

## 2006 Twin Cities Regional Science Fair Awards

|                                              | Project # | First Name Last Name | Grade | Title                                                                   | Affiliation |
|----------------------------------------------|-----------|----------------------|-------|-------------------------------------------------------------------------|-------------|
| <b>ISEF-Indianapolis, IN, May 7-13, 2006</b> |           |                      |       |                                                                         |             |
| <b>Finalists</b>                             |           |                      |       |                                                                         |             |
| Twin Cities                                  | 1013      | Jenna Johnson        | 11    | Cerebral Dominance and Possible Academic Correlation                    | T           |
|                                              | 1094      | Andrea Jensen        | 11    | Effectiveness of Chloramine in Municipal Water Distribution Systems     | T           |
| St. Paul                                     | 1121      | Daniel Zheng         | 11    | Mathematical Modeling of Smoking Effect on Down Syndrome                | S           |
| Western Suburbs                              | 1068      | Matthew Weiss        | 11    | Synthesis Of Oxadiazole Derivatives For Use In Supramolecular Assembly  | W           |
|                                              | 1048      | Katherine Shaeffer   | 12    | Effect Of Ferric Uptake Regulatory Protein On The Transcription Of Gene | W           |
| <b>Alternates</b>                            |           |                      |       |                                                                         |             |
| Twin Cities                                  | 1106      | John Clifford        | 10    | Population Models of a Three Variable Predator-Prey System              | T           |
|                                              | 1114      | Jennifer Kieffaber   | 11    | Asthmatics, Lung Capacities and High Endurance Sports                   | T           |
| St. Paul (Team)                              | 1163      | Isaac Flath          | 10    | Saw Dust in the Wind                                                    | S           |
|                                              | 1163      | Pang Ter Her         | 10    | Saw Dust in the Wind                                                    | S           |
| Western Suburbs                              | 1101      | Kyra Underbakke      | 10    | Investigating the Allelopathic Inhibitory Potential of Aloe vera        | W           |
|                                              | 1084      | Matthew Trusheim     | 12    | The Optical Waveguide: Year Two Of An Ongoing Study                     | W           |

### Sponsors Awards: Winners must be present at the awards ceremony.

#### **Bronze Level-Ribbon**

|                                                       |      |                 |   |                               |   |
|-------------------------------------------------------|------|-----------------|---|-------------------------------|---|
| General E.W. Rawlings Chapter, Air Force Association: | 6021 | Chris Weatherly | 6 | Hover Hijinks                 | S |
| Shurgard Storage                                      | 7087 | Elaina Hamann   | 7 | Building Structures           | T |
| Slattery Sales Group                                  | 6028 | Brandon Fluegge | 6 | Has Your Dog Licked You Today | S |

#### **Silver-Plaque**

|                      |      |                  |    |                                                            |   |
|----------------------|------|------------------|----|------------------------------------------------------------|---|
| Alliant Techsystems  | 1134 | David Burkhardt  | 9  | May the Magnetic Force Be With You                         | W |
| Ecolab               | 1158 | Phil Segal       | 9  | Earthworm Behavior In Rain                                 | W |
| St. Paul Youth Fund  | 1121 | Daniel Zheng     | 11 | Mathematical Modeling of Smoking Effect on Down Syndrome   | S |
| Midway Party Rental  | 1020 | Jared Miller     | 10 | Learning in the Age of Computers                           | W |
| Twin Cities Catering | 1061 | Allison Berquist | 10 | Can Baking Ingredients Affect the Size of a Loaf of Bread? | T |

#### **Gold-Plaque**

|                          |      |             |    |                                                                                  |   |
|--------------------------|------|-------------|----|----------------------------------------------------------------------------------|---|
| University of MN         | 1011 | Alliy Guyn  | 9  | Dancin 'n' Dreamin                                                               | W |
| The Medtronic Foundation | 1045 | Brandon Lew | 11 | Perbenzoylation Of Carbohydrates In Preparation For Anthocyanin Characterization | W |

#### **Platinum-Plaque**

|               |      |                |    |                                                     |   |
|---------------|------|----------------|----|-----------------------------------------------------|---|
| 3M Foundation | 1122 | Michael Blazar | 12 | Impact of Transforming Growth Factor-Beta Signaling | W |
|---------------|------|----------------|----|-----------------------------------------------------|---|

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|                                                                                                                                     | Project # | First Name Last Name | Grade | Title                                                                              | Affiliation |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------|-------|------------------------------------------------------------------------------------|-------------|
| <b>Discovery Junior Science Competition:</b> Top students from 6, 7 and 8 grades are nominated to the next level of competition.    |           |                      |       |                                                                                    |             |
| Sixth Grade                                                                                                                         | 6022      | Marina Kelly         | 6     | Cool Cleaners                                                                      | S           |
|                                                                                                                                     | 6016      | Jennifer Chmura      | 6     | Electrical Current                                                                 | S           |
|                                                                                                                                     | 6026      | Ashley Dahly         | 6     | How Clean Are Your Hands                                                           | W           |
|                                                                                                                                     | 6032      | James Hartnett       | 6     | Effects of Boat Hull Shape on the Speed of the Boat                                | S           |
|                                                                                                                                     | 6007      | Thomas Thuente       | 6     | Truth of Miracle Grow                                                              | S           |
| Seventh Grade                                                                                                                       | 7001      | Frannie Aubart       | 7     | Is Blue Read?                                                                      | T           |
|                                                                                                                                     | 7105      | Eric Young           | 7     | Aquatic Killers                                                                    | T           |
|                                                                                                                                     | 7082      | Morgan Doyle         | 7     | Gravity Mountain                                                                   | T           |
|                                                                                                                                     | 7111      | Tyler Ringstad       | 7     | Magnets in Medium                                                                  | T           |
|                                                                                                                                     | 7087      | Elaina Hamann        | 7     | Building Structures                                                                | T           |
|                                                                                                                                     | 7031      | Hannah De Vries      | 7     | Get More Bang For Your Buck-Which Popcorn Is Best?                                 | T           |
|                                                                                                                                     | 7043      | Jenny Nguyen         | 7     | H2O Purifier                                                                       | W           |
|                                                                                                                                     | 7094      | Collin Randolph      | 7     | How Does Temperature Affect the Output of a Solar Cell?                            | W           |
|                                                                                                                                     | 7075      | Anna Meyer           | 7     | What is Pop Doing to My Teeth?                                                     | W           |
|                                                                                                                                     | 7008      | Angie Nordstrom      | 7     | Does Gender Affect Eyewitness Reliability?                                         | W           |
|                                                                                                                                     | 7063      | Emily Bertram        | 7     | It's Getting Hot in Here                                                           | W           |
|                                                                                                                                     | 7036      | Shawn Halvorson      | 7     | What Types Of Nuts Release The Most Energy When Burned?                            | S           |
|                                                                                                                                     | 7024      | Brock Purtell        | 7     | How Colored Light Affects Plant Growth                                             | S           |
| Eighth Grade                                                                                                                        | 8031      | Patrick Bode         | 8     | Passive Tuned Mass Dampers in High-rise Buildings                                  | S           |
|                                                                                                                                     | 8049      | Mackensie Quade      | 8     | What are the Effects of the Calcium and Plaque Ion...                              | T           |
|                                                                                                                                     | 8005      | Hannah Nauen         | 8     | Attraction by Numbers                                                              | S           |
|                                                                                                                                     | 8066      | Katherine Labuza     | 8     | Effect of Temperature & Humidity on Hard Candy Storage                             | T           |
|                                                                                                                                     | 8017      | Andrew Grimes        | 8     | Graffiti Removal                                                                   | T           |
|                                                                                                                                     | 8057      | Robin Olson          | 8     | Are We Building Better Bugs?                                                       | S           |
|                                                                                                                                     | 8075      | Cassie Lopez         | 8     | Leeches' Preference in Corners                                                     | S           |
|                                                                                                                                     | 8001      | Mara Chin-Purcell    | 8     | Does Your Age Affect Your Age Perception of Others?                                | S           |
|                                                                                                                                     | 8015      | Lucas Gabrielson     | 8     | Fermentation                                                                       | S           |
|                                                                                                                                     | 8054      | Kristin Brintnell    | 8     | Is Your Home Completely Clean?                                                     | S           |
| <b>Minnesota Academy of Science State Fair-Projects selected to represent our region in competition in St. Paul April 2-4, 2006</b> |           |                      |       |                                                                                    |             |
| High School                                                                                                                         | 1013      | Jenna Johnson        | 11    | Cerebral Dominance and Possible Academic Correlation                               | T           |
|                                                                                                                                     | 1004      | Katy Combs           | 9     | Advertisement: Color vs. Black & White                                             | W           |
|                                                                                                                                     | 1020      | Jared Miller         | 10    | Learning in the Age of Computers                                                   | W           |
|                                                                                                                                     | 1023      | Max Perkins          | 9     | Learning Style vs. Grades In School                                                | W           |
|                                                                                                                                     | 1036      | Claire Weiss         | 10    | Music & Our Memory                                                                 | T           |
|                                                                                                                                     | 1029      | Emma Sandstrom       | 9     | How Does Music Affect Our Memory-Reading Comprehension?                            | W           |
|                                                                                                                                     | 1048      | Katherine Shaeffer   | 12    | Effect Of Ferric Uptake Regulatory Protein On The Transcription Of Gene            | W           |
|                                                                                                                                     | 1034      | Nic Valley           | 11    | Manifestation of Self-Handicapping in Grades 3-6                                   | T           |
|                                                                                                                                     | 1056      | Adrienne Sherman     | 10    | Herbicide & Insecticide Interactions in the Genus Mentha                           | T           |
|                                                                                                                                     | 1016      | Vanessa Kemp         | 11    | Cellular Phone Conversation's Effect on a Teenager's Reaction Time                 | T           |
|                                                                                                                                     | 1008      | Ashley Erickson      | 11    | Divorce & Gender: Psychological Effects on HS Students                             | T           |
|                                                                                                                                     | 1068      | Matthew Weiss        | 11    | Synthesis Of Oxadiazole Derivatives For Use In Supramolecular Assembly             | W           |
|                                                                                                                                     | 1042      | Michelle Hackner     | 12    | Analysis Of PbsS Levels In Response To Environmental Stress                        | W           |
|                                                                                                                                     | 1101      | Kyra Underbakke      | 10    | Investigating the Allelopathic Inhibitory Potential of Aloe vera                   | W           |
|                                                                                                                                     | 1149      | Anthony Retica       | 9     | Check-Go                                                                           | W           |
|                                                                                                                                     | 1156      | Meredith Blank       | 12    | Lethal and Sub-lethal Effects of Resmethrin on Nontargeted Species                 | W           |
|                                                                                                                                     | 1122      | Michael Blazar       | 12    | Impact of Transforming Growth Factor-Beta Signaling                                | W           |
|                                                                                                                                     | 1066      | Lillian Nordahl      | 12    | Synthesis Of Biologically Active Thiadiazole Analogs                               | W           |
|                                                                                                                                     | 1164      | Daniel Geoffrion     | 12    | Effects Of Anesthesia, Breathing Rate, Temperature & Electrode Position On Muscles | W           |
|                                                                                                                                     | 1076      | Eric Nycklemoe       | 9     | Black Holes: A Fatal Attraction                                                    | W           |
|                                                                                                                                     | 1114      | Jennifer Kieffaber   | 11    | Asthmatics, Lung Capacities and High Endurance Sports                              | T           |
|                                                                                                                                     | 1134      | David Burkhardt      | 9     | May the Magnetic Force Be With You                                                 | W           |
|                                                                                                                                     | 1102      | Anne Bergen          | 11    | Effect of UVC Radiation on Nitrogen Fixation in Leguminous Plants                  | T           |
|                                                                                                                                     | 1071      | Conor Doherty        | 9     | Effects of Traffic Light Variation on the Flow of Traffic                          | W           |
|                                                                                                                                     | 1106      | John Clifford        | 10    | Population Models of a Three Variable Predator-Prey System                         | T           |
|                                                                                                                                     | 1133      | Jordan Wong          | 11    | Comparison of the Ability of Coniferous and Deciduous Tree Bark...                 | T           |
|                                                                                                                                     | 1121      | Daniel Zheng         | 11    | Mathematical Modeling of Smoking Effect on Down Syndrome                           | S           |
|                                                                                                                                     | 1115      | Kerry Kraemer        | 11    | Dose Related Effect of Caffeine on Nuctenea Cornuta Web Creation                   | T           |
|                                                                                                                                     | 1061      | Allison Berquist     | 10    | Can Baking Ingredients Affect the Size of a Loaf of Bread?                         | T           |
|                                                                                                                                     | 1160      | Stephanie Wilson     | 9     | Organic vs. Non-Organic Feed in Chickens                                           | W           |
|                                                                                                                                     | 1163      | Isaac Flath          | 10    | Saw Dust in the Wind                                                               | S           |
|                                                                                                                                     | 1163      | Pang Ter Her         | 10    | Saw Dust in the Wind                                                               | S           |
|                                                                                                                                     | 1145      | Adam Lapp            | 9     | Effect Of Various Temperatures & PSI On A Soccer Ball                              | W           |
|                                                                                                                                     | 1045      | Brandon Lew          | 11    | Perbenzoylation Of Carbohydrates In Preparation For Anthocyanin Characterization   | W           |
|                                                                                                                                     | 1094      | Andrea Jensen        | 11    | Effectiveness of Chloramine in Municipal Water Distribution Systems                | T           |
|                                                                                                                                     | 1084      | Matthew Trusheim     | 12    | The Optical Waveguide: Year Two Of An Ongoing Study                                | W           |

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|---------|-----------|-----------------------|-----------------|------------------------------------------------------------------|---------------------------------------------------------|---|
| Grade 8 | 8031      | Patrick Bode          | 8               | Passive Tuned Mass Dampers in High-rise Buildings                | S                                                       |   |
|         | 8049      | Mackensie Quade       | 8               | What are the Effects of the Calcium and Plaque Ion...            | T                                                       |   |
|         | 8066      | Katherine Labuza      | 8               | Effect of Temperature & Humidity on Hard Candy Storage           | T                                                       |   |
|         | 8005      | Hannah Nauen          | 8               | Attraction By Numbers                                            | S                                                       |   |
|         | 8039      | Tiffanie Stone        | 8               | Gone Fishing                                                     | S                                                       |   |
|         | 8017      | Andrew Grimes         | 8               | Graffiti Removal                                                 | T                                                       |   |
|         | 8057      | Robin Olson           | 8               | Are We Building Better Bugs?                                     | S                                                       |   |
|         | 8075      | Cassie Lopez          | 8               | Leeches' Preference in Corners                                   | S                                                       |   |
|         | 8001      | Mara Chin-Purcell     | 8               | Does Your Age Affect Your Age Perception Of Others?              | S                                                       |   |
|         | 8015      | Lucas Gabrielson      | 8               | Fermentation                                                     | S                                                       |   |
|         | 8054      | Kristin Brintnell     | 8               | Is Your Home Completely Clean?                                   | S                                                       |   |
|         | 8063      | John Ewald            | 8               | Temperature & Baseballs                                          | T                                                       |   |
|         | 8071      | Michael Schaefer      | 8               | Trajectory                                                       | S                                                       |   |
|         | 8046      | Parker Hoffman        | 8               | Determining Geographic Descent by Human Femoral Morphology       | S                                                       |   |
|         | 8011      | Brittany Astrup       | 8               | Teeth Whiteners                                                  | S                                                       |   |
|         | 8042      | Lauren Berger         | 8               | Effects Of Caffeine & Exercise On People With Various Body Mass  | S                                                       |   |
|         | 8004      | Chandini Nair         | 8               | Does Caffeine Affect Short-Term Memory?                          | S                                                       |   |
|         | 8070      | Kelly Rexon           | 8               | Physics of Dance                                                 | T                                                       |   |
|         | 8085      | Ashley Proffitt       | 8               | What Soap Works Best?                                            | T                                                       |   |
|         | 8085      | Jacqueline Ugarte     | 8               | What Soap Works Best?                                            | T                                                       |   |
|         | 8027      | Noelle Roden          | 8               | Polishing Affect on Agates and Rocks                             | T                                                       |   |
|         | 8080      | Kelsey Lynch          | 8               | How Would Kool-Aid Color Affect the Color Of A White Flower?     | T                                                       |   |
|         | 8080      | Stephanie Noyed       | 8               | How Would Kool-Aid Color Affect the Color Of A White Flower?     | T                                                       |   |
|         | 8025      | Emilie Scott          | 8               | How Does Changing Ingredients Affect the Results of Chocolate... | T                                                       |   |
|         | Grade 7   | 7001                  | Frannie Aubart  | 7                                                                | Is Blue Read?                                           | T |
|         |           | 7105                  | Eric Young      | 7                                                                | Aquatic Killers                                         | T |
|         |           | 7082                  | Morgan Doyle    | 7                                                                | Gravity Mountain                                        | T |
|         |           | 7111                  | Tyler Ringstad  | 7                                                                | Magnets in Medium                                       | T |
|         |           | 7087                  | Elaina Hamann   | 7                                                                | Building Structures                                     | T |
|         |           | 7031                  | Hannah De Vries | 7                                                                | Get More Bang For Your Buck-Which Popcorn Is Best?      | T |
|         |           | 7043                  | Jenny Nguyen    | 7                                                                | H2O Purifier                                            | W |
|         |           | 7094                  | Collin Randolph | 7                                                                | How Does Temperature Affect the Output of a Solar Cell? | W |
|         |           | 7057                  | Rachel Lee      | 7                                                                | Effect Of Buttresses On a Structure's Strength          | S |
| 7008    |           | Angie Nordstrom       | 7               | Does Gender Affect Eyewitness Reliability?                       | W                                                       |   |
| 7095    |           | Marcie Ratliff        | 7               | Simple Pendulum: Or Is It Quite So Simple?                       | W                                                       |   |
| 7063    |           | Emily Bertram         | 7               | It's Getting Hot in Here                                         | W                                                       |   |
| 7036    |           | Shawn Halvorson       | 7               | What Types Of Nuts Release The Most Energy When Burned?          | S                                                       |   |
| 7024    |           | Brock Purtell         | 7               | How Colored Light Affects Plant Growth                           | S                                                       |   |
| 7038    |           | Preston Howell        | 7               | Melt-Down                                                        | W                                                       |   |
| 7050    |           | Matt Hughes           | 7               | Solar Energy                                                     | T                                                       |   |
| 7065    |           | Madeline Koppendraye  | 7               | World of Worms                                                   | W                                                       |   |
| 7079    |           | Tseng Yang            | 7               | Cinnamon In Apple Juice vs. Pasteurizing Apple Juice?            | S                                                       |   |
| 7026    |           | Maura Williams-Freier | 7               | Best Fertilizer                                                  | S                                                       |   |
| 7009    |           | Catherine Plante      | 7               | Dog Intelligence                                                 | T                                                       |   |
| 7075    |           | Anna Meyer            | 7               | What is Pop Doing to My Teeth?                                   | W                                                       |   |
| 7034    |           | Joe Gagnon            | 7               | Effects of Washing on Fire Resistant Clothing                    | S                                                       |   |
| 7073    |           | Claire McGlaue        | 7               | Why Do Fingers Wrinkle in the Bathtub?                           | S                                                       |   |
| 7091    |           | Nick Paidosh          | 7               | Galvanic Corrosion                                               | T                                                       |   |
| 7052    |           | Matthew Buechler      | 7               | Effect of the Design of Storm Sewer Inlets                       | S                                                       |   |
| 7004    |           | Eric Hanson           | 7               | Does Chewing Gum Affect Memory & Concentration?                  | T                                                       |   |
| 7114    |           | Julia Ennen           | 7               | Copper                                                           | T                                                       |   |
| 7019    |           | Ellen Georges         | 7               | Ways for More Daisy Days                                         | T                                                       |   |
| 7041    |           | Justin Miller         | 7               | How Do Water Additives Affect Heat Retention?                    | S                                                       |   |
| 7045    |           | Jake Stafford         | 7               | Carpet Stain Removers                                            | T                                                       |   |
| 7058    |           | Cody Lindeman         | 7               | Choosing Siding                                                  | T                                                       |   |
| 7020    |           | Kate Grogan           | 7               | Drying Flowers                                                   | S                                                       |   |

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|                                                                                                                                   | Project # | First Name Last Name | Grade | Title                                                                                                              | Affiliation |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------|-------|--------------------------------------------------------------------------------------------------------------------|-------------|
| <b>Research Paper</b> Selected for competition at the Tri-State Junior Science and Humanities Symposium April 1-3, 2006           |           |                      |       |                                                                                                                    |             |
| Senior High                                                                                                                       | P-109     | Steve Marquardt      | 11    | Debussy: A Mathematical Analysis                                                                                   | T           |
|                                                                                                                                   | P-110     | Jeff Marquardt       | 11    | Resonant Fifths                                                                                                    | T           |
|                                                                                                                                   | P-111     | Jordan Wong          | 11    | Inhibition of <i>Escherichia coli</i> in Coniferous & Deciduous Tree Bark                                          | T           |
|                                                                                                                                   | P-112     | Heidi Liu            | 11    | Interaction Between Game Theory & Cognitive Neuroscience                                                           | W           |
| <b>Research Paper</b> Selected for Competition at the MAS State Fair                                                              |           |                      |       |                                                                                                                    |             |
| Junior Division                                                                                                                   | P-20      | Rachel Lee           | 7     | Effect Of Buttresses On a Structure's Strength                                                                     | S           |
|                                                                                                                                   | P-21      | Matthew Buechler     | 7     | Effect of the Design of Storm Sewer Inlets                                                                         | S           |
|                                                                                                                                   | P-18      | Steve Mantell        | 8     | Hot Pucks                                                                                                          | S           |
|                                                                                                                                   | P-10      | John Hanton          | 8     | Fastest Environment to Develop Mold                                                                                | T           |
|                                                                                                                                   | P-09      | Mackensie Quade      | 8     | What are the Effects of the Calcium and Plaque Ion...<br>Effect of Temperature & Humidity on Hard Candy Storage    | T           |
|                                                                                                                                   | P-08      | Katherine Labuza     | 7     |                                                                                                                    | T           |
| <b>Project Medalist</b> -Outstanding projects in Category                                                                         |           |                      |       |                                                                                                                    |             |
|                                                                                                                                   | 6002      | Tara Morgan          | 6     | Are Brand Name Sodas Really Better?                                                                                | S           |
|                                                                                                                                   | 6003      | Erika Nordquist      | 6     | Foxtire & Cold Light                                                                                               | T           |
|                                                                                                                                   | 6007      | Thomas Thuente       | 6     | Truth of Miracle Grow                                                                                              | S           |
|                                                                                                                                   | 6012      | Michael Rosenberg    | 6     | Candles                                                                                                            | T           |
|                                                                                                                                   | 6015      | Elizabeth Klaesges   | 6     | Magnetism                                                                                                          | T           |
|                                                                                                                                   | 6016      | Jennifer Chmura      | 6     | Electrical Current                                                                                                 | S           |
|                                                                                                                                   | 6022      | Marina Kelly         | 6     | Cool cleaners                                                                                                      | S           |
|                                                                                                                                   | 6023      | Lars Berg            | 6     | Oil Spills                                                                                                         | S           |
|                                                                                                                                   | 6032      | James Hartnett       | 6     | Effects of Boat Hull Shape on the Speed of the Boat                                                                | S           |
|                                                                                                                                   | 7001      | Frannie Aubart       | 7     | Is Blue Read?                                                                                                      | T           |
|                                                                                                                                   | 7082      | Morgan Doyle         | 7     | Gravity Mountain                                                                                                   | T           |
|                                                                                                                                   | 7105      | Eric Young           | 7     | Aquatic Killers                                                                                                    | T           |
|                                                                                                                                   | 7111      | Tyler Ringstad       | 7     | Magnets in Medium                                                                                                  | T           |
|                                                                                                                                   | 7111      | Christos Robertson   | 7     | Magnets in Medium                                                                                                  | T           |
| <b>Research Paper Trophies - Junior High</b>                                                                                      |           |                      |       |                                                                                                                    |             |
| 1st Place - Junior High                                                                                                           | P-10      | Katherine Labuza     | 8     | Influence of Temperature & Humidity on Hard Candy                                                                  |             |
| 2nd Place - Junior High                                                                                                           | P-13      | Luke Stone           | 6     | What Grass Do I Plant After the Salt Truck Comes?<br>Effects of Calcium & Phosphate Ions on Tooth Demineralization |             |
| 3rd Place - Junior High                                                                                                           | P-09      | MacKensie Quade      | 8     |                                                                                                                    |             |
| <b>Research Paper Trophies - Senior High</b>                                                                                      |           |                      |       |                                                                                                                    |             |
| 1st Place - Senior High                                                                                                           | P-110     | Jeff Marquardt       | 11    | Resonant Fifths<br>Inhibition of <i>Escherichia coli</i> in Coniferous & Deciduous Tree Bark                       |             |
| 2nd Place - Senior High                                                                                                           | P-111     | Jordan Wong          | 11    |                                                                                                                    |             |
| 3rd Place - Senior High                                                                                                           | p-109     | Steven Marquardt     | 11    | Debussy: A Mathematical Analysis                                                                                   |             |
| <b>Minnesota Chapter of the American Fisheries Society:</b> Certificate--Presenter Brian                                          |           |                      |       |                                                                                                                    |             |
| Senior High                                                                                                                       | 1156      | Meredith Blank       | 12    | Lethal and Sub-lethal Effects of Resmethrin on Nontargeted Species                                                 | W           |
| Junior High                                                                                                                       | 7105      | Eric Young           | 7     | Aquatic Killers                                                                                                    | T           |
| <b>Hennepin Medical Society Alliance:</b> Certificate and \$50 Savings Bond                                                       |           |                      |       |                                                                                                                    |             |
| Senior High                                                                                                                       | 1109      | Carissa Bailey       | 11    | Effect of Pets on High School Students                                                                             | T           |
| Junior High                                                                                                                       | 8044      | Christy Fang         | 8     | How Many Grams Can Hair Hold?                                                                                      | S           |
| <b>Associate of Women Geoscientists:</b>                                                                                          |           |                      |       |                                                                                                                    |             |
| <i>Certificate to female whose project exemplifies high standards of innovativeness and scientific excellence in geosciences.</i> |           |                      |       |                                                                                                                    |             |
| Twin Cities                                                                                                                       | 1094      | Andrea Jensen        | 11    | Effectiveness of Chloramine in Municipal Water Distribution Systems                                                | T           |
| Western Suburbs                                                                                                                   | 1092      | Emily Fitch          | 9     | Effects of Horse Manure on Soil Chemistry                                                                          | W           |
| <b>University of MN Department of Rhetoric: T-shirt, lanyard, book</b>                                                            |           |                      |       |                                                                                                                    |             |
|                                                                                                                                   | 1133      | Jordan Wong          | 11    | Comparison of the Ability of Coniferous and Deciduous Tree Bark...                                                 | T           |

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------|-------|---------------------------------------------------------------------|-------------|
| <b>National Oceanic and Atmospheric Administration:</b>                                                                                                             |           |                      |       |                                                                     |             |
| <i>Certificate to student whose project helps understand and predict the changes in the Earth's environment</i>                                                     |           |                      |       |                                                                     |             |
| Twin Cities                                                                                                                                                         | 1094      | Andrea Jensen        | 11    | Effectiveness of Chloramine in Municipal Water Distribution Systems | T           |
| St. Paul                                                                                                                                                            | 8035      | Sebastian Greider    | 8     | How Does Weather Affect Traffic Density In The Twin Cities?         | S           |
| Western Suburbs                                                                                                                                                     | 1095      | Steve Kannenberg     | 9     | Wonderous World Of Water Quality                                    | W           |
| <b>US Department of Health &amp; Human Services:</b>                                                                                                                |           |                      |       |                                                                     |             |
| <i>Certificate to the students who creatively illustrate and expand on healthy lifestyles, healthy diets and no tobacco use.</i>                                    |           |                      |       |                                                                     |             |
| Twin Cities                                                                                                                                                         | 1115      | Kerry Kraemer        | 11    | Dose Related Effect of Caffeine on Nuctenea Cornuta Web Creation    | T           |
| St. Paul                                                                                                                                                            | 1121      | Daniel Zheng         | 11    | Mathematical Modeling of Smoking Effect on Down Syndrome            | S           |
| Western Suburbs                                                                                                                                                     | 1122      | Michael Blazar       | 12    | Impact of Transforming Growth Factor-Beta Signaling                 | W           |
| <b>East Side Science Club Alumni Awards:</b>                                                                                                                        |           |                      |       |                                                                     |             |
| <i>Medals are presented to outstanding youths that demonstrate innovation and creativeness in project development.</i>                                              |           |                      |       |                                                                     |             |
|                                                                                                                                                                     | 6028      | Brandon Fluegge      | 6     | Has Your Dog Licked You Today                                       | S           |
|                                                                                                                                                                     | 7004      | Eric Hanson          | 7     | Does Chewing Gum Affect Memory & Concentration?                     | T           |
|                                                                                                                                                                     | 7007      | Nicholas Noethe      | 7     | What It's Like to Have A.D.D.                                       | W           |
|                                                                                                                                                                     | 6032      | James Hartnett       | 6     | Effects of Boat Hull Shape on the Speed of the Boat                 | S           |
|                                                                                                                                                                     | 8031      | Patrick Bode         | 8     | Passive Tuned Mass Dampers in High-rise Buildings                   | S           |
|                                                                                                                                                                     | 8066      | Katherine Labuza     | 8     | Effect of Temperature & Humidity on Hard Candy Storage              | T           |
|                                                                                                                                                                     | 8020      | Eleanor Lockman      | 8     | Capturing Wild Yeast: The Baking of Sourdough Bread                 | T           |
|                                                                                                                                                                     | 7101      | Elizabeth Beck       | 7     | Will Cows Produce More Milk After Exposure to Music?                | T           |
|                                                                                                                                                                     | 6007      | Thomas Thuente       | 6     | Truth of Miracle Grow                                               | S           |
| <b>Mu Alpha Theta</b>                                                                                                                                               |           |                      |       |                                                                     |             |
| <i>Certificate awarded to students demonstrating the most challenging, original, thorough and creative investigation of a problem involving modern mathematics.</i> |           |                      |       |                                                                     |             |
| Twin Cities                                                                                                                                                         | 1106      | John Clifford        | 10    | Population Models of a Three Variable Predator-Prey System          | T           |
| St. Paul                                                                                                                                                            | 1121      | Daniel Zheng         | 11    | Mathematical Modeling of Smoking Effect on Down Syndrome            | S           |
| <b>Ricoh Sustainable Development Award;</b>                                                                                                                         |           |                      |       |                                                                     |             |
| Twin Cities                                                                                                                                                         | 1104      | Anders Engberg       | 10    | Level of Pollution in Metro Lakes                                   | T           |
| Western Suburbs                                                                                                                                                     | 1066      | Lillian Nordahl      | 12    | Synthesis Of Biologically Active Thiadiazole Analogs                | W           |
| <b>American Meteorological Society:</b>                                                                                                                             |           |                      |       |                                                                     |             |
| <i>Certificates for outstanding achievements in Meteorological Science</i>                                                                                          |           |                      |       |                                                                     |             |
| St. Paul                                                                                                                                                            | 8035      | Sebastian Greider    | 8     | How Does Weather Affect Traffic Density In The Twin Cities?         | S           |
|                                                                                                                                                                     | 8029      | Mary Scott           | 8     | Venturi Effect in the Downtown Twin Cities                          | S           |
| Twin Cities                                                                                                                                                         | 1086      | Mikki O'Leary        | 11    | Effects of Weather on Residential Buildings                         | T           |
| Western Suburbs                                                                                                                                                     | 7063      | Emily Bertram        | 7     | It's Getting Hot in Here                                            | W           |
|                                                                                                                                                                     | 1091      | Madeline Epping      | 9     | Water pH Level & Temperature Correlation                            | W           |
|                                                                                                                                                                     | 7066      | Christina Kusters    | 7     | Hail vs. House                                                      | W           |

## 2006 Twin Cities Regional Science Fair Awards

|                                                                                                                                                  | Project # | First Name | Last Name  | Grade | Title                                                                  | Affiliation |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------|------------|-------|------------------------------------------------------------------------|-------------|
| <b>US Metric Association:</b>                                                                                                                    |           |            |            |       |                                                                        |             |
| <i>Certificate to the student whose project involves a significant amount of quantitative measurement and which best uses the metric system.</i> |           |            |            |       |                                                                        |             |
| Twin Cities                                                                                                                                      | 1115      | Kerry      | Kraemer    | 11    | Dose Related Effect of Caffeine on Nuctenea Cornuta Web Creation       | T           |
| St. Paul                                                                                                                                         | 1163      | Isaac      | Flath      | 10    | Saw Dust in the Wind                                                   | S           |
|                                                                                                                                                  | 1163      | Pang Ter   | Her        | 10    | Saw Dust in the Wind                                                   | S           |
| Western Suburbs                                                                                                                                  | 1101      | Kyra       | Underbakke | 10    | Investigating the Allelopathic Inhibitory Potential of Aloe vera       | W           |
| <b>ASM Materials Education Foundation:</b>                                                                                                       |           |            |            |       |                                                                        |             |
| <i>Medallion (In the mail) and Certificate recognizing the best materials engineering project</i>                                                |           |            |            |       |                                                                        |             |
| Western Suburbs                                                                                                                                  | 1068      | Matthew    | Weiss      | 11    | Synthesis Of Oxadiazole Derivatives For Use In Supramolecular Assembly | W           |
| <b>Intel Excellence in Computer Science Award</b>                                                                                                |           |            |            |       |                                                                        |             |
| <i>Certificate and \$200 CHECK IN THE MAIL</i>                                                                                                   |           |            |            |       |                                                                        |             |
| Twin Cities                                                                                                                                      | 1106      | John       | Clifford   | 10    | Population Models of a Three Variable Predator-Prey System             | T           |
| St. Paul                                                                                                                                         | 8035      | Sebastian  | Greider    | 8     | How Does Weather Affect Traffic Density In The Twin Cities?            | S           |
| Western Suburbs                                                                                                                                  | 1071      | Conor      | Doherty    | 9     | Effects of Traffic Light Variation on the Flow of Traffic              | W           |
| <b>American Psychology Association: Certificate</b>                                                                                              |           |            |            |       |                                                                        |             |
| Twin Cities                                                                                                                                      | 1012      | Maisee     | Heurh      | 9     | Memory                                                                 | S           |
| St. Paul                                                                                                                                         | 1008      | Ashley     | Erickson   | 11    | Divorce & Gender: Psychological Effects on HS Students                 | T           |
| Western Suburbs                                                                                                                                  | 1020      | Jared      | Miller     | 10    | Learning in the Age of Computers                                       | W           |
| <b>US Stockholm Junior Water Prize:</b>                                                                                                          |           |            |            |       |                                                                        |             |
| <i>Certificate and folder.</i>                                                                                                                   |           |            |            |       |                                                                        |             |
| Twin Cities                                                                                                                                      | 1094      | Andrea     | Jensen     | 11    | Effectiveness of Chloramine in Municipal Water Distribution Systems    | T           |
| Western Suburbs                                                                                                                                  | 1095      | Steve      | Kannenber  | 9     | Wonderous World Of Water Quality                                       | W           |
| <b>American Council of Engineering Companies of MN Top student receives TI calculator</b>                                                        |           |            |            |       |                                                                        |             |
| Grand Award                                                                                                                                      | 1085      | Catherine  | Watkins    | 9     | Ringnom Engine                                                         | W           |
|                                                                                                                                                  | 6016      | Jennifer   | Chmura     | 6     | Electrical Current                                                     | S           |
|                                                                                                                                                  | 6019      | Joshua     | Brinkman   | 6     | Effect of Counterweight Configuration on Trebuchet Throwing Range      | T           |
|                                                                                                                                                  | 7052      | Matthew    | Buechler   | 7     | Effect of the Design of Storm Sewer Inlets                             | S           |
|                                                                                                                                                  | 7056      | Martin     | Lange      | 7     | Static Electricity                                                     | T           |
|                                                                                                                                                  | 8031      | Patrick    | Bode       | 8     | Passive Tuned Mass Dampers in High-rise Buildings                      | S           |
|                                                                                                                                                  | 8034      | Hope       | McCullough | 8     | Is There Anything Stronger than the Arch?                              | T           |
|                                                                                                                                                  | 1086      | Mikki      | O'Leary    | 11    | Effects of Weather on Residential Buildings                            | T           |
|                                                                                                                                                  | 1095      | Steve      | Kannenber  | 9     | Wonderous World Of Water Quality                                       | W           |
| <b>International Society for Optical Engineering:</b>                                                                                            |           |            |            |       |                                                                        |             |
| <i>Certificate and opportunity for \$100 and other prizes if they complete and send in their paperwork.</i>                                      |           |            |            |       |                                                                        |             |
| Twin Cities                                                                                                                                      | 1112      | Eric       | He         | 9     | Electrical Source Imaging from Noninvasive Brain Waves                 | T           |
| Western Suburbs                                                                                                                                  | 1084      | Matthew    | Trusheim   | 12    | The Optical Waveguide: Year Two Of An Ongoing Study                    | W           |

## 2006 Twin Cities Regional Science Fair Awards

| Project #                                                                                                                             | First Name Last Name    | Grade | Title                                                                              | Affiliation |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-------|------------------------------------------------------------------------------------|-------------|
| <b>Yale Science and Engineering Association:</b>                                                                                      |                         |       |                                                                                    |             |
| <i>Certificate and Medallion in the mail. Excellent project in Computer science, Physics or Chemistry Category by an 11th grader.</i> |                         |       |                                                                                    |             |
| Twin Cities                                                                                                                           | 1114 Jennifer Kieffaber | 11    | Asthmatics, Lung Capacities and High Endurance Sports                              | T           |
| St. Paul                                                                                                                              | 1121 Daniel Zheng       | 11    | Mathematical Modeling of Smoking Effect on Down Syndrome                           | S           |
| Western Suburbs                                                                                                                       | 1110 Andrew Bergk       | 11    | Nanotechnology: Quantum Dots                                                       | W           |
| <b>ISEF Alumni Awards</b>                                                                                                             |                         |       |                                                                                    |             |
| Sponsor: Timara Underbakke                                                                                                            |                         |       |                                                                                    |             |
| \$25 and a certificate                                                                                                                | 8039 Tiffanie Stone     | 8     | Gone Fishing                                                                       | S           |
| \$25 and a certificate                                                                                                                | 8017 Andrew Grimes      | 8     | Graffiti Removal                                                                   | T           |
| science medal keychain                                                                                                                | 8062 Benjamin Dutcher   | 8     | HCl & Bubbles                                                                      | S           |
| science medal keychain                                                                                                                | 8019 Rachel Keller      | 8     | Which Chemical Has the Highest Increase In Temperature?                            | S           |
| Sponsor: Michael Lohman                                                                                                               |                         |       |                                                                                    |             |
| Crystal growth kit                                                                                                                    | 1158 Phil Segal         | 9     | Earthworm Behavior In Rain                                                         | W           |
| <b>Minnesota Agriculture in the Classroom:</b>                                                                                        |                         |       |                                                                                    |             |
| Project                                                                                                                               | 7079 Tseng Yang         | 7     | Cinnamon In Apple Juice vs. Pasteurizing Apple Juice?                              | S           |
| Project                                                                                                                               | 1056 Adrienne Sherman   | 10    | Herbicide & Insecticide Interactions in the Genus Mentha                           | T           |
| Project                                                                                                                               | 8083 Tom Pane           | 8     | Effects of Water Erosion on Different Types of Soils                               | S           |
| Paper                                                                                                                                 | 1042 Michelle Hackner   | 12    | Analysis Of PbsS Levels In Response To Environmental Stress                        | W           |
| <b>USDA Agriculture Research Service: Books related to the area of study</b>                                                          |                         |       |                                                                                    |             |
| 6006                                                                                                                                  | Luke Stone              | 6     | What Grass Do I Plant After The Salt Truck Comes?                                  | T           |
| 6041                                                                                                                                  | Sam Johnson             | 6     | The Planty Way                                                                     | S           |
| 6041                                                                                                                                  | David Lund              | 6     | The Planty Way                                                                     | S           |
| 7065                                                                                                                                  | Madeline Koppendrayner  | 7     | World of Worms                                                                     | W           |
| 7024                                                                                                                                  | Brock Purtell           | 7     | How Colored Light Affects Plant Growth                                             | S           |
| 1091                                                                                                                                  | Madeline Epping         | 9     | Water pH Level & Temperature Correlation                                           | W           |
| 1156                                                                                                                                  | Meredith Blank          | 12    | Lethal and Sub-lethal Effects of Resmethrin on Nontargeted Species                 | W           |
| 1042                                                                                                                                  | Michelle Hackner        | 12    | Analysis Of PbsS Levels In Response To Environmental Stress                        | W           |
| <b>Minnesota Astronomical Society: Certificate and Prize package</b>                                                                  |                         |       |                                                                                    |             |
| 7049                                                                                                                                  | Ali Colburn             | 7     | More Twinkle: Windy of Still Night?                                                | W           |
| 1076                                                                                                                                  | Eric Nycklemoe          | 9     | Black Holes: A Fatal Attraction                                                    | W           |
| 1147                                                                                                                                  | Katie Miller            | 11    | Temperature of a Star and the Frequency of a Musical Pitch                         | T           |
| 7051                                                                                                                                  | Shahrazad Negeye        | 7     | What are Sunspots?                                                                 | S           |
| <b>Minnesota Space Frontier Society: Certificate and Prize package</b>                                                                |                         |       |                                                                                    |             |
| 6013                                                                                                                                  | Jeffrey Bissoy-Mattis   | 6     | Can a Rocket Fly With Baking Soda & Vinegar                                        | T           |
| 6014                                                                                                                                  | Julian Seine            | 6     | What Paper Airplane Flies Best                                                     | S           |
| 7053                                                                                                                                  | Peter Harkema           | 7     | 5-4-3: Which Will It Be?                                                           | W           |
| 7060                                                                                                                                  | Jacob Okerland          | 7     | Hummingbirds and Helicopters                                                       | T           |
| 7080                                                                                                                                  | Chloe Adams             | 7     | How Do Gliders Fly?                                                                | T           |
| 7084                                                                                                                                  | Daniel Grady            | 7     | 3-2-1 Blast Off!                                                                   | W           |
| 8060                                                                                                                                  | Jonathan Chavez         | 8     | Does the Shape of a Rocket's Nose Cone Effect the...                               | T           |
| 1150                                                                                                                                  | Nicholas Reynolds       | 9     | What Does the Ideal Nose Look Like?                                                | W           |
| <b>TCRSF: Team Awards</b>                                                                                                             |                         |       |                                                                                    |             |
| 6041                                                                                                                                  | David Lund              | 6     | The Planty Way                                                                     | S           |
| 6041                                                                                                                                  | Sam Johnson             | 6     | The Planty Way                                                                     | S           |
| 7111                                                                                                                                  | Tyler Ringstad          | 7     | Magnets in Medium                                                                  | T           |
| 7111                                                                                                                                  | Christos Robert         | 7     | Magnets in Medium                                                                  | T           |
| 8080                                                                                                                                  | Kelsey Lynch            | 8     | How Would Kool-Aid Color Affect The Color Of A White Flower?                       | T           |
| 8080                                                                                                                                  | Stephanie Noyed         | 8     | How Would Kool-Aid Color Affect The Color Of A White Flower?                       | T           |
| 1164                                                                                                                                  | Daniel Geoffrion        | 12    | Effects Of Anesthesia, Breathing Rate, Temperature & Electrode Position On Muscles | W           |
| 1164                                                                                                                                  | Andrew McCullough       | 12    | Effects Of Anesthesia, Breathing Rate, Temperature & Electrode Position On Muscles | W           |

## 2006 Twin Cities Regional Science Fair Awards

|                                                                                                          | Project # | First Name Last Name | Grade | Title                                                                              | Affiliation |
|----------------------------------------------------------------------------------------------------------|-----------|----------------------|-------|------------------------------------------------------------------------------------|-------------|
| <b>Glen Domeier Memorial Award:</b>                                                                      |           |                      |       |                                                                                    |             |
| <i>\$50, Compass and use book to project that best demonstrates excellence in environmental science.</i> |           |                      |       |                                                                                    |             |
|                                                                                                          | 1101      | Kyra Underbakke      | 10    | Investigating the Allelopathic Inhibitory Potential of Aloe vera                   | W           |
|                                                                                                          | 8039      | Tiffanie Stone       | 8     | Gone Fishing                                                                       | S           |
| <b>Killeen Memorial Award: Trophy to the student who best shows inspiration for their project.</b>       |           |                      |       |                                                                                    |             |
|                                                                                                          | 6022      | Marina Kelly         | 6     | Cool cleaners                                                                      | S           |
| <b>US ARMY</b>                                                                                           |           |                      |       |                                                                                    |             |
| St. Paul                                                                                                 | 1121      | Daniel Zheng         | 11    | Mathematical Modeling of Smoking Effect on Down Syndrome                           | S           |
|                                                                                                          | 1163      | Isaac Flath          | 10    | Saw Dust in the Wind                                                               | S           |
|                                                                                                          | 1163      | Pang Ter Her         | 10    | Saw Dust in the Wind                                                               | S           |
|                                                                                                          | 1161      | Jessica Armstrong    | 9     | Burn Baby Burn                                                                     | S           |
|                                                                                                          | 1161      | Stephanie King       | 9     | Burn Baby Burn                                                                     | S           |
| Twin Cities                                                                                              | 1128      | Nate Durand          | 10    | Effects of Salt on Escherchia coli                                                 | T           |
|                                                                                                          | 1130      | Elliot Post          | 11    | Effects of Light on Dinoflagellates and their Bioluminescence                      | T           |
|                                                                                                          | 1084      | Matthew Trusheim     | 12    | The Optical Waveguide: Year Two Of An Ongoing Study                                | W           |
|                                                                                                          | 1056      | Adrienne Sherman     | 10    | Herbicide & Insecticide Interactions in the Genus Mentha                           | T           |
|                                                                                                          | 1054      | Michael Sakowski     | 11    | Effects of Phosphorescence on Plant Growth                                         | T           |
| Western Suburbs                                                                                          | 1156      | Meredith Blank       | 12    | Lethal and Sub-lethal Effects of Resmethrin on Nontargeted Species                 | W           |
|                                                                                                          | 1164      | Daniel Geoffrion     | 12    | Effects Of Anesthesia, Breathing Rate, Temperature & Electrode Position On Muscles | W           |
|                                                                                                          | 1164      | Andrew McCullough    | 12    | Effects Of Anesthesia, Breathing Rate, Temperature & Electrode Position On Muscles | W           |
|                                                                                                          | 1048      | Katherine Shaeffer   | 12    | Effect Of Ferric Uptake Regulatory Protein On The Transcription Of Gene            | W           |
|                                                                                                          | 1045      | Brandon Lew          | 11    | Perbenzoylation Of Carbohydrates In Preparation For Anthocyanin Characterization   | W           |
| <b>US Navy/US Marine Corps:</b>                                                                          |           |                      |       |                                                                                    |             |
| <i>Certificate and an award.</i>                                                                         |           |                      |       |                                                                                    |             |
| <i>Senior High</i>                                                                                       |           |                      |       |                                                                                    |             |
| Twin Cities                                                                                              | 1086      | Mikki O'Leary        | 11    | Effects of Weather on Residential Buildings                                        | T           |
|                                                                                                          | 1057      | Leslie Sink          | 11    | Disaster After the Hurricane                                                       | T           |
|                                                                                                          | 1124      | Samantha Ebertowski  | 11    | Caffeine: Is there a Placebo Effect in Relation to Heart Rate                      | T           |
| St. Paul Team                                                                                            | 1163      | Isaac Flath          | 10    | Saw Dust in the Wind                                                               | S           |
|                                                                                                          | 1163      | Pang Ter Her         | 10    | Saw Dust in the Wind                                                               | S           |
| Team                                                                                                     | 1162      | James Benjamin       | 9     | Fastest Skateboard Bearing                                                         | S           |
|                                                                                                          | 1162      | Jose Navarro         | 10    | Fastest Skateboard Bearing                                                         | S           |
|                                                                                                          | 1162      | Rony Valle Mejia     | 9     | Fastest Skateboard Bearing                                                         | S           |
| Western Suburbs                                                                                          | 1134      | David Burkhardt      | 9     | May the Magnetic Force Be With You                                                 | W           |
|                                                                                                          | 1042      | Michelle Hackner     | 12    | Analysis Of PbsS Levels In Response To Environmental Stress                        | W           |
|                                                                                                          | 1146      | Andrew Matson        | 9     | Temperature & Its Effects On Levitating Magnets                                    | W           |
| <b>Junior High</b>                                                                                       |           |                      |       |                                                                                    |             |
| Twin Cities                                                                                              | 7105      | Eric Young           | 7     | Aquatic Killers                                                                    | T           |
|                                                                                                          | 8069      | Doug Nordquist       | 8     | Doppler Effect                                                                     | T           |
|                                                                                                          | 6006      | Luke Stone           | 6     | What Grass Do I Plant After The Salt Truck Comes?                                  | T           |
| St. Paul                                                                                                 | 6032      | James Hartnett       | 6     | Effects of Boat Hull Shape on the Speed of the Boat                                | S           |
|                                                                                                          | 7052      | Matthew Buechler     | 7     | Effect of the Design of Storm Sewer Inlets                                         | S           |
|                                                                                                          | 7034      | Joe Gagnon           | 7     | Effects of Washing on Fire Resistant Clothing                                      | S           |
| Western Suburbs                                                                                          | 7087      | Elaina Hamann        | 7     | Building Structures                                                                | T           |
|                                                                                                          | 7098      | William Warmka       | 7     | Does Sugar Amount Affect Speed of Light in Gelatin?                                | W           |
|                                                                                                          | 7015      | Anna Burnham         | 7     | Go Bananas: Ripening Bananas                                                       | T           |
|                                                                                                          | 6033      | Kate Rexon           | 6     | Buoyancy: Why Boats Float                                                          | W           |
| <b>Herbert Hoover Young Engineer Award:</b>                                                              |           |                      |       |                                                                                    |             |
| <i>Certificate and Medal to the project which best demonstrates outstanding engineering effort.</i>      |           |                      |       |                                                                                    |             |
| Twin Cities                                                                                              | 1056      | Adrienne Sherman     | 10    | Herbicide & Insecticide Interactions in the Genus Mentha                           | T           |
| St. Paul                                                                                                 | 1081      | Koua Her             | 9     | Which Beam Design is the Strongest?                                                | S           |
| Western Suburbs                                                                                          | 1085      | Catherine Watkins    | 9     | Ringnom Engine                                                                     | W           |

## 2006 Twin Cities Regional Science Fair Awards

|                                                                                                                                                 | Project # | First Name Last Name  | Grade | Title                                                            | Affiliation |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------------------|-------|------------------------------------------------------------------|-------------|
| <b>US Air Force: Certificate</b>                                                                                                                |           |                       |       |                                                                  |             |
|                                                                                                                                                 | 8060      | Jonathan Chavez       | 8     | Does the Shape of a Rocket's Nose Cone Effect the...             | T           |
|                                                                                                                                                 | 1118      | Charlie Newcomb       | 9     | Pain Killers                                                     | W           |
|                                                                                                                                                 | 1075      | Nicole Janssen        | 9     | Tsunami Tank                                                     | W           |
|                                                                                                                                                 | 1076      | Eric Nycklemoe        | 9     | Black Holes: A Fatal Attraction                                  | W           |
| <b>National Society of Professional Engineers</b>                                                                                               |           |                       |       |                                                                  |             |
| <i>Certificate, lapel pin and subscription to Engineering Times to the most outstanding engineering project.</i>                                |           |                       |       |                                                                  |             |
|                                                                                                                                                 | 1088      | Jessica Wagner        | 11    | Differences in Flex Rating for Pole Vault Poles                  | T           |
|                                                                                                                                                 | 8031      | Patrick Bode          | 8     | Passive Tuned Mass Dampers in High-rise Buildings                | S           |
|                                                                                                                                                 | 1085      | Catherine Watkins     | 9     | Ringnom Engine                                                   | W           |
| <b>Arnold Air Society, Air Force ROTC:</b>                                                                                                      |           |                       |       |                                                                  |             |
|                                                                                                                                                 | 1150      | Nicholas Reynolds     | 9     | What Does the Ideal Nose Look Like?                              | W           |
|                                                                                                                                                 | 7080      | Chloe Adams           | 7     | How Do Gliders Fly?                                              | T           |
| <b>"Almost Perfect" Awards:</b> Trophies to teachers who have consistently submitted "almost perfect"                                           |           |                       |       |                                                                  |             |
|                                                                                                                                                 |           | Brian Stock           |       | Blessed Trinity School                                           |             |
|                                                                                                                                                 |           | Elizabeth Bortke      |       | Cyber Village Academy                                            |             |
| <b>New Teacher Book Award: "Nuts and Bolts"</b>                                                                                                 |           |                       |       |                                                                  |             |
|                                                                                                                                                 |           | Dane Bonath           |       | St. Charles Borromeo                                             |             |
| <b>Science Museum of Minnesota</b>                                                                                                              |           |                       |       |                                                                  |             |
| <i>Two tickets with Ominitheater</i>                                                                                                            |           |                       |       |                                                                  |             |
|                                                                                                                                                 | 6014      | Julian Seine          | 6     | What Paper Airplane Flies Best                                   | S           |
|                                                                                                                                                 | 6010      | Erin Scallen          | 6     | Got Juice?                                                       | S           |
|                                                                                                                                                 | 7041      | Justin Miller         | 7     | How Do Water Additives Affect Heat Retention?                    | S           |
|                                                                                                                                                 | 6005      | Patrick McQuillan     | 6     | Here's a Corny Question!                                         | S           |
| <b>Mn Sanofi-Aventis BioGENEus Challenge</b>                                                                                                    |           |                       |       |                                                                  |             |
| 2 Certificates and a chance to advance to higher level competition                                                                              |           |                       |       |                                                                  |             |
|                                                                                                                                                 | 1122      | Michael Blazar        | 12    | Impact of Transforming Growth Factor-Beta Signaling              | W           |
|                                                                                                                                                 | 1066      | Lillian Nordahl       | 12    | Synthesis Of Biologically Active Thiaziazole Analogs             | W           |
| <b>Just For Fun Awards: Must be present to win</b>                                                                                              |           |                       |       |                                                                  |             |
|                                                                                                                                                 | 1118      | Charlie Newcomb       | 9     | Pain Killers                                                     | W           |
|                                                                                                                                                 | 1106      | John Clifford         | 10    | Population Models of a Three Variable Predator-Prey System       | T           |
|                                                                                                                                                 | 7077      | Lindsey Oawster       | 7     | Drugs & Their Effects                                            | T           |
|                                                                                                                                                 | 8009      | Tony Piechowski       | 8     | Breakfast vs. Grades                                             | T           |
|                                                                                                                                                 | 1125      | Tyler Barnes          | 0     | Bacteria in Hockey Equipment                                     | T           |
|                                                                                                                                                 | 8001      | Mara Chin-Purcell     | 8     | Does Your Age Affect Your Age Perception Of Others?              | S           |
|                                                                                                                                                 | 7003      | Tony Grundtner        | 7     | Name That Color                                                  | T           |
|                                                                                                                                                 | 1100      | Justin Thill          | 10    | Erosion Control                                                  | W           |
|                                                                                                                                                 | 6001      | Lily Eisenthal        | 6     | Does Age or Gender Affect the Ability to Remember?               | S           |
|                                                                                                                                                 | 8064      | Kathryn Gentner       | 8     | Speed-o?                                                         | T           |
|                                                                                                                                                 | 1132      | Alexandra Salzer      | 9     | How Tobacco Affects The Daphnia's Heart Rate                     | W           |
|                                                                                                                                                 | 6013      | Jeffrey Bissoy-Mattis | 6     | Can a Rocket Fly With Baking Soda & Vinegar                      | T           |
|                                                                                                                                                 | 7108      | Caitlyn Wellner       | 7     | Sports vs. Grades                                                | T           |
|                                                                                                                                                 | 7108      | Michelle Woods        | 7     | Sports vs. Grades                                                | T           |
|                                                                                                                                                 | 8033      | Luke Marshall         | 8     | Rise of the Hovercraft                                           | S           |
|                                                                                                                                                 | 1122      | Michael Blazar        | 12    | Impact of Transforming Growth Factor-Beta Signaling              | W           |
|                                                                                                                                                 | 1066      | Lillian Nordahl       | 12    | Synthesis Of Biologically Active Thiaziazole Analogs             | W           |
|                                                                                                                                                 | 1022      | Katelyn Olson         | 10    | Influence of Music on Memory                                     | T           |
|                                                                                                                                                 | 1101      | Kyra Underbakke       | 10    | Investigating the Allelopathic Inhibitory Potential of Aloe vera | W           |
|                                                                                                                                                 | 1114      | Jennifer Kieffaber    | 11    | Asthmatics, Lung Capacities and High Endurance Sports            | T           |
|                                                                                                                                                 | 1118      | Charlie Newcomb       | 9     | Pain Killers                                                     | W           |
|                                                                                                                                                 | 1132      | Alexandra Salzer      | 9     | How Tobacco Affects The Daphnia's Heart Rate                     | W           |
|                                                                                                                                                 | 1012      | Maisee Heurh          | 9     | Memory                                                           | S           |
|                                                                                                                                                 | 1035      | KaoNue Vue            | 9     | Pepsi vs. Coca-Cola                                              | S           |
| <b>Attention to Detail &amp; Communication Award</b>                                                                                            |           |                       |       |                                                                  |             |
|                                                                                                                                                 | 1020      | Jared Miller          | 10    | Learning in the Age of Computers                                 | W           |
| <b>Outstanding Volunteerism Award:</b> 2006 Medal for plaque                                                                                    |           |                       |       |                                                                  |             |
|                                                                                                                                                 |           |                       |       | USS Nokomis Group                                                |             |
| <b>Special Thanks to Retiring Committee Members</b> Sue Zenk and Karin Ostrand for <i>countless hours, days, and years</i> of service at TCRSF! |           |                       |       |                                                                  |             |
| Look for special awards honoring Sue Zenk and Karin Ostrand at TCRSF 2007.                                                                      |           |                       |       |                                                                  |             |