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| Mistakes for Learning – Template | | |
| **Part One – Original Question & Solution**  Select a question from this unit (Kinematics 1 OR 2) that you originally did incorrectly. | **Original Question:***Image or rewritten.*  If a ball is thrown up into the air with a velocity of 16.0m/s what is the maximum height it will reach? | **Original Solution:**  *Image or rewritten.*  Vi=16.0m/s, a=-9.81m/s^2, d=?, Vf=X, t=X  I couldn’t solve the problem because there was no formula to solve it. |
| **Part Two – Original Error Explanation**   1. Identify parts of the question done correctly. 2. Identify and explain your error(s). 3. What misconceptions or incomplete understanding led to the original error? 4. What have you learned by making this error? | **Error Explanation:**   1. Initial velocity and acceleration are clearly understood 2. I thought the information of the final velocity was not provided. 3. When an object thrown vertically up reached maximum height, I did not understand the meaning of final velocity. 4. When an object thrown vertically reached the maximum height, I learned that the final velocity was zero. | |
| **Part Three – Correction**   1. Show corrected solution. 2. Provide a step-by-step explanation that could explain how to do the question to a student in Science 10. This explanation should include proper terminology and explanation of new terms to the younger student. | **Correct Solution:**  *Image or rewritten.*  Vi=16.0m/s  a= -9.81m/s^2  d=?  Vf=0  Vf^2=Vi^2+2ad  0=16.0^2+2(-9.81)d  d= 13.0m | **Step-by-Step Explanation of Solution:**  Vector is quantity with magnitude and direction. The Velocity and Gravity here are vectors. When a ball is thrown vertically up, the velocity is + values and the gravity (-) pulls it down. So, when you throw the ball up, the velocity and gravity are offset. Thus, when the ball reaches the maximum height, the final velocity is zero. |
| **Part Four – Core Competency Reflection**  Working through questions that previously challenged you will require you to **communicate** your previous and improved understanding, **collaborate** with others, **think** critically and creatively about your approach to the question and require various aspects of **personal and social responsibility**. You are welcome to use the following prompts to write your reflection:   * How has working through this solution helped develop your core competencies? * How has your mathematical reasoning and understanding developed over this unit/course (with reference to your chosen question)? * How is learning connected to other concepts/questions?   **\*Complete attached Riverside CC Template for Part Four** | | |