II III IV V Pedigree showing Inheritance of Huntington's Disease Key: male with Huntington's Disease unaffected male female with Huntington's Disease unaffected female Generation I II III IV V Pedigree showing Inheritance of Huntington's Disease ? Explain how you made your conclusion using evidence from the pedigree and the principles of genetics. According to the pedigree, cystic fibrosis is a recessive trait. If you have one CF gene and a non CF gene, you can be the carrier of the disease, but not necessarily have the disease.

Mendel mentioned that the trait may not show up in someone, but may still be passed on to the next generation. He also stated that the inheritance of each trait is determined by the genes that are passed on unchanged. So if the CF gene is not present, it can become present depending on the ratio of genes as it passes down. 2. What would a Punnett square that shows how the son in generation IV (marked with an A) inherited cystic fibrosis look like? Key: male with Huntington's disease unaffected male female with Huntington's disease unaffected female

Genetics worksheet – Paper Example

Generation I II III IV V Pedigree showing inheritance of Huntington's disease Key: male with Huntington's disease unaffected male female with Huntington's disease unaffected female Generation I II III IV V Pedigree showing inheritance of Huntington's disease B B Questions: 1. According to the pedigree, is Huntington's disease inherited as a dominant or as a recessive traitKey: male with Huntington's Disease unaffected male female with Huntington's Disease unaffected female Generation I II III IV V Pedigree showing Inheritance of Huntington's Disease Key: ale with Huntington's Disease unaffected male female with Huntington's Disease unaffected female Generation I II III IV V Pedigree showing Inheritance of Huntington's Disease ? Explain how you made your conclusion using evidence from the pedigree and the principles of genetics. According to the pedigree, I feel as though Huntington's disease is a recessive trait. I feel this way because there is nofamilymember affected at the beginning of the pedigree. Also in the third generation of the pedigree there are no family members affected by the disease.

If Huntington's disease were a dominant trait I feel that the pedigree would show that it could affect more family members in the earlier stages. 2. What would a Punnett square that shows how the first daughter in generation II (marked with a B) did not inherit Huntington's disease look like? 3. What is the role of chromosomes in the inheritance of genetic traits, such as cystic fibrosis and Huntington's disease? Chromosomes carry the genetic traits. In a normal cell each of these chromosomes consists of two parts. A reproductive cell usually contain only on the chromatids of each chromosome.