**How to Solve a Physics Problem!**

1. **Read** and **reread** the whole problem.
2. **Mark the Question** (like Marking the Text). **Underline** important information. **Circle** the question.
3. Decide what **object you need to study** and what **time interval** you need to use.
4. **Draw a diagram** of the situation. Label all known quantities/variables on the diagram.
5. **List all the known quantities and variables.** Sometimes these may be given in words. For example, “Starts from rest” means vo=0 m/s.
6. **Decide what type of motion is being described** – is it constant velocity? Constant acceleration? Projectile motion? Rotational motion? Etc.
7. Look at your equations and **figure out which equations relate the quantities/variables** you are given and are looking for.
8. **Set up the equation(s).** Write the general equation, and then rewrite with all the known quantities/variables substituted in.
9. **Do the calculations.** It is okay to do this all in your calculator.
10. **Check for reasonableness.** Does your answer make sense? Think about both the value and the units.
11. **Check your units!!!** Do you have units everywhere you should? Do the units make sense? Are they what they’re supposed to be? Check dimensional analysis – do the units work?

Creating a template for yourself often helps. Everyone likes to see their problem and work through it in their own way. **Being systematic about how you approach a problem, though, will help you work FASTER (important on the AP exam or any exam) and make fewer mistakes.** So **create a system** for yourself! ☺

Here is ONE suggestion for a template you can use to set up a problem – but you should find a format that works for YOU! Everyone is different. Don’t be afraid to find your own format or approach, as long as it WORKS! ☺

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| Diagram: | Type of motion:  Equation(s) to use: |
| Show Work (box your answer) |
| Known Quantities/Variables |