**Stewardship: Monitoring a California condor with GPS**

**Studbook ID: \_\_\_\_\_\_\_\_ Sex: F \_\_ M󠅾 \_\_ Hatch Date: \_\_\_\_\_\_\_\_\_\_\_ Age: \_\_\_**

Expand the data folders and turn on one day’s data at a time. Follow these steps for each day’s data:

1. *Adjust the time scale sliders: record* **First Flight** *time and* **Roost Start** *time.*

**(Roost Start time – First Flight time) = Time Active**

1. *Follow the flight path of the condor to find* **Perch Sites**: *data point < 6m above ground.*
2. *Use the* “Flight Path” *data to determine* **Flight Miles***.*
3. *Use the polygon tool to measure the area of the range being used:*

**Area: \_\_\_\_\_\_\_\_\_\_**miles2  (Area ÷ Total Range) x 100 = **Percent:** \_\_\_\_\_\_\_\_\_\_

**\*Total Range = 18,000mi2**

Week 1

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Date** | **First Flight Time** | **Roost Start Time** | **Time Active** | **Perch Sites** | **Flight Miles** | **Area/% of Range Used** |
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| **AVERAGE:** |  |  |  |  |  |  |

Week 2

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| --- | --- | --- | --- | --- | --- | --- |
| **Date** | **First Flight Time** | **Roost Start Time** | **Time Active** | **Perch Sites** | **Flight Miles** | **Area/% of Range Used** |
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| **AVERAGE:** |  |  |  |  |  |  |

Week 3

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| --- | --- | --- | --- | --- | --- | --- |
| **Date** | **First Flight Time** | **Roost Start Time** | **Time Active** | **Perch Sites** | **Flight Miles** | **Area/% of Range Used** |
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| **AVERAGE:** |  |  |  |  |  |  |

***Average = (day 1 data + day 2 data + day 3 data + …) ÷ number of days’ data***

**One of Many: Looking at individuals in a flock**

1. *Record the data with the rest of the class in your teacher’s database\**

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| **Condor SB#** | **Mean Start Activity** | **Mean End Activity** | **Avg Time Active** | **Avg # Perch Sites** | **Avg Flight Miles** | **Daily Avg % of Range used** |
| **20** |  |  |  |  |  |  |
| **79** |  |  |  |  |  |  |
| **247** |  |  |  |  |  |  |
| **262** |  |  |  |  |  |  |
| **369** |  |  |  |  |  |  |
| **457** |  |  |  |  |  |  |
| **518** |  |  |  |  |  |  |
| **590** |  |  |  |  |  |  |
| **599** |  |  |  |  |  |  |
| **616** |  |  |  |  |  |  |
| **755** |  |  |  |  |  |  |
| **771** |  |  |  |  |  |  |
| **791** |  |  |  |  |  |  |
| **805** |  |  |  |  |  |  |
| **818** |  |  |  |  |  |  |
| **864** |  |  |  |  |  |  |
| **933** |  |  |  |  |  |  |
| **949** |  |  |  |  |  |  |
| **950** |  |  |  |  |  |  |

1. Find the average for the flock each week, then find their actual averages over time.

**Population Data: Putting it all together**

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| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Avg Start Activity Time** | **Avg End Activity Time** | **Avg Time Active** | **Avg # Perch Sites** | **Avg Flight Miles** | **Avg % Range used/day** | **Avg % Range used/week** |
| **Week 1 Flock Averages:** |  |  |  |  |  |  |  |
| **Week 2 Flock Averages:** |  |  |  |  |  |  |  |
| **Week 3 Flock Averages:** |  |  |  |  |  |  |  |
| **Flock Avg:** |  |  |  |  |  |  |  |

1. View all of your condor’s daily use area of the range shape files at the same time. Draw a new shape file surrounding all of your condor’s daily area shapes to find the weekly area used. Use the same technique adding together the weekly areas to find your total over time.

**Total flock area of the range used**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_miles2

**Total Flock percentage of the range used**: \_\_\_\_\_\_\_\_\_\_%