Mathematics Transfer Goals:

I will become a productive citizen, a consumer of information, and will make sound decisions for success in life.

- Think purposefully using mathematical reasoning to analyze and model new problem situations.
- Make sense of and be tenacious in solving real world problems, seeking out and using appropriate tools and resources.
- Communicate mathematical ideas clearly, constructing viable arguments and using precise mathematical language
- Collaborate confidently and respectfully toward a common goal, advocating for all team members to have a voice.

Unit 1: Overland Trail	**Understandings**	**Focus Questions**	**Summative Assessment**	**Tasks (Specific problems mapped to understandings and what to highlight/modify)**	**Classroom (Formative) Assessments**	**Time**	**Reflection**
	1. SWUT patterns can be used to make sense of the world around us.	1. How are the values in an input/output table related? 2. How does the input determine the output or the output determine the input? 3. How can you use patterns to generate a mathematical model?	A: 2b M: 2a, 2d, 6 T:	1. What's Next (pp. 3-4) 2. Inside Out (p. 10) 3. Pulling Out Rules (p. 12) 4. Extending Work with In-Out Tables (Genie Packet) 5. Diagonals Illuminated (pp. 105-106, nice but not needed) 6. Another Way to Look at Patterns (Genie Packet) 7. Arithmetic Sequences (Genie Packet)	- Extending Work with In-Out Tables	12 weeks	
	2. SWUT the same linear relationship can be represented using tables, graphs, equations, and verbal descriptions.	1. How can the multiple representations of linear functions be used to solve problems? 2. How do you use technology to explore the relationships between equations, tables, and graphs?	A: 3a, 3e M: 2e T: 1	1. Extending Work with In-Out Tables (Genie Packet) 2. Another Way to Look at Patterns (Genie Packet) 3. To Kearny by Equation (pp. 33-34) 4. The Vermillion Crossing (p. 35) 5. Wagon Train Sketches and Situations (pp. 42-44) 6. Graph Sketches (p. 45, nice but not needed) 7. In Need of Numbers (pp. 46-47) 8. The Issues Involved (p. 48) 9. Out Numbered (pp. 49-50) 10. From Rules to Graphs (p. 51) 11. Other Types of Rules and Graphs Worksheet on Piecewise Functions (Genie Packet) 12. A Special Type of Piecewise Functions Worksheet on Step Functions (Genie Packet) 13. Previous Travelers (pp. 54-56) 14. The Basic Student Budget (pp. 60-61) 15. Following Families on the Trail (pp. 62-63) 16. Rules for Families on the Trail (Genie Worksheet) 17. Graphing Calculator In-Outs (pp. 64-65) 18. More Graphing Calculator In-Outs (Genie Worksheet) 19. Mystery Graph (p. 121)	- All Five, One – Linear Functions - Following Families on the Trail (Question 2) - Straight-Line Reflections		

				20. Writing Equations for Linear Situations (Genie Worksheet) 21. Sublette's Cutoff Revisited (p. 67) 22. Basic Student Budget Revisited (p. 68) 23. All Five, One (p. 71) 24. Travel on the Trail (pp. 72-73) 25. Moving Along (pp. 74-75) 26. All Five, One – Linear Functions (p. 76) 27. Straight-Line Reflections (p. 77) 28. Straight-Line Reflections and the Graphing Calculator (Genie Worksheet) 29. Water Conservation (p. 84) 30. The Big Buy (p. 85)			
	3. SWUT linear relationships have defining characteristics that can be used to make sense of and solve problems.	1. What are the defining characteristics of a linear function? 2. How can linear expressions be written in equivalent forms? 3. How do I use a linear model to analyze a real world problem? 4. How do I solve single variable linear equations?	A: 7, 8 M: 2c, 3b, 3c, 3d, 4, 5 T:	1. Family Constraints (pp. 24-25, nice but not needed) 2. To Kearny by Equation (pp. 33-34) 3. The Vermillion Crossing (p. 35) 4. Classroom Expressions (pp. 109-110) 5. You're the Storyteller: From Rules to Situations (p. 53) 6. Sublette's Cutoff (p. 58) 7. Who Will Make it? (p. 59) 8. The Basic Student Budget (pp. 60-61) 9. Following Families on the Trail (pp. 62-63) 10. Rules for Families on the Trail (Genie Worksheet) 11. More Mystery Graphs (Genie Worksheet) 12. Fort Hall Businesses (p. 66) 13. Keeping Track (p. 125) 14. A Special Show (p. 126) 15. Keeping Track of Sugar (p. 127) 16. Using General Function Notation (Genie Worksheet) 17. Fair Share on Chores (pp. 78-80) 18. Water Conservation (p. 84) 19. The Big Buy (p. 85) 20. Getting the Gold (pp. 88-89) 21. The Mystery Bags Game (pp. 90-91) 22. More Mystery Bags (p. 92) 23. More Scrambled Equations and Mystery Bags (pp. 95-96) 24. Family Comparisons by Algebra (p. 97) 25. Starting Over in California (pp.	- Family Comparisons by Algebra - Overland Trail In-Class Assessment		

				98-99) 26. The Graphing Calculator and Solving Equations (Genie Packet) 27. Solving Literal Equations (Genie Packet)			