Vocabulary Terms: Evolution of Populations **NAME**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| 13.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Situation in which allele frequencies remain constant;  Mathematical equation to study changes in allele frequency called Hardy-Weinberg  equation | | Conditions:  1.  2.  3.  4.  5. | | Change in a kind of organism over time; Occurs in a population over many generations but not in individuals | | 4 modes:  1.  2.  3.  4. | | 1.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 14.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Formation of a new species | | Two main forms:  1.  Physical barrier between populations  2.  Populations are separated for reasons other than physical barrier | | Inherited characteristic that increases an organism’s chance of survival; alter traits to affect fitness.  Result of natural selection—can include physical traits or even intangible like lifespan | | [https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcTwWOXYs3MPE1K_TolEqpsh-QPHYz8bRxfT1GpEQ-g1B7-lnuh6Ow](http://www.google.com/imgres?rlz=1T4ADSA_enUS400US401&hl=en&biw=932&bih=498&tbm=isch&tbnid=rvHEhIrCcm6T2M%3A&imgrefurl=http%3A%2F%2Fwww.biologyaspoetry.com%2Fterms%2Fadaptation.html&docid=m6ScPnd-QtUzMM&imgurl=http%3A%2F%2Fwww.biologyaspoetry.com%2Fimages%2Fadaptation_001.png&w=400&h=299&ei=UJvYUv20PJfnoAS054KYCw&zoom=1&iact=rc&dur=6875&page=5&start=36&ndsp=10&ved=0CNoBEK0DMCc) | | 2.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 15.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Separation of species or populations so that they cannot interbreed and reproduce fertile offspring | | Types:  1.  i.e courtship rituals, bird songs  2.  i.e river, mountain  3.  i.e. seasonal, nocturnal vs. diurnal | | Modification in structure form and function in an organism, differs from other organisms in same species; population must exhibit differences in phenotypes in individuals | | Causes:  1.  Any change in DNA sequence  2.  Such as crossing over or independent assortment in gamete formation | | 3.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Hypothetical example of speciation:  Darwin’s finches | Draw flow chart showing 5 steps: (use book) | | | | Process by which individuals that are better suited to their environment survive and reproduce most successfully; survival of fittest. Can affect single gene traits i.e. widow’s peak, or polygenic traits i.e. height | | Conditions:  1.  2.  Has to be able to be inherited; if not then it cannot be selected for or against  3. | | 4.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 5.  \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_ | | Consists of all genes (including all alleles or gene forms) present in a  population | | [https://encrypted-tbn3.gstatic.com/images?q=tbn:ANd9GcSF3G3LYQxyWhIDHBIB4ISqve_wXchtgeuHse4LMUFfalo0Zd0f](http://www.google.com/imgres?um=1&sa=N&rlz=1T4ADSA_enUS400US401&hl=en&tbm=isch&tbnid=mCx7CKH50IeTWM%3A&imgrefurl=http%3A%2F%2Fcreationwiki.org%2FGene_pool&docid=uyPwO51bCefepM&imgurl=http%3A%2F%2Fcreationwiki.org%2Fpool%2Fimages%2Fthumb%2F5%2F5f%2FGenePool.png%2F300px-GenePool.png&w=300&h=244&ei=HKTYUtqNOZCwoQTEooDQBQ&zoom=1&iact=rc&dur=14828&page=1&start=0&ndsp=8&ved=0CGgQrQMwAw) | | Form of natural selection where single distribution curve splits into two; occurs when individuals at upper and lower ends of the curve have higher fitness than individuals near the middle; Extremes do better than more common forms | | C:\Documents and Settings\Teacher\My Documents\My Pictures\untitled.bmp | 9.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 6.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | Number of times an allele occurs in a gene pool compared with the number of times other alleles occur.  Evolution is any change in the relative frequency of alleles in a population | | [https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcR-y_Y4mUi3wkyL5Sy21LWc0PfzBRqqJ3CrNsMJ-kvMgZu7sOR-](http://www.google.com/imgres?um=1&rlz=1T4ADSA_enUS400US401&hl=en&tbm=isch&tbnid=4pB4AH-cTeSp6M%3A&imgrefurl=http%3A%2F%2Fwww.comfsm.fm%2F~dleeling%2Fstatistics%2Ftext5.html&docid=jSEQfbVFbnlHYM&imgurl=http%3A%2F%2Fwww.comfsm.fm%2F~dleeling%2Fstatistics%2Fhistfemheightrf.jpg&w=318&h=259&ei=pKbYUrnfJc7hoATn24D4DQ&zoom=1&iact=rc&dur=1797&page=1&start=0&ndsp=7&ved=0CGIQrQMwAQ) | | Random change in allele frequencies that occur in small populations | | [https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcQ6Cz2JiNw9F-ESQYblDpANhRIfkU8fpa_cmj_a4tRHkjZqlSvO](http://www.google.com/imgres?rlz=1T4ADSA_enUS400US401&hl=en&biw=932&bih=498&tbm=isch&tbnid=5NfkXTILRfZ2dM%3A&imgrefurl=http%3A%2F%2Fwww.biologycorner.com%2FAPbiology%2Fevolution%2Fch18.html&docid=1531_a1jp_Ip8M&imgurl=http%3A%2F%2Fwww.biologycorner.com%2Fresources%2Fgenetic_drift.jpg&w=577&h=400&ei=FqzYUoCXJMbboAS164DoDw&zoom=1&iact=rc&dur=687&page=3&start=17&ndsp=10&ved=0CJgBEK0DMBM) | 10.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 7.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | Form of natural selection  Where entire distribution curve moves; occurs when individuals at one end of curve have higher fitness than individuals in the middle or other end of curve. | | C:\Documents and Settings\Teacher\My Documents\My Pictures\untitled1.bmp | | Change in allele frequencies as a result of the migration of a small subgroup of a population; this is a special case of genetic drift | | [https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcTDKweoQCBqfdgW91BGj3vyFAJQbVHhQ-c_uWYLyYuPQcHRIywK](http://www.google.com/imgres?rlz=1T4ADSA_enUS400US401&hl=en&biw=932&bih=498&tbm=isch&tbnid=DT-AZkmuBWbAkM%3A&imgrefurl=http%3A%2F%2Fpics4.imagezone.org%2Fkey%2Fthe%2520founder%2520effect%2520biology&docid=RQpN0G5DE-V0fM&imgurl=http%3A%2F%2Fwhat-when-how.com%2Fwp-content%2Fuploads%2F2011%2F05%2Ftmp3932_thumb.jpg&w=640&h=273&ei=Ya_YUrjyBIH6oASu24DgBg&zoom=1&iact=rc&dur=1000&page=7&start=59&ndsp=10&ved=0CKUCEK0DMEA) | 11.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 8.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | Form of natural selection when center of distribution curve remains in its current position; occurs when individuals near center of the curve have higher fitness than individuals at the ends. | | http://img.sparknotes.com/figures/A/a3aa6bb95c7d70781cc0089d17f9160f/stable.gif | | Change in allele frequencies as genes from one population are incorporated into (joined with) another.  Have to be able to inter breed. | | [https://encrypted-tbn2.gstatic.com/images?q=tbn:ANd9GcQXbtRlM9pvbtaVvRS_Uw296R9YktA458pWJcw1_vuHLp10M5XuTw](http://www.google.com/imgres?rlz=1T4ADSA_enUS400US401&hl=en&biw=932&bih=498&tbm=isch&tbnid=7H22f6o2ko1juM%3A&imgrefurl=http%3A%2F%2Fwww.umbc.edu%2Fbioclass%2Fbiol100%2Fpowerpoints%2Flecture10%2Fsld034.htm&docid=ltQTOVyqlK5M6M&imgurl=http%3A%2F%2Fwww.umbc.edu%2Fbioclass%2Fbiol100%2Fpowerpoints%2Flecture10%2Fimg034.jpg&w=719&h=539&ei=ybDYUrW4KYn3oATow4CYDw&zoom=1&iact=rc&dur=1375&page=3&start=15&ndsp=11&ved=0CKQBEK0DMBU) | 12.  \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_ |