**Land Use Lesson** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hour \_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_

**Activity 1: The Big Picture - How has land use changed around Gull Lake?**

● You’ll be looking at 100 randomly generated grid squares (out of 350 total).

● Each gridsquare is assigned a specific type of land cover.

● You’ll be tracking how each type of land cover changes over time (using %).

**Before** looking at the 3 maps (1830, 1938, 2013) , make a prediction to this question:

**What types of land cover do you think increased/decreased during these time spans?**

(Use the grid below for your answers.)

*Land Cover Choices: agricultural land, forest land, grass/shrub, urban & built up, water, wetlands*

|  |  |  |
| --- | --- | --- |
|  | 1830-1938 | 1938-2013 |
| Increase |  |  |
| Decrease |  |  |

**2.** Place the grid transparency on the 1830 map

**3.** Assign a land cover to each of the 10 squares on the handout (**most abundant type**)

**4.** Do the same for 1938 and 2013 maps

**5.** Do your data support your prediction? Why or why not?

**Activity 2: Zooming In - What is driving the land use changes?**

● You’ll use the same grid system for this activity.

● Each gridsquare is assigned a land cover type on only the southeast (SE) corner.

● Track how the % cover of each precise location changes over time.

Look at the three maps (1830, 1938, 2013) and make a prediction to this question:

**Which 1938 land cover types change to which different land cover types by 2013?**

|  |  |
| --- | --- |
| Land cover in 1938 | Predicted land cover types in 2013 (%) |
| Agriculture |  |
| Forest |  |
| Grass/Shrub |  |
| Urban |  |
| Water |  |

**2.** Place the grid transparency on the 1830 map

**3.** Assign a land cover to each of the 10 squares on the handout (**what is in SE corner?)**

**4.** Do the same for 1938 and 2013 maps

**5.** Do your data support your prediction? Why or why not?

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Activity 1. Majority of Grid** | | |  | **Activity 2. SE Corner of Grid** | | |
| **Grid** | **1830** | **1938** | **2013** | **1830** | **1938** | **2013** |
| **4** |  |  |  |  |  |  |  |
| **9** |  |  |  |  |  |  |
| **21** |  |  |  |  |  |  |
| **61** |  |  |  |  |  |  |
| **63** |  |  |  |  |  |  |
| **64** |  |  |  |  |  |  |
| **66** |  |  |  |  |  |  |
| **88** |  |  |  |  |  |  |
| **89** |  |  |  |  |  |  |
| **97** |  |  |  |  |  |  |
|  | In each cell (grid X year), enter the *most common* land cover type (the type that occupies more area than any other). *A=Agriculture, F=Forest, G=Grass/Shrub, U=Urban, W=Water, L=Wetland* | | |  | In each cell (grid X year), enter the land cover type that is found in the extreme southeast corner, even if it is only a teeny-tiny little sliver. *A=Agriculture, F=Forest, G=Grass/Shrub, U=Urban, W=Water, L=Wetland* | | |