**March Notes: Day 5 Phylogenetic Tree**

Name: Period: Date:

**Aim: Does Evolution Happen Today?**

**Evolution - Review**

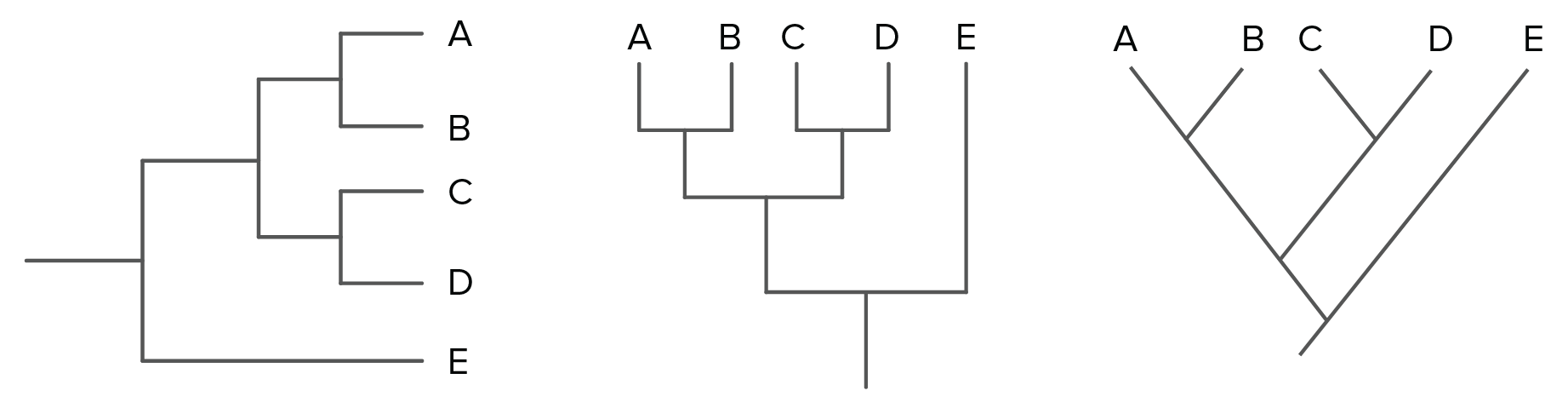
* Evolution is a in a of organisms over a period of
* Within every , there are who are slightly .
* These are the results of in the .
* These lead to new that can or an individual to .
* “Survival of the ” and “ selection” means that who have better will survive and on these traits to their
* If the does not , then those become .
* An individual’s can also help with natural . If the behavior helps the individual to , the behavior may be pass on to (instinct or teaching).

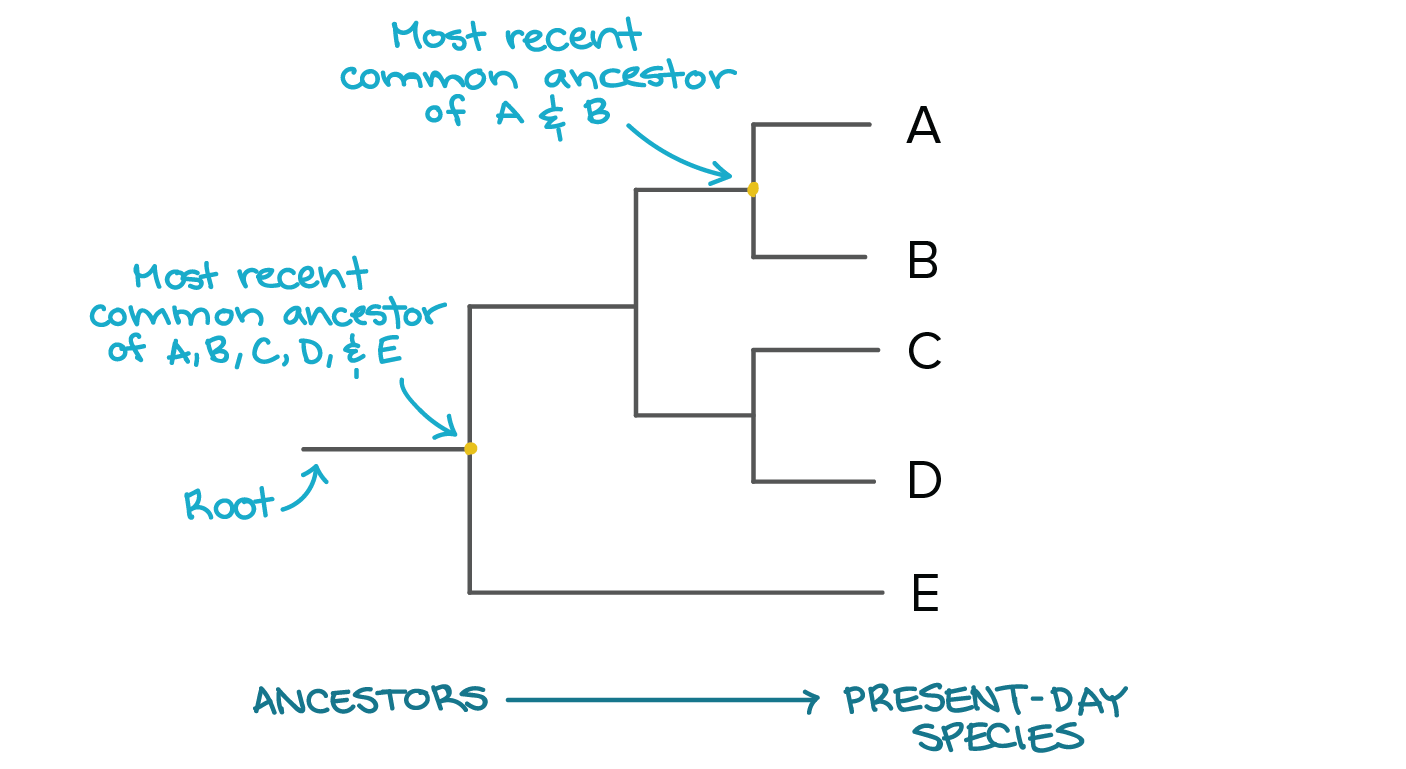
**Evidence for Evolution - Review**

* Although evolution is only a theory, there are lots of that support it.
  + show a in species
  + show body that are shared by animals
  + development seem to be similar in many animals.
  + Similar are found in different animals using the same
  + Similar are found in different organisms.

**Reading Phylogenic Trees**

* shows how change over time.
* The oldest part of the tree is always where there is only one line.
* As the line , time become closer to our time.
* A species occurs at the point where the line split.
* Sometime the make it to the , which means that the still today.
* Sometime the line before it reaches the . This means that the organism became .





**Antibiotic Resistant Bacteria**

* Doctors use antibiotic ( ) to kill that occur in the body.
* The is designed to kill . But because within every , there are individuals who are different; some bacteria may have a mutation that makes them resistant the antibiotics.
* The all the bacteria except for these mutated bacteria.
* These reproduce and pass on their genes to their offspring.
* Now all the new are resistant to the medicine and the medicine does not work.
* antibiotics are needed to kill the new bacteria.

**Pesticide Resistant Insects.**

* use to kill insects that eat their crops.
* The are designed to kill insects. But because within every , there are who are slightly ; some insects may have a mutation that makes them to the pesticide.
* The pesticide kills all the insects except for these insects.
* These insects and pass on their mutated genes to their offspring.
* Now all the insects are to the and the pesticide does not
* New are to kill the new .

**The Key to a Species Chances to Survive**

* The is always . (climate, amount of resources)
* that have the most will have a chance of some surviving sudden changes. These individuals will reproduce and keep the species from becoming extinct.
* Populations that have few or will die out if the environment changes too .

**What is the best way to reproduce?**

* reproduction is .
  + Only parent is needed.
  + variation (clones)
  + If a mutation occurs, the mutation will quickly move through the population.
* reproduction is .
  + Needs individuals
  + of variations (Chromosome )
  + move slow through a . (mutation has to occur in the or cells in order to be passed on to ).