

Name: _____

Date: _____










Period: _____

CW/HW: _____

Evolution Game

Directions:

1. Begin with the ancestral organism in generation one (GEN 1).
2. Choose one of the two variation options (this will differ for each person) and draw your new organism in the "Your Organism" box.
3. Flip a coin with your partner. What is the change in the environment? Did your organism's variations help them to survive?
 - if **YES**, draw your well adapted organism in the "Who Survived?" box
 - if **NO**, draw a big "X of extinction" through the box with your organism in it and copy the organism that did survive into the "Who Survived?" box
4. Continue the activity, generation by generation. Follow the specific instructions as you go.

GEN	Variation	Your Organism	Change in the Environment	Who Survived?
1		 Proto-Primate		
2	 Opposable Thumbs  Longer Tail		<p>Heads: Food becomes scarce, thumbs allow for simple tools to get more food. Opposable Thumbs live.</p> <p>Tails: Food is available high up in the treetops. Longer tails live.</p>	
3	 Nocturnal Vision  Improved Daytime Vision		<p>Heads: Predators only hunt during the day. Nocturnal eyes live.</p> <p>Tails: Brightly colored, nutritious fruits evolve. Improved day vision lives.</p>	
4	 Improved quadruped mobility  Improved bipedal mobility		<p>Heads: Trees with food become thin and flexible, difficult to navigate. Improved four limbs live.</p> <p>Tails: Best foraging is down on the ground, but you must be fast to evade predators. Long, bipedal legs live.</p>	
5	 Bigger Muscles  Bigger Brains		<p>Heads: Predators develop a taste for primates, but leave the big ones alone. Bigger muscles live.</p> <p>Tails: Climate cools, only smart primates figure out how to make clothes and/or shelter. Bigger brains lives.</p>	

Please answer the following questions using full sentences.

1. What comes first, the adaptation or the change in the environment? Explain your answer.
2. What variables caused your organism to go extinct?
3. What variables helped your organism to survive?
4. Pick a feature that caused your organism to go extinct and describe THREE alternate environments where that feature would have been an ADVANTAGE.
5. What role do DNA and GENES play in evolution?
6. As modern day humans (Homo sapiens), describe a feature we have "lost" that you think might be an advantage today.
7. Are there any features that we have today that make us "weak" in today's environment – perhaps not here in San Francisco, but in the rain forest or the desert?