**Biology STAAR Review Stations**

**Day 5**

**Category # 2 Mechanisms of Genetics (6.E, 6.F, 6.G, 6.H)**

6.E identify and illustrate changes in DNA and evaluate the significance of these changes

6.F predict possible outcomes of various genetic combinations such as monohybrid crosses, dihybrid crosses and non-Mendelian inheritance

6.G recognize the significance of meiosis to sexual reproduction

6.H describe how techniques such as DNA fingerprinting, genetic modifications, and chromosomal analysis are used to study the genomes of organisms

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|  | **6.E** | **6.F** | **6.G** | **6.H** |
| **Interactive Quizzes** | **DNA and Genes**  <http://www.glencoe.com/qe/science.php?qi=2502> | **Mendelian Genetics**  <http://glencoe.mheducation.com/sites/0078802849/student_view0/unit3/chapter10/section2/self-check_quizzes-english.html> | **Meiosis**  <http://glencoe.mheducation.com/sites/0078802849/student_view0/unit3/chapter10/section1/self-check_quizzes-english.html> | **DNA Fingerprinting Quiz**  <http://www.quia.com/quiz/447670.html?AP_rand=1093351065> |
| **Graphic Organizers** | **Mutation Graphic Organizer**  See handout | **Dihybrid Cross Practice Punnet**  **Square**  **Activity**  See handout | **Meiosis Graphic Organizer**  See handout | **Genetic Variation Graphic Organizer**  See handout |
| **Virtual Labs** | **Damage to DNA Leads to Mutation Simulation**  <http://www.hhmi.org/biointeractive/damage-dna-leads-mutation>  **Addition and Deletion Mutations Simulation**  <http://glencoe.mcgraw-hill.com/olcweb/cgi/pluginpop.cgi?it=swf::550::400::/sites/dl/free/0078802849/592990/Addition_and_deletion_mutations.swf::Addition%20and%20Deletion%20Mutations> | **Dihybrid Cross Simulation**  <http://www.dnaftb.org/5/problem.html>  **Completion\_\_\_\_\_**  **Punnet Squares Virtual Lab**  <http://glencoe.mcgraw-hill.com/sites/dl/free/0078802849/383934/BL_05.html> | **Meiosis Internet Activity**  <http://www.lpscience.fatcow.com/jwanamaker/animations/meiosis.html> | **Create a DNA Fingerprint Virtual Lab**  [**http://www.pbs.org/wgbh/nova/education/body/create-dna-fingerprint.html**](http://www.pbs.org/wgbh/nova/education/body/create-dna-fingerprint.html) |
| **Vocabulary** | **DNA Flashcards**  http://quizlet.com/20610090/unit-5-dna-vocabulary-list-flash-cards/ | **Mendelian Genetics**  **Flashcards**  <http://quizlet.com/1471356/mendelian-genetics-vocabulary-terms-flash-cards/> | **Meiosis Flashcards**  <http://quizlet.com/8869794/meiosis-vocabulary-terms-flash-cards/> | **DNA Fingerprinting Flashcards**  [**http://quizlet.com/1823048/dna-fingerprinting-flash-cards/**](http://quizlet.com/1823048/dna-fingerprinting-flash-cards/) |
| **Video Clips** | **Mutations: The Potential Power of a Small Change**  [www.youtube.com/watch?v=GieZ3pk9YVo](http://www.youtube.com/watch?v=GieZ3pk9YVo) | **Mendelian Genetics**  <https://www.youtube.com/watch?v=oVl8OH_7QSc> | **Meiosis the Great Divide**  <https://www.youtube.com/watch?v=toWK0fIyFlY> | **DNA Fingerprinting**  [**https://www.youtube.com/watch?v=DbR9xMXuK7c**](https://www.youtube.com/watch?v=DbR9xMXuK7c) |

**Critical Thinking Questions**

**Write answers in your notebook!!!!!!**

1. How do changes in DNA affect the resulting protein?

2. What are the implications of these changes?

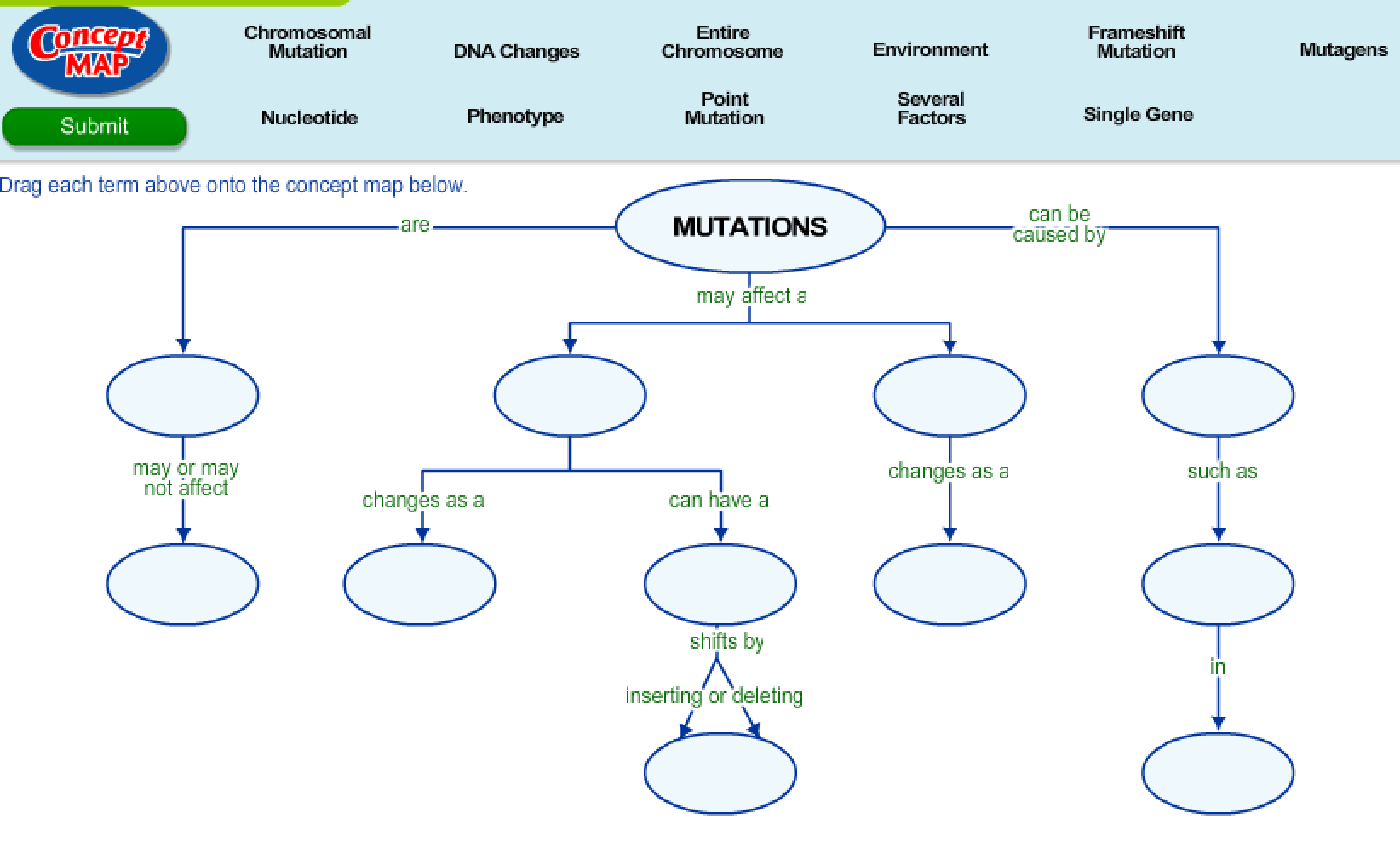
3. How does mitosis compare to meiosis?

4. How can genetic disorder be detected using different techniques?

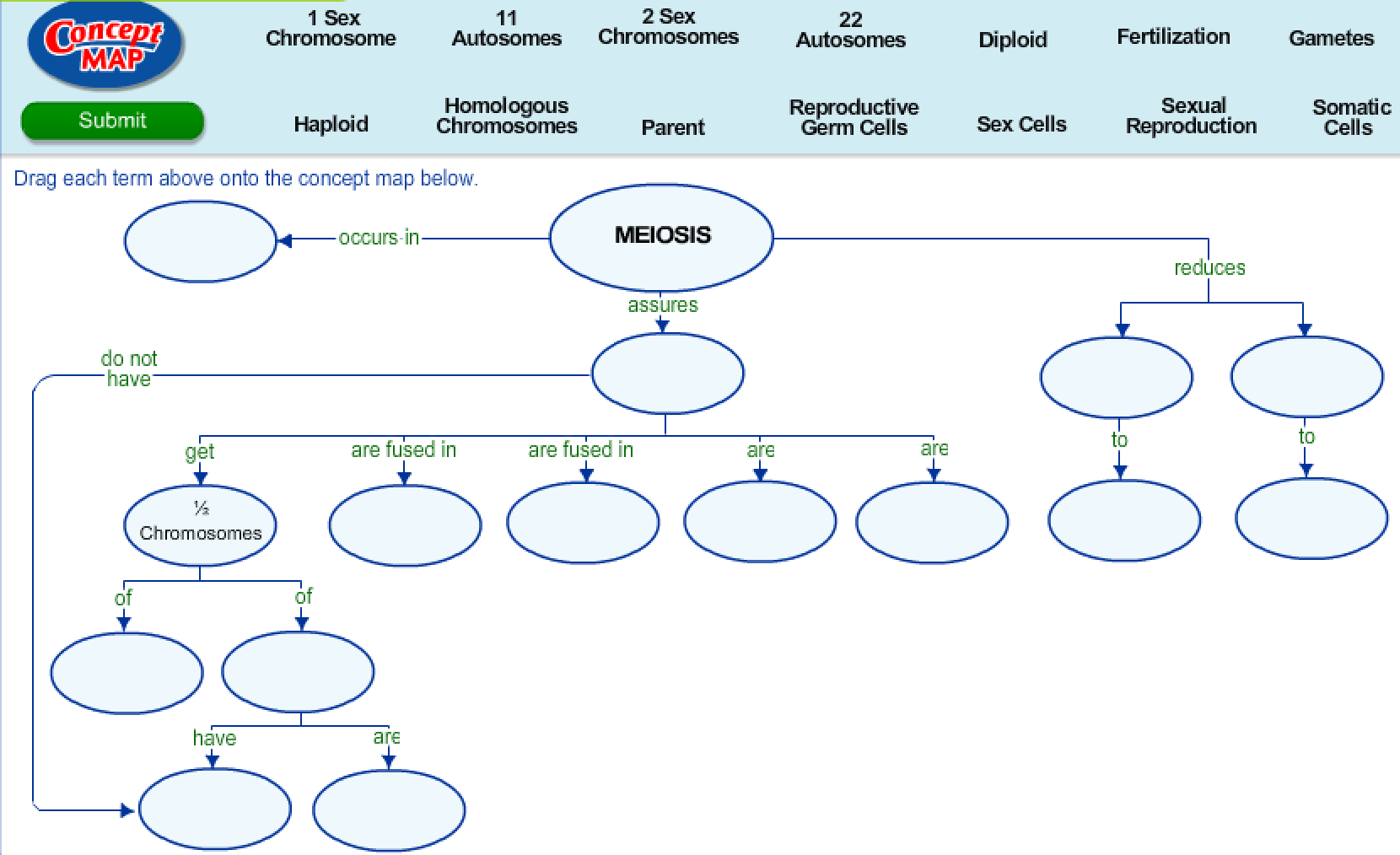
5. How do the results of dihybrid crosses express themselves in living organisms?

6. Describe ways to study the genomes of organisms

**6.E Mutations Graphic Organizer**

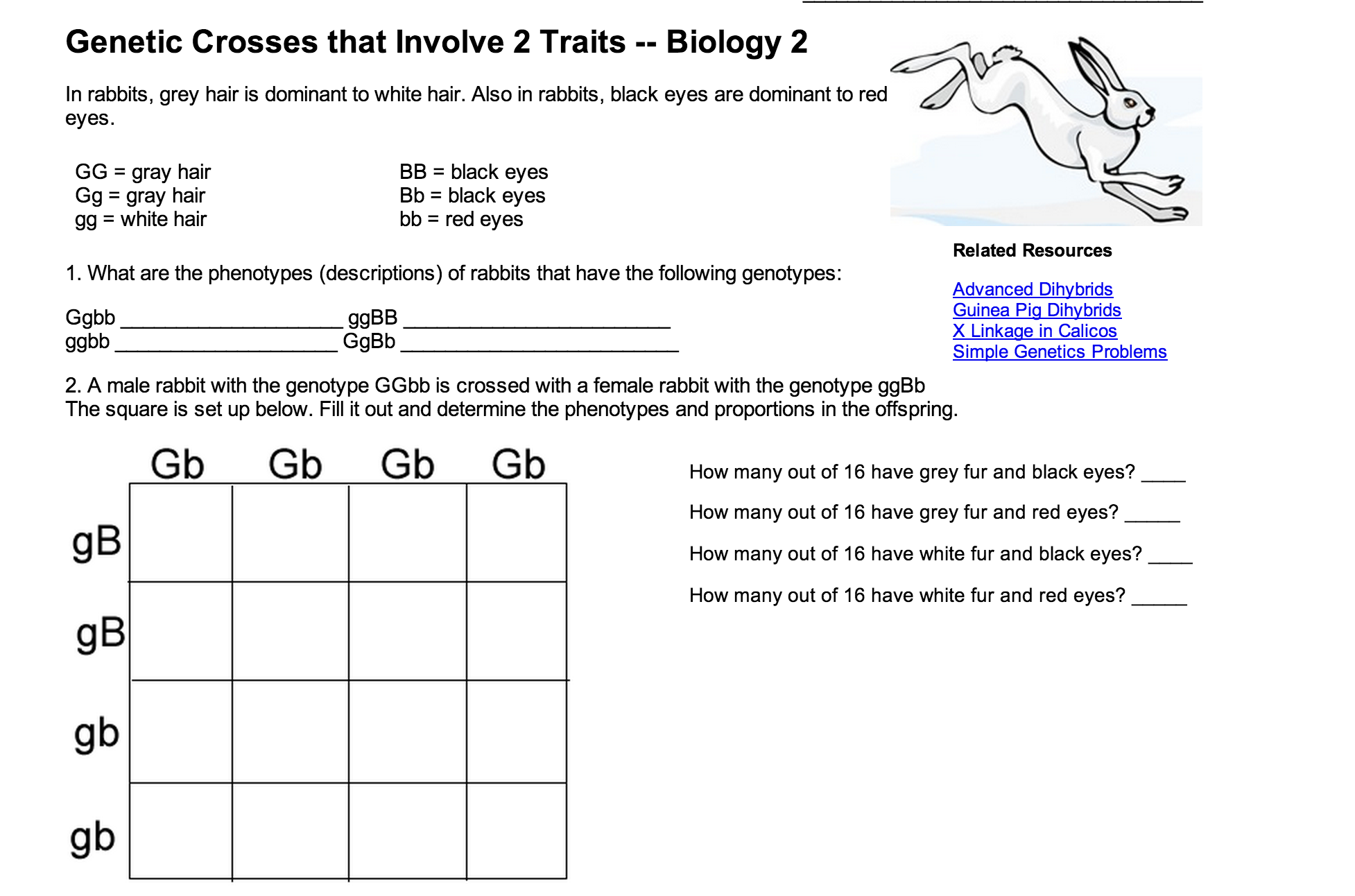


**6.G Meiosis Graphic Organizer**



**6.F Dihybrid Cross Practice Punnet Square**

[**http://www.biologycorner.com/worksheets/genetics\_2traits\_bio2.html#.UzWthq1dWMU**](http://www.biologycorner.com/worksheets/genetics_2traits_bio2.html#.UzWthq1dWMU)

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**6.H Genetic Variation Graphic Organizer**

