



Digital Commons@

Loyola Marymount University
LMU Loyola Law School

Module 06: Urban Biodiversity

Urban EcoLab

April 2021

Student Pages - Simulate the Effect of Patch Size

Center for Urban Resilience

Follow this and additional works at: <https://digitalcommons.lmu.edu/urbanecolab-module06>



Part of the [Ecology and Evolutionary Biology Commons](#), [Environmental Education Commons](#), [Sustainability Commons](#), and the [Urban Studies and Planning Commons](#)

Repository Citation

Center for Urban Resilience, "Student Pages - Simulate the Effect of Patch Size" (2021). *Module 06: Urban Biodiversity*. 6.

<https://digitalcommons.lmu.edu/urbanecolab-module06/6>

This Lesson 8: Habitat Fragmentation and Species Survival is brought to you for free and open access by the Urban EcoLab at Digital Commons @ Loyola Marymount University and Loyola Law School. It has been accepted for inclusion in Module 06: Urban Biodiversity by an authorized administrator of Digital Commons@Loyola Marymount University and Loyola Law School. For more information, please contact digitalcommons@lmu.edu.

Name: _____ Date: _____ Class/Period: _____

8.3: Simulate the Effect of Patch Size

Purpose

Explore the effect of patch size on species survival.

Directions

Use the QR code or go directly to :

<http://virtualbiologylab.org/HabitatFrag1.htm>. Select “Fragmentation” and “Run”.

Record the percent of remaining habitat and number of moves for each trial:



| % Fragmentation | # Moves | % Fragmentation | # Moves | % Fragmentation | # Moves |
|-----------------|---------|-----------------|---------|-----------------|---------|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

At what point can the frog no longer make it to the water?

Name: _____ Date: _____ Class/Period: _____

8.4: Land Use and Green Space

Purpose

To design a better space where humans, other animals and plants can survive and thrive. Think about the following criteria as you design your space. Address those criteria you think are important in your design and have a reason for your choices.

Design Criteria:

- Continuity: create ecological connectivity for species mobility
- Fragmentation: consider the size of green patches and what can live in these spaces
- Stratification: create rich layers of vegetation
- Naturalize: select plants that will increase biodiversity
- Biodiversity: create habitat variety to support different types of plants and animals
- Recreation: include what is needed for you and others to most enjoy the space
- Attractiveness: create a pleasing design
- Pacification: design for noise reduction
- Biophilia: create areas that feel good to be in
- Health: create spaces that encourage healthy choices
- Water: create spaces that manage water flowing into and out of the habitat as well as access to drinking water
- Cultural: reflect local natural and cultural heritage
- Safety: create spaces where people feel safe to visit
- Comfort: include places to sit, read, and study
- Other:

Design Elements:

As you plan your space, think about what you are placing in the space and its location. Keep track of the reasons for the decisions you are making.