**AP Statistics Name:
Day 1 Activity: Hyenas in the Croatan?**

Your team has been given a bag containing paper squares. The squares represent a pack of hyenas that lives in the Croatan National Forest -- blue represents *male*; white represents *female*. We know the pack exists but we do not know its gender composition so we are going to take *repeated* *random samples* in order to make a conjecture about *what proportion of the pack is male*.

Your team will take random samples of size 10. Do this by (1) randomly choosing 10 squares,
(2) recording the results, and then (3) returning the 10 squares to the envelope. Repeat this procedure 20 times to collect 20 random samples.

To complete this activity you will follow a ***4-Step Process***: (1) State, (2) Plan, (3) Do, (4) Conclude.
(*Spiders Prefer Dark Corners*)

1. **State**: What is the question you are trying to answer?

2.  **Plan**: How will you answer the question?

3. **Do**: What are the results of your data collection? (Graphs & Calculations)

a. **Table**. Enter the results of your samples in the table.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sample** | **Females (W)** | **Males (B)** | **Sample** | **Females (W)** | **Males (B)** |
| 1 |  |  | 11 |  |  |
| 2 |  |  | 12 |  |  |
| 3 |  |  | 13 |  |  |
| 4 |  |  | 14 |  |  |
| 5 |  |  | 15 |  |  |
| 6 |  |  | 16 |  |  |
| 7 |  |  | 17 |  |  |
| 8 |  |  | 18 |  |  |
| 9 |  |  | 19 |  |  |
| 10 |  |  | 20 |  |  |

b. **Graph**. Make a *dotplot* of the results of your samples and transfer it to a white board. Label your white board with the bag number. Leave space on your white board for your conclusion (Step 4).

Number of Males in Sample

c. **SOCS** (*Don’t forget your SOCS!*)

**S**hape: Describe the *shape* of the distribution of your data.

**C**enter: Describe the *center* of the distribution of your data.

**S**pread: Describe the *spread* of the distribution of your data.

**O**utliers: Are there any individual values that fall outside of the overall pattern of the
 distribution?

4. **Conclude**: Based on what you “Did,” give a *practical* conclusion in the *context of the real-world problem*. Transfer your conclusion to the white board. Place the white board on the front chalk tray.



Empty the bag, count the squares and calculate the actual proportion of males in your pack.

Male: Female: Total: ProportionMALE:

|  |  |  |  |  |
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