Problem Solving Process Map

Area 1: Understanding the Problem

1. Read/Reread (for understanding)	2. Paraphrase (your own words)	3. Visualize (mentally or drawing)	4. Work in pairs or small groups
5. Identify Goal or Unknown	6. Identify Required Information	7. Identify Extraneous Information	8. Detect Missing Information
9. Define/Translate Use a dictionary	10. Check Conditions and/ or Assumptions	11. Share Point of View with Others	12. Others as Needed

Area 2: Devising a Plan to Solve the Problem

1. Estimate (quantity, measure or magnitude)	2. Revise 1st Estimate, 2nd estimate & so on	3. Share/Discuss Strategies	4. Work in pairs or small groups
5. Explain why the plan might work	6. Each try a common strategy or a different one	7. Reflect on Possible Solution Processes	8. Others as Needed

Area 3: Implementing a Solution Plan

1. Experiment with Different Solution Plans	2. Allow for "Mistakes"/Errors	3. Show all of my work Including partial solutions	4. Work in pairs or small groups
5. Discuss with others Different Solution Plans	6. Keep track and save all results/data	7. Compare attempts to solve similar problems	8. Find solution Do not give up
9. Implement your own solution plan	10. Attempts could be as important as the solution	11. Check your Answer(s)/Solution(s)	12. Others as Needed

Area 4: Reflecting on the Problem: Looking Back

1. Reflect on plan after you have an answer	2. Reflect on plan while finding the answer	3. Check if all problem conditions were made	4. Make sure I can justify/explain my answer
5. Check if correct assumptions were made	6. Check that I answer the problem question	7. Check if answer is unique or there are others	8. Reflect for possible alternative strategies
9. Reflect about possible more efficient process	10. Look for ways to extend the problem	11. Reflect on similarity/ difference to other prob.	12. Others as Needed