Middle School Life Science **Standards 5.1 B, 5.10 A1**
Environmental Studies

Seed Dispersal Challenge

Background: Resources that adult plants need to survive include light, food, water, and space. In order to ensure that a seedling can obtain needed nutrients and material for survival, seeds must somehow be dispersed to areas where all of the resources are available. Seeds are most commonly dispersed through the movement of wind, water and animals. This investigation will investigate the effectiveness of wind dispersal mechanisms.

Challenge: Work with a partner to design a wind dispersed seed structure that will carry a single seed (dried lima bean) the farthest distance possible.

Materials:

1 sheet 8 1/2 by 11 paper	Tape	Fan
Scissors	lima bean	

Rules:

1. You may not use more than 1 sheet of paper, but you do not have to use the entire paper
2. You may cut, fold, tear and/or tape your paper in any manner you choose provided your seed is fixed to the seed structure and ill not fall out.
3. You will have 25 minutes to design and assemble your seed structure.
4. All seed/seed structures will be dropped in front of a wind source (fan), and the distance traveled will be recorded.
5. Each seed/seed structure will be dropped 3 times, and the average distance traveled will be calculated.

Mini Lab Report (To be completed as a formal, typed assignment due ____)

I. Problem:

II. Hypothesis:

III. Procedure:

IV. Data:

	Trial 1	Trial 2	Trial 3	Average
Test Sample 1				
Test Sample 2				

V. Analysis:

1. Compare your data from the first design with your second design. Evaluate your results.

2 How was this experiment similar to what might occur in nature?

3. How was this experiment different from what occurs in nature?

4. What other variables in the natural environment will affect how far a seed travels from the parent plant?

VI. Conclusion:

Did you prove or disprove your hypotheses? Explain why or why not. Describe three new concepts you discovered while conducting this experiment.