|  |  |  |
| --- | --- | --- |
| **iLearn BI 101**  **Report** | **Population Ecology Assessment:**  **Survivorship, Dispersion, and Population Growth** | Name: |

Record your answers to the corresponding questions in the Population Ecology Assessment Procedures. To fill in your answers to each question, click on the grey text box and begin typing. When completed, submit this document through the assignment submission page on the Canvas course website.

**Survivorship**

1. Human survivorship pattern:

**Part 1: Obituaries**

**2a.** **Table 1:** Human Survivorship Table Sample size of 5

* Complete the table as described in the lab procedures.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Year  Died | Year  Born | Age at Death | AI  0-10 | AI  11-20 | AI  21-30 | AI  31-40 | AI  41-50 | AI  51-60 | AI  61-70 | AI  71-80 | AI  81-90 | AI  >91 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| % of Lifespan |  |  | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| Totals |  |  |  |  |  |  |  |  |  |  |  |  |

1. Graph Comparison
   1. Describe the differences:
   2. Adequate size:
2. Graph analysis:
   1. Youngest age of death:
   2. Oldest age at death:
   3. 25% dead:
   4. 50% dead:
   5. 75% dead:

**Part 2: Bubble/Feather Survivorship**

1. Bubble/Feather Data

**Table 2:** Bubble Survivorship

|  |  |  |  |
| --- | --- | --- | --- |
| **Bubble Number**  **(Control)** | Time  to Death | **Bubble Number**  **(Parental)** | Time  to Death |
| **1** |  | **1** |  |
| **2** |  | **2** |  |
| **3** |  | **3** |  |
| **4** |  | **4** |  |
| **5** |  | **5** |  |
| **6** |  | **6** |  |
| **7** |  | **7** |  |
| **8** |  | **8** |  |
| **9** |  | **9** |  |
| **10** |  | **10** |  |

1. Describe the differences:
2. Examples in nature:

**Part 3: Dispersion**

|  |  |  |
| --- | --- | --- |
| **Target Species per Plot**  **(X)** | **Number of plots**  **(E)** | **Number of Algae Counted** |
| 0 |  |  |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |
| 7 |  |  |
| **Totals** | (n) = | (N) = |

**7. Table 3 8. Table 4**

|  |  |
| --- | --- |
| **Coin Flip** | **Number of algae counted** |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |
| 6 |  |
| 7 |  |
| 8 |  |
| 9 |  |
| 10 |  |
| 11 |  |
| 12 |  |
| 13 |  |
| 14 |  |
| 15 |  |
| 16 |  |
| 17 |  |
| 18 |  |
| 9 |  |
| 20 |  |

**9.** Index of Dispersion (**Id)** =

**Part 4: Population Growth Activity**

1. Algae data
   1. Density:
   2. Distribution pattern:
   3. Lifestyle:
2. Sea Urchin Data
   1. Number of Adult Urchins:

Number of Young Urchins:

Number of Dead Urchins:

* 1. Population size at the end of 2010:
  2. Density:

1. Sea Urchin Population size at the beginning of 2010:
2. Birth rate (b):
3. Death rate (d):
4. Growth rate (r):
5. Population Growth
   1. **Table 5**: Urchin Population Size

|  |  |
| --- | --- |
| End of Year: | Population Size |
| 2010 |  |
| 2011 |  |
| 2012 |  |
| 2013 |  |
| 2014 |  |
| 2015 |  |

* 1. Is this population growth likely?