

# Index

- Abernathy, Alexia, 112–114  
ACE Mentor Program, 80  
acronyms, 54, 55, 56  
Active Spin Control, 45–46  
Adams, Christina, 38–39  
Adams, Dalton, 53  
advertising campaign, designing, 115  
Allergen Scanner, 12  
alliteration, 52  
Amazing Kids!—Amazing Mentors!, 80  
Ameer, Alyse, 12  
American Sign Language Translator, 76–77  
Andersen, Ole, 87–88  
Anderson, Joel, 44–45  
Anderson, Mary, 82  
applying  
    competitions and programs, 58–65  
    for patent, 90–91  
    for trademark, 97–98  
Armitage, Betsy, 52  
Automated Page-Replacing Contrivance,  
    8–9  
Auto-Off Candle, 103–104  
Avalanche Search and Survey Helicopter,  
    12  
  
Baby Buzzer, 53  
Bader, Luke, 24, 27–29, 39, 53  
Balick, Matt, 105–106  
Bath Butler, 67  
Bell, Alexander Graham, 82  
Bendable Broom, 52  
bicycle, 4  
Big Array System, 70–71  
Biodegradable Disposable Diaper, 16–17  
Bodylski, Johnny, 41–42, 57  
  
Boinks! and Boinks! Buddies, 106–108  
Boogie-2-Boogie, 10  
Borden, Peter, 18, 65  
brainstorming, 5, 20–21, 73  
breaking problem into smaller parts, 5–7  
Bridge the Gap!, 104  
Brown, Rachel, 66  
  
Cactus Makes Perfect, 54  
Calibrated Angle and Depth Scissors,  
    92–94  
Camp Invention, 65, 125  
camps, 65, 125–126  
Cardio-Mate, 13  
Carthritis, 53  
Cast Cooler, 27  
Celle, Kai, 67  
Challenge List, 121–122  
characters, creating, 101  
Charlie’s Automatic Dog Washer, 50–51  
Chavez, Seth, 11  
Chlorine Sensor, 77–78  
Cho, Christopher, 8–9, 65  
chores, making easier, 4–5  
Christiansen, Matthew, 44  
Christopher Columbus Awards, 34, 69,  
    72, 120  
Christopher Columbus Foundation Com-  
    munity Grant, 12  
Chu, Allan, 10–11  
claims, 90–91  
Clement, Lindsey, 5, 30–32, 46  
Coca-Cola, 99  
community problem, solving, 11–13, 73  
competitions  
    benefits of, 58

- competitions (*continued*)  
 finding, 65, 119–125  
 participating in, 57–58  
 preparing for, 58–59, 63–65  
 computers, ideas related to, 10  
 Connecticut Invention Convention, 119  
 cost estimate, 41  
 Craftsman/NSTA Young Inventors Awards  
 program, 7, 25, 58–59, 122  
 Craig, Heather and Hanna, 41, 63, 79–81  
 Crayon Holder, 86
- deadlines, knowing, 63  
 describing inventions, 36  
 design patents, 85, 88–90  
 discovery, finding use for, 18–20  
 Discovery Channel Young Scientist Chal-  
 lenge, 18, 123–124  
 display, planning, 63–64  
 Donovan, Marian, 5  
 Doucette, Michelle, 72, 73  
 Dun & Bradstreet, 112  
 Dust Storm Detector, 11
- Easy Door Assist, 43  
 E-colocator Gloves, 53  
 eCYBERMISSION competition, 11, 63, 72,  
 120  
 Edible Pet Spoon, 6  
 Edison, Thomas, 23, 37  
 Effect of Neem Oil on Mosquitoes, 18  
 Energy Power Camp, 126  
 Epperson, Frank, 50  
 Eubank, Katelyn, 43  
 EXITE (Exploring Interests in Technology  
 and Engineering Camp), 125  
 ExploraVision Awards, 13, 63, 72,  
 120–121  
 E-Z Gallon, 88–90
- Fair Share Timer, 52  
 Fairweather, Kaitlin, 109–111  
 Farnsworth, Philo, 57  
 Fenugreek-Treated Paper, 18–20  
 Fleck, Abbey, 91–92  
 Flip-Itz, 105–106  
 focus groups, forming, 115  
 Friedberg, Sarah, 66, 68–69  
 Fry, Art, 18
- Glove and Battie Caddie, 32–34  
 Goldstein, Cassidy, 86
- Goodin, Suzanna, 6  
 graphic representation, 96  
 Greatbatch, Wilson, 14  
 Grip Stick, 7  
 guidelines for competition, reading,  
 58–59  
 Gumball Machine, 30–32  
 Gurry, Bonnie, 77–78
- Haas, Chris, 96, 99–101  
 Hall, Patrick, 44–45  
 Hallman, Stephanie, 69  
 Hands-On Basketball, 99–101  
 Hansen, Amy and Alyssa, 10  
 Hathaway Brown School, 77–78  
 Outreach Student Research Program, 78  
 Hazen, Elizabeth, 66  
 HEADS UP, 54–55  
 hobby, improving, 7–11  
 Hosinski, Peter, 52  
 Hrabar, Kristin, 40  
 Hula Hoop, 99  
 Hunt, Patricia, 77
- Ice Crawler, 79–81  
 ideas, getting  
 brainstorming, 5  
 community problem, solving, 11–13  
 discovery, using, 18–20  
 improvement, making, 7–11  
 needs of others, meeting, 13–15  
 problem to solve, looking for, 4–5  
 smaller parts, breaking problem into,  
 5–7  
 through research, 16–18  
 Illuminated Nut Driver, 40  
 improvement, making, 7–11  
 infringement on patents, 91  
 innovations, 4  
 Intel International Science and Engineer-  
 ing Fair, 11, 124  
 Intellectual Property Owners, Inc., 90  
 Intel Science Talent Search, 17, 124  
 Invent America! program, 126–127  
 Invent America! Student Invention Con-  
 test, 32, 88, 122  
 InvenTeams, 12, 72, 121  
 Invention Convention, 13, 127  
 invention fairs, 57–58  
 inventions  
 definition of, 3–4  
 types of, 3–4

- Invent Iowa State Invention Convention, 8, 59–61, 119
- Inventive Kids Around the World Contest, 59, 122
- Inventive Thinking Curriculum Project, 24–25, 127
- Inventucation, 127
  
- James, Richard, 54
- Johnson, Charles, 20, 53, 55, 63
- Johnson, Nicholas and Kaycee, 10
- Jones, Sierra, 54
- journal
  - description of, 23–24
  - Glove and Battie Caddie example of, 32–34
  - Gumball Machine example of, 30–32
    - as part of display, 35–36
    - requirements for, 24–25
    - Walk Along example of, 27–29
    - Water Bike example of, 26–27
    - witness signature in, 24
  - judging criteria, reviewing, 59–63
  
- Kaonohi, Brittney, 53–54
- Kellogg, Will Keith, 50
- Kevlar, 16
- Kid Inventor Challenge, 122–123
- KidKare ride toys, 15
- Kids Invent Toys!, 125
- Klapman, Gabe, 70–71
- Knight, Mattie, 3
- Krasik-Geiger, Ariel, 92–94
- Kwolek, Stephanie, 16
  
- Land Mine Protector, 13
- Lee, Hans Christiansen, 45–46
- Lee, Peter Alexander, 70–71, 74
- Lemelson-MIT InvenTeam Grants, 12, 72, 121
- Levandusky, Steven, 34
- Lewis, Justin, 105–106
- Leyfert, Jodie, 12
- license, exclusive, 111
- licensing product, 111–112
- Light Hand, 9
- Litsey, Sophia, 67
- Littleton InvenTeam, 71–73
- log
  - description of, 23–24
  - Glove and Battie Caddie example of, 32–34
  
- Gumball Machine example of, 30–32
  - as part of display, 35–36
  - requirements for, 24–25
  - Walk Along example of, 27–29
  - Water Bike example of, 26–27
  - witness signature in, 24
- logos, 96
- LZAC Lossless Data Compression, 10–11
  
- Makin’ Bacon, 91–92
- manufacturing product, 109
- marks. *See* trademarks
- Matrix Wheelchair Seat, 38–39
- Matykiewicz, Charlie, 50–51
- McConnell, John, 75–76, 77
- McDevitt, Ryan, 12
- Meant to Invent, 127
- Meggitt, Austin, 15, 32–34, 36, 52, 84, 88
- MENTOR/National Mentoring Partnership, 80
- mentors
  - from business community, 78, 81
  - as guides, 74–75
  - Internet resources for, 80
  - questions to ask, 81
  - school programs for, 77–78
- Michel, Alex, 11
- Microelectrochemical Sensor and Plating System, 16
- Miller, Scott, 11
- Minipara, Shahid, 9
- model
  - cost estimate for, 41
  - help, asking for, 43–45
  - making, 37–39
  - materials, making list of, 39–40
  - scale model, making, 45, 47–49
  - sketch, starting with, 39
  - skills, inventorying and acquiring, 41
  - tools, making list of, 40
  - workshop, setting up, 42
- Morlan, Krysta, 3, 26–27
- Mortality Composting, 68–69
- Muir, John, 4
- Murphy, Colleen, 106–107
- Murphy, Meghan, 105, 106–108
- music, ideas related to, 9
  
- naming invention
  - catchy name, 54–55
  - for feel, 53–54
  - making up words, 52

- naming invention (*continued*)
  - for self, 50–51, 56
  - for sound, 53
  - for what it does, 51
  - word tricks in, 52–53
- National Association of the Self-Employed, 108
- National Gallery for America’s Young Inventors, 9, 123
- National Science Teachers Association (NSTA), 7
  - needs of others, meeting, 13–15
- Neem Oil on Mosquitoes, Effect of, 18
- New Hampshire Young Inventors Program and Fair, 119–120
- No Loss Lacrosse, 109–111
- non-disclosure agreement, 109
- nonexclusive license, 111
- Now You See It, Now You Don’t, 68–69
- NSTA (National Science Teachers Association), 7
- Onitskansky, Elina, 16
- Oops! Proof No-Spill Bowl, 112–114
- oral presentation, preparing, 64–65
- O-Shock, 87–88
- PaceMate, 13–14
- Pasteur, Louis, 50
- patents
  - applying for, 90–91
  - description of, 82
  - granting of, 82
  - infringement on, 91
  - looking at, 92–93
  - purpose of, 83
  - trademarks compared to, 98–99
  - types of, 85–90
- patent search, conducting, 83–85, 94
- Patterson, Brian, 11
- Patterson, Ryan, 25, 38, 75–77, 78
- Pearson, Daniel, 34
- Pedal Powered Lawn Mower, 51
- plant patents, 85, 88
- Post-its, 18
- Pressure Blowout Smoke Diverter, 34–35
- problem to solve
  - breaking into smaller parts, 5–7
  - in community, 11–13
  - listing, 21–22
  - looking for, 4–5
- product
  - developing, 105–108
  - licensing, 111–112
  - manufacturing, 109
  - selling, 109–111, 114
  - turning invention into, 102–103
- programs, 126–128
- Pursley, John, 79, 81
- Rain Watchdog, 41–42
- Rastogi, Akhil, 83, 88–90
- reports
  - example of, 34–35
  - as part of display, 35–36
- research
  - to determine if product exists, 20
  - finding idea through, 16–18
- Retractable Bicycle Fender, 8
- rhyming, 52, 56
- Ride, Sally, 10
- Riebling, Justin, 42–43, 54
- Rincon, Patricia, 44–45
- Rodriguez, Sara Elias, 102
- Roth, Emily, 68–69
- royalties, 111
- Ruff-n-Tuffies, 53–54
- Rushing, Lauren, 44–45
- Sally Ride Science Camp, 125
- scale model, making, 45, 47–49
- Schedler, Carrie, 68–69
- Science Buddies online program, 80
- science fairs, 57, 123–124
- Science Technology and Engineering Preview (STEPS) Summer Camp for Girls, 126
- Scotchgard, 37–38
- Scurci, Kathryn, 68–69
- Seagreaves, Eric, 34
- Secret Camera Journal, 102
- Sellers, Kevin, 8, 39
- selling invention, 109, 111
  - Boinks! and Boinks! Buddies, 106–108
  - Crayon Holder, 86
  - Flip-Itz, 105–106
  - Glove and Battie Caddie, 32–34
  - Hands-On Basketball, 99–101
  - Illuminated Nut Driver, 40
  - Light Hand, 9
  - Makin’ Bacon, 91–92
  - No Loss Lacrosse, 109–111
  - Oops! Proof No Spill Bowl, 112–114
  - O-Shock, 87–88
  - Secret Camera Journal, 102

- Sherman, Patsy, 37–38
- Shukla, Kavita, 18–20, 58, 64
- Siemens Westinghouse Math, Science & Technology Competition, 16, 124–125
- signature of witness, 24
- Silver, Dr. Spencer, 18
- Sims, Tom, 7
- Sit and Go, 6
- sketching, 36, 39
- skills, inventorying and acquiring, 41
- Slinky, 54
- slogans, 96, 101
- Smith, Sam, 37–38
- Snap-a-Flag, 53
- Sokoloff, Harris, 54–55, 81
- solution to problem
  - by breaking into smaller parts, 5–7
  - in community, 11–13
  - looking for, 4–5
- Speed Grain Cart, 42–43
- Spencer, Perry L., 82
- sport, improving, 7–11
- Stachowski, Rich, 90–91
- Standard & Poor's Register of Corporations*, 112
- Steinberg, Renee, 6
- Stoll, Kimmy, 53–54
- Stopping Cart, 44–45
- Student Ideas for a Better America, 15, 123
- Sturmer, Meredith, 67
- submission requirements, listing, 59
- summer camps, 65
- surveys, 21
- Sweep Stopper, 44
- symbol, 96
  
- teamwork
  - benefits of, 66
  - cooperation, compromise, and, 66–69
  - in large teams, 71
  - planning for, 73
  - in small teams, 70
- Tech Trek Camps, 126
- Thomas Register of American Manufacturers*, 109, 112
- Tietjen, Alexa, 12
- Torso Protector, 7–8
- Totino, Rose, 50
- TOYchallenge, 10, 72, 121
- toys, ideas related to, 9–10
- trademarks
  - applying for, 97–98
  - description of, 95
  - designing, 101
  - patents compared to, 98–99
  - purpose of, 95
  - registering, 95, 98
  - symbols for, 95–96
  - types of, 96–97
- trademark search, conducting, 97
- trade secrets, 99
- Trahan, Kevin, 7–8
- Trahan Torso Protector, 7–8
  
- Underwater Walkie-Talkie, 90–91
- U.S. Patent and Trademark Office, 83, 84–85, 95, 97
- utility patents, 85–88, 90–91
  
- Vasudeva, Rishi, 16–17
  
- Walk Along, 27–29
- Washington, George, 82
- Waterbike, 26–27
- Web sites
  - for inventors, 117–118
  - for mentoring, 80
  - for patent searching, 83, 84–85
  - for team competitions, 72
- Weiss, Mitchell, 37, 51
- Western Colorado Math and Science Center, 77
- Westinghouse, George, 3
- Whale, Brandon A., 13–14
- Whale, Spencer, 15
- Wild Planet Toys Inc. Kid Inventor Challenge, 9
- witness signature, 24
- workshop, setting up, 42
- Wozniak, Steve, 10
- Wright, Lisa, 103–104
- Wright, Wilbur and Orville, 3, 37
  
- Young Inventors Program and Fair (Minnesota), 62, 127
  
- Zeppos, Colleen Murphy, 99
- Zordan, Alyssa, 7

## Photo Credits

Pages 6 and 51: photo by Stephen Carrera for Sears on behalf of the Craftsman/NSTA Young Inventors Program; pages 9 and 103: courtesy of Wild Planet Toys, Inc.; page 14: courtesy of Partnership for America's Future, Inc., Akron, OH; page 19: photo by Ken Lam, courtesy of Lemelson-MIT; page 26: courtesy of Krysta Morlan; page 29: courtesy of Deb Bader; page 33: courtesy of Anne and Austin Meggitt; pages 60–61: courtesy of Belin-Blank Center, The University of Iowa; page 62: ©Success Beyond the Classroom (SBC), judging form used for Young Inventors Fair, Young Inventors Program, Minneapolis, Minnesota; page 69: courtesy of Jon Hood; page 76: courtesy of Intel ISEF; page 79: courtesy of Paul L. Craig; page 100: courtesy of SPORTIME; page 106: courtesy of Robert Balick; page 108: courtesy of the National Association for the Self-Employed; page 110: courtesy of Andrew Virzi, Milford Cabinet; page 113: courtesy of Little Kids, Inc.