TRHS Problem Solving Rubric. Approved March, 2009. Re-formatted.

	1—Novice	2—Developing	3—Effective	4—Advanced
Organization	Student needs to have the problem explained.	 Student tries to comprehend the problem but needs cueing and/or clarification. 	Student works toward comprehending the problem before starting to solve.	Student works toward fully comprehending the problem before starting to solve.
	Student needs specific direction to identify parts of the problem.	 Student often starts to solve before understanding the problem. 	Student can break down the problem into smaller parts.	Student can effectively break the problem down into smaller parts.
		 Student looks for key words, phrases, numbers, units and ideas but needs direction for completion. 	 Student uses key words, phrases, numbers, units and ideas to identify known and unknown information. 	Student uses key words, phrases, numbers, units and ideas to identify known and unknown information.
		 Student can attempt to break down the problem into smaller parts, but needs frequent guidance. 	Student needs occasional cueing, clarification or affirmation.	Student is cognizant of the processes used and can explain to others.
	Student needs specific direction to use appropriate tools (writing, drawing, acting, etc.) to organize known and unknown information	 Student needs direction to use appropriate tools (writing, drawing, acting etc.) to organize known and unknown information. 	 Student uses appropriate tools (writing, drawing, acting etc.) to organize known and unknown information. 	Student effectively uses appropriate tools (writing, drawing, acting, etc.) to organize known and unknown information.
Associations, Connections & Relationships	Student needs specific direction to make associations between known and unknown information.	 Student can make associations between known and unknown information, but needs frequent guidance. 	Student utilizes previous knowledge to build accurate associations between known and unknown information, bur needs occasional cueing, clarification, or affirmation.	Student utilizes previous knowledge to build accurate associations between knowns and unknowns.
		 Student tends to make incorrect associations or associations based on incorrect knowledge. 	Student can learn new knowledge to make associations, but needs prompting, cueing, or direction.	Student can research and learn new knowledge to make associations
	Student needs substantial remediation of assumed skills/knowledge.	 Student may need some remediation of assumed skills/knowledge. 	 Students can explain the associations with cueing. 	 Student and successfully explain the associations. Student can make new associations (create new knowledge, genuine synthesis).
Completion	Student needs specific, constant direction to reach a solution.	 Student can solve the problem with substantial guidance. 	Student can solve the problem. Student checks if it is reasonable or valid when prompted.	Student can independently solve the problem and check if it is reasonable or valid.
		• Student reports of the solution are incomplete.	Student reports of the solution tend to be incomplete.	Student is able to report the solution in terms of the original problem.
			Student can recognize applications and connections beyond the immediate solution if directed.	Student regularly recognizes applications and connections beyond the immediate solution.
Critique	Student is unaware of the problem- solving process	Student attempts to use the processes	Student can explain the process with prompting and/or cueing	Student can explain the processes used.
		 Student needs direction to identify processes 	Student may not identify all mistakes or flawed reasoning	Student consistently identifies mistakes or flawed reasoning and applies this to correct the process.
		 Student needs substantial practice to master problems at the current level. 	 Student can solve additional problems at the same level, but needs practice before moving to next level or problems. 	Student is ready to solve problems at the next level.
			Student can give and accept positive and negative critique from others.	Student can give and accept and utilize positive and negative critique to/from other that is beneficial.