Experimental Variables Worksheet

***Directions***: Identify the following variables or groups in the experiments given.

**Independent Variable (IV)**: What the experimenter changes during the experiment.

**Dependent Variable (DV)**: What the experimenter measures.

**Controlled Variable (Constant)**: Things that are kept the same.

**Control Group**: Thing to compare against to see if Independent Variable has any affect.

**Experimental Group(s)**: Thing to compare against to see if Independent Variable has any affect.

1. The number of flowers on different breeds of bushes in a greenhouse is recorded every week for two months.

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| IV: |
| DV: |
| Controlled Variables: |
| Control Group: |

1. You give four sunflowers different watering with either pure water or different concentrations of salt solutions. After a two-week period, the height is measured.

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| IV: |
| DV: |
| Controlled Variables: |
| Control Group: |

1. Pea plant clones are given different amounts of water for a three-week period. First pea plant receives 400 milliliters. Second pea plant receives 200 milliliters. Third pea plant receives 100 milliliters. Fourth pea plant does not receive any extra water; the plant only receives natural ways of receiving water. The height of the pea plants is recorded daily.

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| IV: |
| DV: |
| Controlled Variables: |
| Control Group: |
| Experimental Group: |

1. One tank of goldfish is fed the normal amount which is once a day; a second tank is fed twice a day; and a third tank is fed four times a day during a six-week study. The fishes’ body fat is recorded daily.

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| IV: |
| DV: |
| Controlled Variables: |
| Control Group: |
| Experimental Group: |

1. You decide to clean the bathroom. You notice that the shower is covered in a strange green slime. You decide to try to get rid of this slime by adding lemonade juice. You spray half of the shower with lemonade juice and spray the other half of the shower with water. After 3 days of “treatment”, there is no change in the appearance of the green slime on either side of the shower.

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| IV: |
| DV: |
| Controlled Variables: |
| Control Group: |
| Possible Hypothesis: |

1. You want to find the best food for your bearded dragons. You decide to find the mass of 4 lizards, then feed lizard one nothing, lizard two mealworms, lizard three store-bought reptile food pellets, and lizard four carrots. After 2 weeks of feeding only the food listed you find the mass of the lizards again to find who gained the most mass.

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| IV: |
| DV: |
| Control Group: |

What might be the hypothesis for this experiment?

What are some issues in this experiment?

Why are these poor choices?

How could you improve the experiment?