

# Lab: Succession

Modified from Arizona State University

**Background:** Ecological Succession is the process in which communities of plant and animal species in a particular area are replaced over time by a series of different and often more complex communities. Primary succession is succession in a bare area that has never been occupied by a community of organisms, while secondary succession is succession in an area in which natural vegetation has been removed or destroyed but the soil or bottom sediment has not been destroyed. This change in species over time reflects the ongoing struggle by different species for enough light, nutrients, food and space. Early in succession, species tend to be generalists and opportunists that are able to exploit limited resources quickly. Late in succession, species tend to be more specialized as the community increases in biodiversity.

## PreLab Questions:

1. What is ecological succession?
2. How do primary succession and secondary succession differ?

## Lab Procedure:

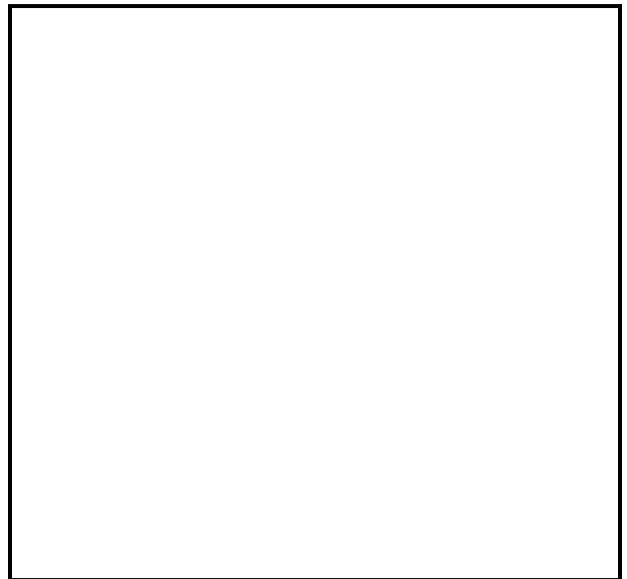
- a. To play the game, follow the instructions on the laminated sheet provided
- b. After playing the game, draw the resulting community using the key provided.
- c. Replay the game after switching characters (if you had an early successional character card during the first game, use a late successional character during the second game).
- d. After playing the game a second time, draw the resulting community and answer the following questions.

## Results:

**Table One: Game One Results**

Event	# cards played	Results	Character	# plants to draw
Fire		1 <sup>st</sup> place		6
Landslide		2 <sup>nd</sup> place		5
Grazing		3 <sup>rd</sup> place		4
No Disturbance		4 <sup>th</sup> place		3

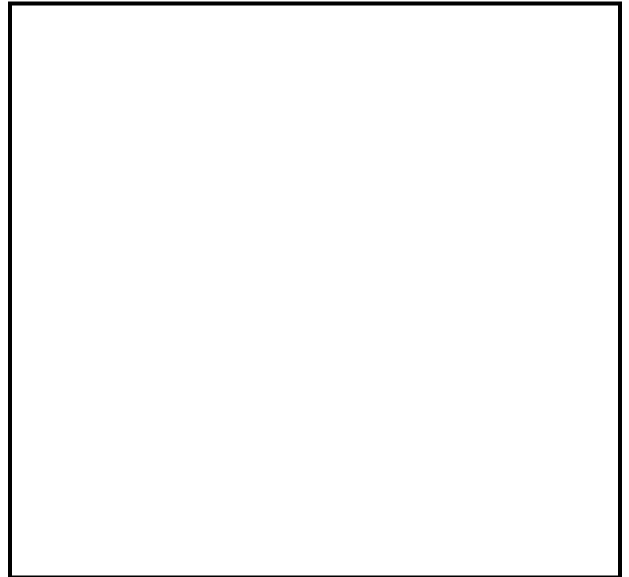
**Game One Community Drawing**



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**Table Two: Game Two Results****Game Two Community Drawing**

Event	# cards played	Results	Character	# plants to draw
Fire		1 <sup>st</sup> place		6
Landslide		2 <sup>nd</sup> place		5
Grazing		3 <sup>rd</sup> place		4
No Disturbance		4 <sup>th</sup> place		3

**PostLab Questions:**

3. Which species tend to get ahead during times of no disturbance?
4. Identify two characteristics of species that get ahead during times of no disturbance.
5. Which species tend to get ahead after the ecosystem is disturbed?
6. Identify two characteristics of species that get ahead after the ecosystem is disturbed.
7. Describe the community that resulted in game one.
8. Would you characterize the community in game one as a forest, chaparral or grassland?
9. Describe the community that resulted in game two.
10. Would you characterize the community in game two as a forest, chaparral or grassland?
11. Describe two ways in which individuals of two different plant species might interact with each other. Will they always interact the same way?
12. Why will the winner of each game not be the same every time?
13. This game simulates a terrestrial community. Identify an aquatic community and describe possible successional changes seen in that community.
14. Identify two ways in which humans influence ecological succession.
15. Name the book that influenced the characters in this lab.