**Beanbags and Motion!**

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period\_\_\_\_\_\_\_\_\_\_\_\_

**Objective:**

**Materials:** at least 4 beanbags timer football field (grid)

**Procedure:**

1. For each scenario, collect data that can be used to represent a person moving on a football field. The 4 types of motion are:
   1. Moving in the positive direction at a slow and constant pace.
   2. Moving in the positive direction at a medium and constant pace.
   3. Moving in the positive direction at a fast and constant pace.
   4. Moving in the positive direction while speeding up.
2. What data will you need to collect?
3. What is the best way to collect the data?
   1. Record the time every location?
   2. Record the location every time?
4. Thinking about your answer to #3, what is your . . .
   1. Independent Variable (this is what you change on purpose)
   2. Dependent Variable (this is what is based upon your independent variable)

**Analysis Questions:**

1. What is the shape of your position vs time lines for constant speed?
2. Compare the lines produced by your constant motion.
3. What is the shape of your graph line for a positive acceleration?

**Scenario A**

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| **Written Description of the Motion:** |
| **Data Table: Visual Representation of the Motion:**  http://www.conceptdraw.com/solution-park/resource/images/solutions/football/Sport-Football-Horizontal-football-field-Template.png   |  |  | | --- | --- | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  | |
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**Scenario B**

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| **Written Description of the Motion:** |
| **Data Table: Visual Representation of the Motion:**  http://www.conceptdraw.com/solution-park/resource/images/solutions/football/Sport-Football-Horizontal-football-field-Template.png   |  |  | | --- | --- | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  | |
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**Scenario C**

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| **Written Description of the Motion:** |
| **Data Table: Visual Representation of the Motion:**  http://www.conceptdraw.com/solution-park/resource/images/solutions/football/Sport-Football-Horizontal-football-field-Template.png   |  |  | | --- | --- | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  | |
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**Scenario D**

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| **Written Description of the Motion:** |
| **Data Table: Visual Representation of the Motion:**  http://www.conceptdraw.com/solution-park/resource/images/solutions/football/Sport-Football-Horizontal-football-field-Template.png   |  |  | | --- | --- | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  | |
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