Student exploration chicken genetics answer key pdf

Student research: chicken genetics Vocabulary: allele, codominance, dominant, genotype, heterozygous, homozygous, phenotype, probability, punnett square, recessive, trial Preliminary Knowledge Questions (Do these PRED use Gizmo.) The image shows a flower that was produced by crucifying a pure red flower with a pure white flower. What is the predominant floral color after you: red or white? Commented. How does the inheritance pattern show this flower differs from other inheritance patterns that you've seen or studied? There are many different ways you can inherit. Some things are governed by alile, which are dominant over other aliles. Other things govern alile, who share dominance. They follow a pattern of heredity called codeminanca. With Chicken Genetics Gizmo™, you will examine how codeminanca affects the inheritance of certain things. Turn on Show genotype. A genotype is a combination with alleeli that the organism has. Point to the red chicken. What is the genotype of red chicken? What is the genotype of white chicken? What do you think the letters F, R and W mean in genotypes? Drag the red chicken and white chicken into the mother boxes, but don't click the Breed yet. Question: Which hereditine samples show sodominant traces? He predicts: What do you think a descendant of red chicken and white chicken will look like? Watch: Click Breed. What are the descendants of genotypes? The appearance of the organism is its phenotype. Describe the offspring of the phenotype. Experiment: Drag four offspring into holding cages. Click Clear, and then drag one of the descendants to the parent box. Put the white chicken in the other box. Click Breeding Times. Describe the consequences of genotypes and phenotypes of offspring. Revidi and repeat: Click Clear. Drag the chicken from the cages into the mother box. Drag the red chicken into another box. Click Breed several times. Describe the consequences of genotypes and phenotypes of offspring. Explain: In predominant/recessive hereditary patterns, the predominant allel is always expressed when present. The recessive alila is expressed only when the dominant allel is not present. The comments in this activity describe how patterns of codeminant inheritance differ from the prevailing/recessive succession patterns. Click Clear. Drag the remaining chickens from the Holding cages into the mother boxes. Introduction: Probability is the probability that a specific event will occur. Scientists use the likelihood to predict the outcomes of different genetic crosses. Question: How can you use the probability to predict the outcome of a codemant cross? Model: Punnett's market is used to model possible offspring of genotypes from the genetic cross. Parent genotypes are written at the top and side of the market as shown. The possible genotypes of the offspring are then fulfilled. The first square is filled for you. Fill in the remaining squares. (Note: FR FW is equivalent to FW FR.) Analysis: A chicken will have the same alleles for the color of feathers. Heterozygous chicken will have two different allels for feather paint. Are parents homozygous or heterozygous? Explain how you know. What are the possible genotypes of offspring? Will the offspring be homozygous or heterozygous? Calculate: Punnett squares can be used to predict the likely results of genetic crosses. To calculate probability, divide the number of one type of possible result by the total number of all possible results. For example, if you submit a coin, the chance of landing on your heads is 1 ÷ 2. This probability can be expressed as 1/2, 0,5 or 50%. Look at Punnett Square upstairs. How many total possible results are there? How many possible results are there for each of the following genotypes? What is the likelihood of each of the following results? (Record responses as fractions and percentages.) (Activity B continued on the following page) Activity B (continues from the previous page) Test: Use Gizmo to test predicted results. Turn on Show Statistics and Show as approximate percentage. Click Breed. What are the results of the cross? Assess: Did the results of the cross match your prediction? If not, why do you think that's the case? Collect data: Click Breed 19 again until you create 100 offspring. How do the percentages match your forecast? Were they more or less similar to your original prediction? Compare: Click Breed until you create at least 1,000 offspring. Compare statistics on Gsm with the original forecasts. How close are you? Draw conclusions: Every time you raise breeding chickens, you have completed the experiment. The trial is great when you do the experiment. Random option often results in the same attempts to have different results. As a result, scientists have repeatedly repeated experiments to ensure that the opportunity alone is not responsible for the results of the trial. How did your results change as the number of experiments performed increased? Why was it important to you to raise chickens more often in this experiment? Student research: chicken genetics Vocabulary: allele, codominance, dominant, genotype, heterozygous, homozygous, phenotype, probability, punnett square, recessive, trial Preliminary Knowledge Questions (Do these PRED use Gizmo.) The image shows a flower that was produced by crucifying a pure red flower with a pure white flower. What is the predominant floral color after you: red or white? Commented. How does the inheritance pattern show this flower differs from other inheritance patterns that you've seen or studied? Gizmo Warm-up There are many different ways you can inherit. Some things are governed by alile, which are dominant over other aliles. Other things govern alile, who share dominance. They follow a pattern of heredity called codeminanca. With Gizmo chicken genetics™ will study how the some things. Turn on Show genotype. A genotype is a combination with alleeli that the organism has. Point to the red chicken. What is the genotype of red chicken? What is the genotype of white chicken? What do you think the letters F, R and W mean in genotypes? Activity A: Codominant features Get the Gizmo ready: Drag red chicken and white chicken into the parent boxes, but don't click Breed yet. Question: Which hereditine samples show sodominant traces? He predicts: What do you think a descendant of red chicken and white chicken will look like? Watch: Click Breed. What are the descendants of genotypes? The appearance of the organism is its phenotype. Describe the offspring of the phenotype. Experiment: Drag four offspring into holding cages. Click Clear, and then drag one of the descendants to the parent box. Put the white chicken in the other box. Click Breeding Times. Describe the consequences of genotypes and phenotypes of offspring. Revidi and repeat: Click Clear. Drag the chicken from the cages into the mother box. Drag the red chicken into another box. Click Breed several times. Describe the consequences of genotypes and phenotypes of offspring. Explain: In predominant/recessive hereditary patterns, the predominant allel is always expressed when present. The recessive alila is expressed only when the dominant allel is not present. The comments in this activity describe how patterns of codeminant inheritance differ from the prevailing/recessive succession patterns. Activity B: Codominant crosses Get the Gizmo ready: Click Clear. Drag the remaining chickens from the Holding cages into the mother boxes. Introduction: Probability is the probability that a specific event will occur. Scientists use the likelihood to predict the outcomes of different genetic crosses. Question: How can you use the probability to predict the outcome of a codemant cross? Model: Punnett's market is used to model possible offspring of genotypes from the genetic cross. Parent genotypes are written at the top and side of the market as shown. The possible genotypes of the offspring are then fulfilled. The first square is filled for you. Fill in the remaining squares. (Note: FR FW is equivalent to FW FR.) Analyze: Homozygous chicken will have the same allele for the color of feathers. Heterozygous chicken will have two different allels for feather paint. Are parents homozygous or heterozygous? Explain how you know. What are the possible genotypes of offspring? Will the offspring be homozygous or heterozygous? Calculate: Punnett squares can be used to predict the likely results of genetic crosses. To calculate probability, divide the number of one type of possible result by the total number of all possible results. For example, if you submit a coin, the chance of landing on your heads is 1 ÷ 2. This probability can be expressed as 1/2, 0,5 or 50%. Look at Punnett Square upstairs. How many total possible results are there? How many possible results for each of the following genotypes? FR FR FW FW FR FW FW What is the probability of each of the following results? (Record responses as fractions and percentages.) FR FR FW FW FR FW (Activity B continued on next page) Activity B (continued from previous page) Test: Use Gizmo to test the intended results. Turn on Show Statistics and Show as approximate percentage. Click Breed. What are the results of the cross? Assess: Did the results of the cross match your prediction? If not, why do you think that's the case? Collect data: Click Breed 19 again until you create 100 offspring. How do the percentages match your forecast? Were they more or less similar to your original prediction? Compare: Click Breed until you create at least 1,000 offspring. Compare statistics on Gsm with the original forecasts. How close are you? Draw conclusions: Every time you raise breeding chickens, you have completed the experiment. The trial is great when you do the experiment. Random option often results in the same attempts to have different results. As a result, scientists have repeatedly repeated experiments to ensure that the opportunity alone is not responsible for the results of the trial. How did your results change as the number of experiments performed increased? Why was it important to you to raise chickens more often in this experiment? Attempt?