Rocky Mountain Science Center

MONTHLY TUTORING REPORT

Student: Justin Shomo

Date: October 22, 1990

Justin Shomo is a highly gifted six-year-old boy who has exceptional talents in the areas of mathematics, science, and abstract reasoning. His reading and writing skills are slightly above grade level as well, which indicates that he is a well rounded learner with no discernable learning disabilities. We have found Justin to be an abstract learner, however, which means that he readily grasps very advanced concepts well beyond his age level, but has some difficulty performing less complicated, sequential tasks. For instance, we have found that Justin can easily understand fractional and algebraic concepts, but has difficulty with simple addition or subtraction. He is able to do basic computation, but it takes him longer to arrive at an answer than it should considering his mathematical capabilities. This is not an unusual problem for highly gifted abstract learners. Einstein himself failed at arithmetic in grade school because he had difficulty processing in a simplistic, sequential forms.

Justin is a perfectionist and an introvert. His biggest fear is to fail at something he attempts to do and suffer humiliation in front of others as a consequence. He is very hard on himself when he doesn't perform to his own high standards, and as a result, is often resistant to trying anything new. When he is asked to read a new book with one of us, he often runs to hide, outright refuses, or manipulates us into reading the book first to him. But when he is patiently coaxed out of his fear and gently encouraged to try his best, he becomes more cooperative. He is the most cooperative when he is told that he is performing exceptionally well, better than most children his age, or when he enjoys the assignment so much that he stops thinking about the possibility of failure. As tutors, we use material that excites and motivates Justin to want to perform, and we encourage him enough as he goes along, that his self concept is significantly boosted by the end of every session. This is something Justin desperately needs because his fear of failure can be truly overwhelming at times and could cause him to become a behavior problem in class. When he is treated in a patient, encouraging manner, his true capabilities come out and they are most astonishing.

In the language arts, we have found that Justin has good fine motor capabilities. He holds a pencil properly and has no trouble writing legibly. He has a good spelling sense and he uses appropriate separations between his words when he writes. Also, he has an extremely long attention span when interested in
an assignment, and can write and illustrate his stories for well over an hour without stopping. His imagination is extremely vivid and may carry him away at times, but a little reminding of his time limitations can put him back on task.

He can be highly distractible when he is particularly excited about a project or when introduced to a new environment. He immediately wants to explore every aspect of a situation or a setting and asks endless intelligent questions about what he is involved in. He is also very particular about the words he chooses. If he is dictating a story to one of us and he says "once" and we write "one day" instead, he gets very upset. This is just another example of how perfectionistic he is. When reading, he likes to keep track of every word he gets right as we go along, by underlining them in pencil, and if one of us helps him in the slightest way, he won't count that word as one he read himself (even if we tell him to count it, he refuses). Justin is reading at or slightly above grade level, and has successfully read words on his own like "electrical equipment", "computers", "machine," "brought," and "future" which are all well above his grade level.

In the area of mathematics, Justin has shown himself capable of grasping concepts well above his grade level. As an example, we asked him how to solve for an unknown quantity in an equation such as $5x + 3 = 13$. He immediately knew the solution for $x$ to be 2 simply by looking at the problem, which indicated that in certain instances, he can process numbers easier than he can during rote learning tasks. After we showed him how to solve for $x$, he immediately understood what was involved and was able to do it every time after that for different equations. Justin has a very advanced understanding of mathematical concepts including, but not limited to, adding and subtracting fractions, ratios, and pre-algebraic concepts. His shortcomings lie in his impatience with rote mathematical tasks; he simply doesn't find them interesting. If he is exposed to the advanced mathematics he is interested in, the basic math skills such as addition, subtraction, multiplication and division will follow along because it is virtually impossible to perform algebra, for example, without them.

We have also worked extensively with Justin on science projects involving the understanding of high school level science and he has shown extraordinary ability in this area. His grasp of electronic concepts is extensive and exceeds the knowledge level of many members of our science club. At an early session with him, he explained to us his understanding of electricity and magnetism and we were astonished. We have many 11-year-olds who simply haven't learned these concepts yet and some who have been taught them but have difficulty with the practical applications of these ideas. He also demonstrates a very good ability with tools and manipulating them for the purpose of building a project. Early on, he built a complete electrical motor from scratch, and parts of the process involved using a soldering
iron. We do not allow many students to use this particular device because it is easy to get burned by it, but after seeing Justin's capabilities with other tools, we trusted him to do the soldering. Since this is a task many adults find difficult, we expected to redo or help him with his work. This proved to be unnecessary; his work was better than some of our soldering. We are very impressed with his fine motor skills as they apply to using tools and building things.

In conclusion, we feel that it is absolutely essential that Justin remain in whatever gifted program is offered at his school, and continue with the mentoring he is receiving at the Rocky Mountain Science Center. If given just a little bit of patience and encouragement, Justin is capable of out-performing most children his own age and many far older than himself. Without a gifted program, Justin's unique talents will be wasted and his self esteem will most certainly suffer to the point where he may refuse to perform in school at all.

THE ROCKY MOUNTAIN SCIENCE CENTER -

J. Anthony Darnell

Miriam S. Darnell