Maximizing Acheta Domesticus (house cricket) Lifespans by Creating Artificial Environments That Imitate Their Natural Habitat	Project ID#
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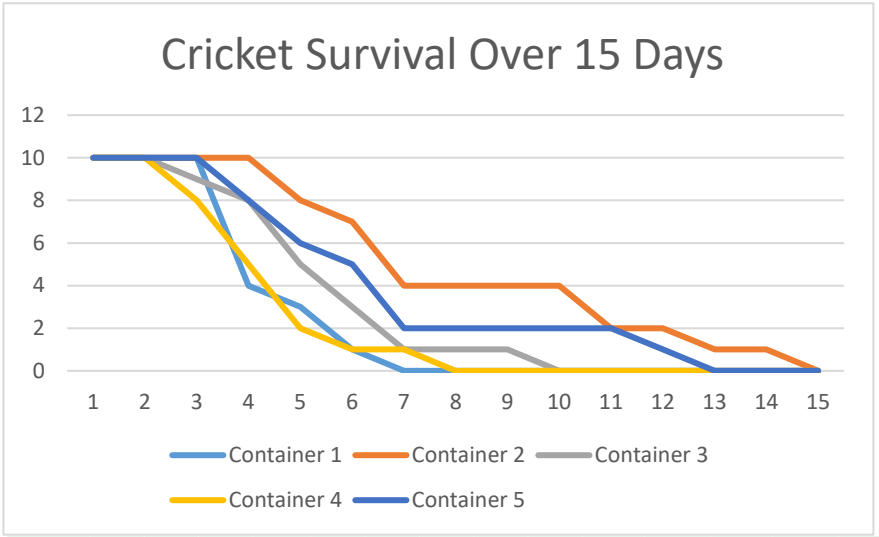
Q1: Research Question/Engineering Goal

Does keeping Acheta Domesticus in an artificial environment similar to its

natural habitat extend its lifespan?

Q3: Data Analysis & Results



Container	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14	Day 15
1	10	10	10	4	3	1	0	0	0	0	0	0	0	0	0
2	10	10	10	10	8	7	4	4	4	4	2	2	1	1	0
3	10	10	9	8	5	3	1	1	1	0	0	0	0	0	0
4	10	10	8	5	2	1	1	0	0	0	0	0	0	0	0
5	10	10	10	8	6	5	2	2	2	2	2	1	0	0	0

Q2: Methodology/Project Design

1. Label each plastic container 1-5.
2. Create each artificial environment using various materials.

- Container 1- 1 piece of egg carton. Container 1 represents the artificial environment that does not simulate any aspects of a cricket's natural environment.
- Container 2- 1 piece of egg carton and moisture (sprayed with spray bottle once per day).
- Container 3- 1 piece of egg carton and ½ cup of Colorado Soil.
- Container 4- 1 piece of egg carton and 20 oats.
- Container 5- 1 piece of egg carton, moisture, ½ cup of Colorado Soil, and 20 oats.

3. Place containers in indirect light and keep room temperature between 65-70 degrees Fahrenheit.
4. Select 10 living crickets for each artificial environment and place in container. Leave small crack after placing lid for ventilation.
5. Once a day after initial cricket placement, check each container and record the number of living crickets remaining. Remove all

Q4: Interpretation & Conclusions

I accept my hypothesis because the Acheta Domesticus survived longer in the containers with added food and moisture. This shows that crickets survive longer in an artificial environment like their natural habitat than a plastic container. An interesting finding was that the crickets with added food survived a shorter time than those without. The crickets with only added moisture survived the longest. A possible explanation for this explained in my background research, which states that crickets typically find their water source in their foods, not as a separate source. This leads me to believe that having water is the most important factor in cricket survival, not food.

dead crickets with a sanitized tweezer. Spray containers 2 and 5 four times with spray bottle to replenish moisture. 6. Repeat the previous step until no living crickets remain in any container.	