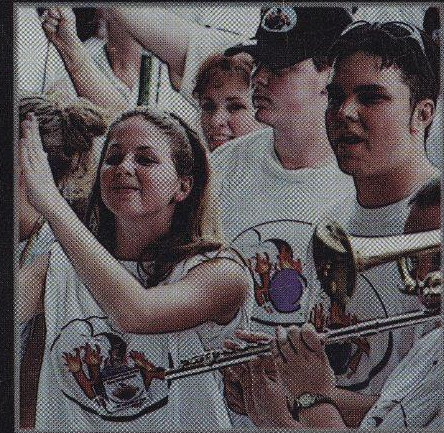
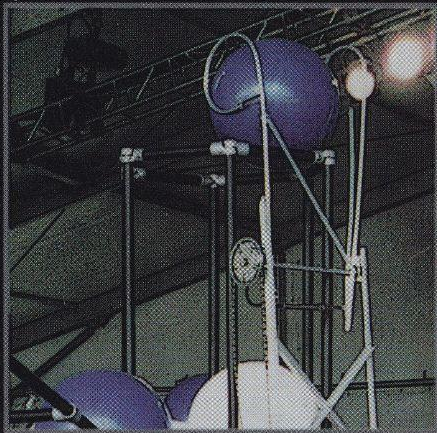


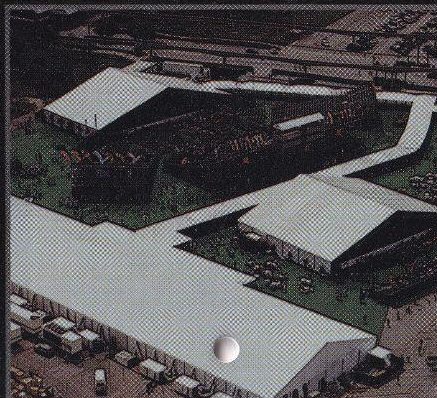
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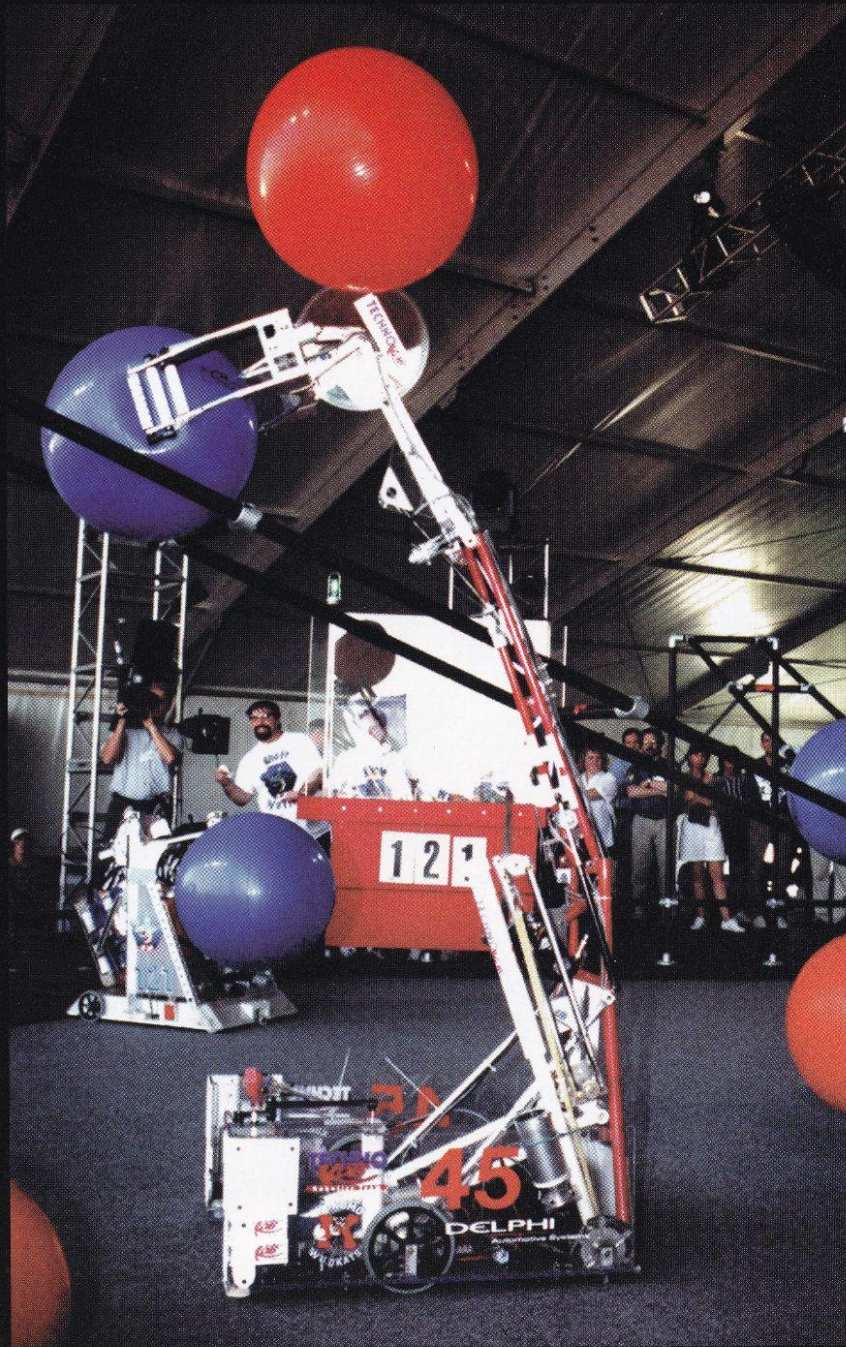
FOR INSPIRATION AND RECOGNITION OF SCIENCE AND TECHNOLOGY

## 1999 ROBOT CALENDAR

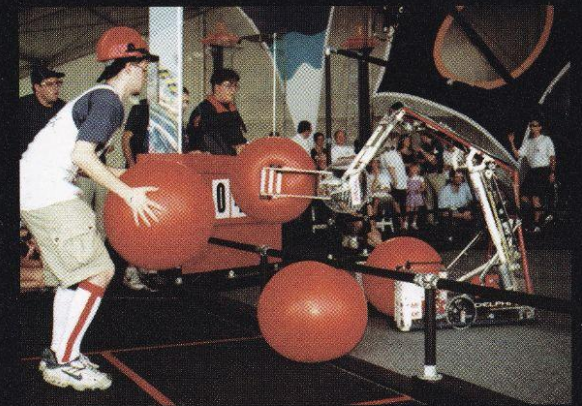
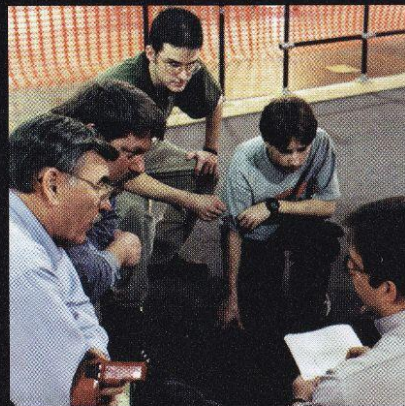
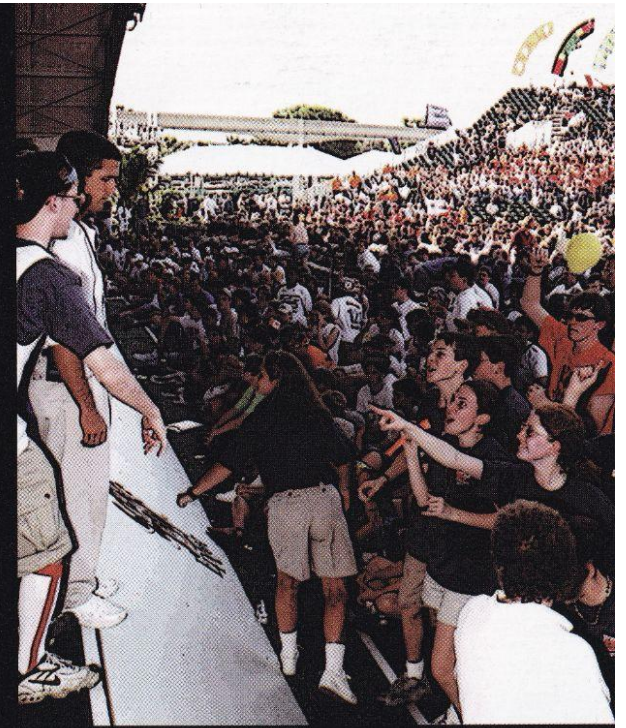


AT **FIRST**, WE SEE A WORLD WHERE SCIENCE AND TECHNOLOGY ARE CELEBRATED,  
WHERE KIDS THINK SCIENCE IS COOL  
AND DREAM OF BECOMING SCIENCE AND TECHNOLOGY HEROES





The TechnoKats have competed in FIRST since its inception in 1992, when they placed 3<sup>rd</sup> of 17 teams. Since then they have mentored several teams and helped start competition traditions like trading pins and using noise makers. The TechnoKat robot mimics the motion of the human arm with shoulder, elbow and wrist joints. It uses roller mechanisms in both the gripper and drive-base to collect balls. After taking 2<sup>nd</sup> at the Great Lakes Regional, they began transferring balls from the drive-base directly to the gripper. With this added maneuver the TechnoKats became the National Champions.



Delphi Delco Electronics · Kokomo High School · Kokomo, Indiana  
The TechnoKats · since 1992 · [www.netusa1.net/~technokats](http://www.netusa1.net/~technokats)  
1998 National Champions; 1994 & 1995 Chairman's Award Finalist

# JANUARY

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Italian artist Leonardo da Vinci studied anatomy and mechanics, served as an architect and engineer, and even attempted to fly. This famous drawing shows a man's arm span is roughly equal to his height.

For more information about the inventions and discoveries in this calendar, read "the rest of the story" at [www.huskiebrigade.com](http://www.huskiebrigade.com)

1 New Year's Day

2

3

4

1809 - Louis Braille's birthday: developed alphabet for the blind

5

6

7



1785 - First Balloon flight across English Channel

8

9 **KICK-OFF**  
1999  
COMPETITION  
UNVEILED

10

11

12

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15

16

BRAINSTORM

17

18

Martin Luther King Day

19

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23

CONCEPT  
DESIGN

1706 - Benjamin Franklin's birthday: invented lightning rod

1912 - Robert Scott reaches South Pole 35 days after Amundsen (see 12/14)

1976 - First supersonic airline service: "Concorde"

1849 - Elizabeth Blackwell is first U.S. female doctor

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DETAIL DESIGN  
WORK

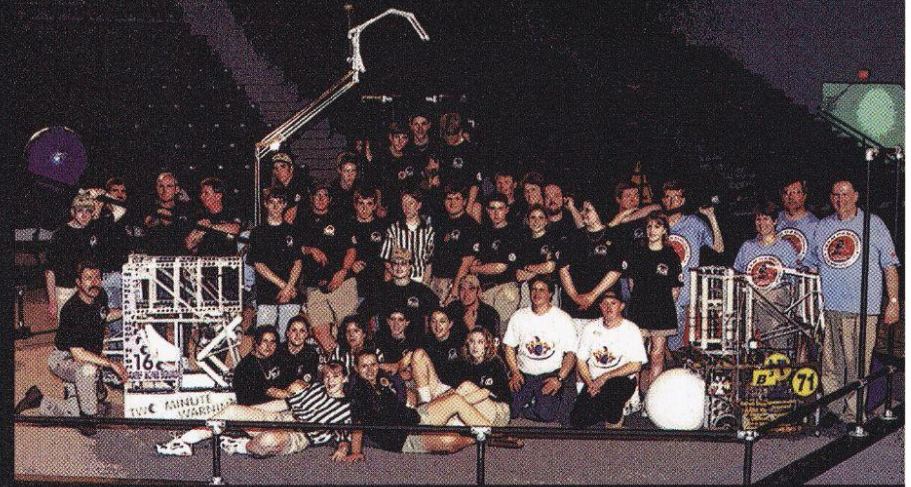
31

1915 - Bell & Watson make first transcontinental telephone call (see 2/14)

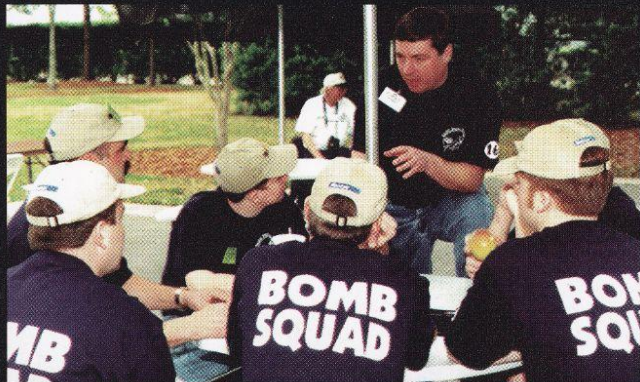
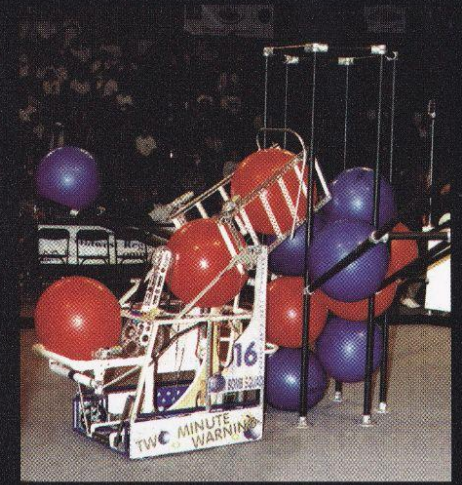
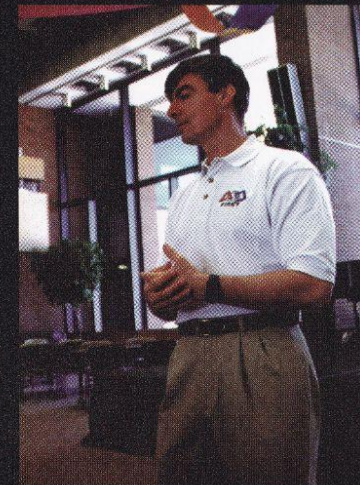
1911- First U.S. aircraft takeoff & landing on water



1886 - Karl Benz produces first gas engine automobile



The "2-Minute Warning" robot picks up balls with a rotating PVC pipe, transports them with a V-belt, and squeezes them through the sides of the center goal and the 3 point rails. The squeezer uses six pairs of chain driven PVC rollers. A hidden suction cup sometimes deploys to protect a 3 point ball. With their robot's simple design, speed and reliability, the Baxter Bomb Squad finished 2<sup>nd</sup> in Houston and 1<sup>st</sup> at the Midwest Regional.



Former Space Shuttle Commander Andrew Allen (right) is the President of FIRST. He says FIRST is fast becoming the "Ultimate Mind Sport" of middle and high school students.

**Baxter Healthcare Corporation · Mountain Home High School · Mountain Home, Arkansas**  
**The Baxter Bomb Squad · since 1996 · [www.mtncom.mhfirst/](http://www.mtncom.mhfirst/)**  
**1998 Chairman's Award Finalist**

# FEBRUARY

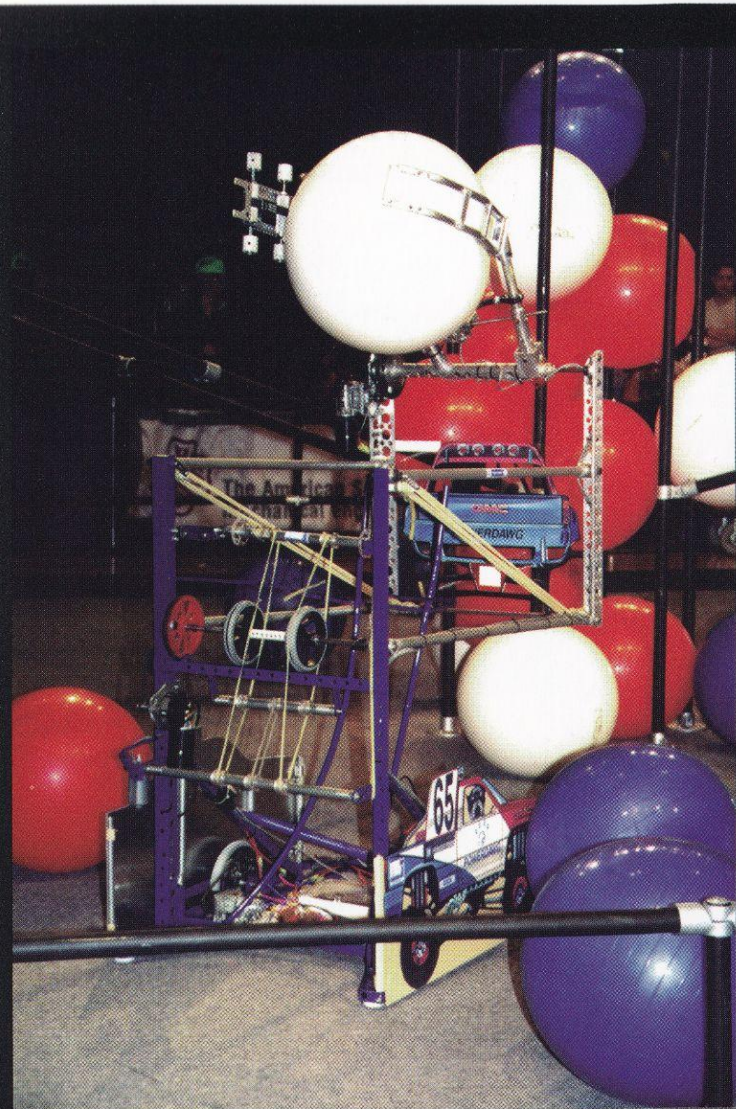
Baxter



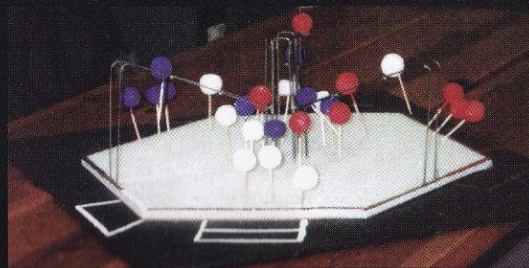
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S M T W T F S

	1	2	3	4	5	6
<b>MAKE PARTS</b>						
	1920 - Michael Sweeney uses first armored commercial car	1999 - School-to-Work Job Shadow Day		1902 - Charles Lindbergh's birthday		1971 - First golf ball hit on moon
<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b> <small>Lincoln's Birthday</small>	<b>13</b>
<b>ASSEMBLE ROBOT</b>						
	1883 - Louis Waterman invents fountain pen			1847 - Thomas Edison's birthday: 1,093 patents (most in U.S. history)		
<b>14</b> <small>Valentine's Day</small>	<b>15</b> <small>President's Day</small>	<b>16</b>	<b>17</b> <small>Ash Wednesday</small>	<b>18</b>	<b>19</b>	<b>20</b>
<b>TESTING &amp; PRACTICE</b>						
1876 - Alexander Bell patents telephone			1911 - Charles Kettering's electric self-starter debuts in 1912 Cadillacs			1962 - John Glenn makes America's first manned orbital flight: Friendship 7
<b>21</b>	<b>22</b> <small>Washington's Birthday</small>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b> <b>FIRST REGIONALS</b> Moffett Field, CA Chicago, IL
 1858 - First electric burglar alarm installed		<b>SHIP ROBOT DEADLINE</b>				1951 - Edwin Land patents instant camera: Polaroid Land camera
<b>28</b>		1843 - Patent Commissioner Henry Ellsworth testifies to Congress that the rapid pace of innovation "taxes our credulity and seems to presage the arrival of that period which human improvement must end."				



The "Powerdawg" robot uses a 4 bar lift mechanism and a tank style drivetrain. During two regional competitions, the Huskie Brigade fine tuned the gripper mechanism so that it would pick up and hold two balls at a time. The development work paid off as the team improved from 10<sup>th</sup> of 30 teams at the Midwest Regional to 3<sup>rd</sup> of 166 teams at the nationals in Florida.






General Motors Powertrain · Pontiac Northern High School · Pontiac, Michigan  
The Huskie Brigade · since 1997 · [www.huskiebrigade.com](http://www.huskiebrigade.com)  
**Third Place, 1997 and 1998 National Championships**

# MARCH

1999

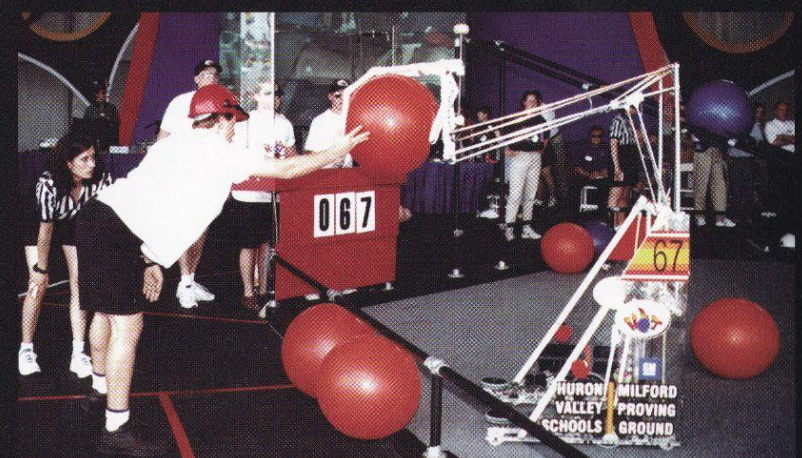
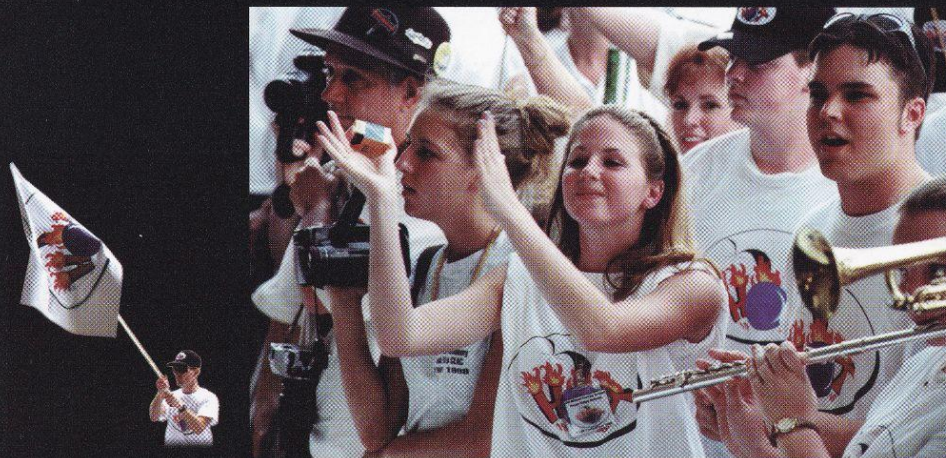


S M T W T F S

	<b>1</b>	<b>2</b>  1949 - First non-stop round-the-world flight	<b>3</b>	<b>4</b> 1887 - Anne Sullivan teaches Helen Keller her first word: "doll"	<b>5</b>	<b>6</b> <b>FIRST REGIONALS</b> Kennedy Space Ctr., FL Houston, TX 1908 - 3 Cadillacs rebuilt from one pile of parts
<b>7</b>	<b>8</b>	<b>9</b> 1862 - First armored warship battle: Monitor vs Merrimac	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b> <b>FIRST REGIONAL</b> Philadelphia, PA
<b>14</b> 1794 - Eli Whitney patents cotton gin 1879 - Albert Einstein's birthday	<b>15</b>	<b>16</b>	<b>17</b> <small>St. Patrick's Day</small>  1940 - First air-conditioned taxi ride (see 11/4)	<b>18</b>	<b>19</b>	<b>20</b> <b>FIRST REGIONALS</b> Manchester, NH New Brunswick, NJ
<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b> 1914 - Garrett Morgan patents gas mask	<b>25</b>	<b>26</b> 1974 - Bob Bolton patents backpressure Exhaust Gas Recirculation (EGR) valve	<b>27</b> <b>FIRST REGIONAL</b> Ypsilanti, MI
<b>28</b> Palm Sunday	<b>29</b> 1995 - Bill Bolander receives first Lemelson-MIT Prize for powertrain control algorithms	<b>30</b>	<b>31</b> 1889 - Eiffel Tower completed on time & under budget (see 5/2)			~260 B.C. - Archimedes discovers density in his bathtub and catches a dishonest goldsmith. "Eureka!" (I found it!) See <a href="http://www.huskiebrigade.com">www.huskiebrigade.com</a> for details. 1989 - "Super Soaker" squirtgun shown at International Toy Fair



**H**OT BOT's mast assembly carries the four-bar boom assembly, gripper, and motors. Potentiometers provide feedback to the controller for fast, smooth positioning. Control system features include a software filter, coordinated motion algorithm, position presets, and velocity limiting. In 1998 the HOT Team won the Leadership in Control award at two regionals and at the nationals.



General Motors Milford Proving Ground · Milford, Lakeland and Harbor High Schools · Milford, Michigan  
 The HOT Team (Heroes of Tomorrow) · since 1997 · [204.39.204.79/files/Lakeland%20HS/ilshome/Hot%20Website/mpg.first.htm](http://204.39.204.79/files/Lakeland%20HS/ilshome/Hot%20Website/mpg.first.htm)  
**Fourth Place, 1998 National Championships; 1998 Chairman's Award Finalist**






# APRIL

1999

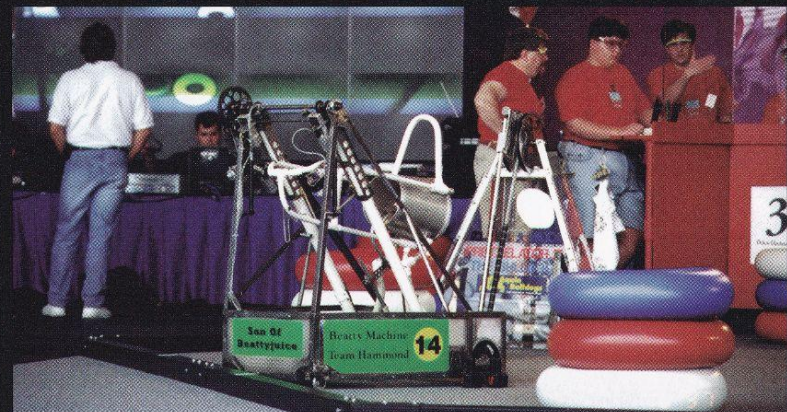


S M T W T F S

	Galileo Galelei (1564-1642) proves Aristotle wrong at Leaning Tower of Pisa with 10 and 1 lb balls. See <a href="http://www.huskiebrigade.com">www.huskiebrigade.com</a> for details.			<b>1</b> Passover  1913 - Henry Ford's assembly line revolutionizes the auto industry	<b>2</b> Good Friday	<b>3</b>  1860 - Mail to CA reduced from 30 to 10 days by Pony Express (see 10/24)
<b>4</b> Easter	<b>5</b>  FIRST Founder Dean Kamen's Birthday	<b>6</b>  1909 - Peary, Henson & 4 Eskimos are first to reach North Pole	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<b>11</b>	<b>12</b>  1961 - Yuri Gagarin: First human in space	<b>13</b>	<b>14</b> 1894 - Thomas Edison's kinetoscope (motion pictures) shown to public  1981 - Space Shuttle "Columbia" lands after 2 days and 37 orbits	<b>15</b> 1452 - Leonardo da Vinci's birthday: artist, scientist, engineer  1998 - Robert S. Langer receives Lemelson prize for developing artificial skin	<b>16</b>	<b>17</b>
<b>18</b>	<b>19</b>	<b>20</b>  1940 - Demonstration of first electron microscope	<b>21</b>  1855 - First train crosses Mississippi on the river's first bridge	<b>22</b>	<b>23</b>	<b>24</b> <b>FIRST NATIONAL CHAMPIONSHIPS</b> Orlando, FL
<b>25</b>  1901 - New York requires auto license plates	<b>26</b>	<b>27</b>	<b>28</b>  1992 - Series of repairs started on Leaning Tower of Pisa	<b>29</b> <b>SATELLITE BROADCAST OF FIRST NATIONALS AT GM DEALERS</b>  For details see <a href="http://www.huskiebrigade.com">www.huskiebrigade.com</a>	<b>30</b>  1798 - U.S. Navy created during conflict with France	



**C**omposed of students from four high schools, Team Hammond captured first place at the 1997 Midwest Regional and went on to become National Champions in Florida. Their 1997 robot excelled at scoring multiple innertubes on the top of the rotatable center goal, which doubled the points scored on the sides. With support from a small machine tool company and several other sponsors, their "B<sup>3</sup>" robot was also a formidable competitor in the 1998 Competition.



**Beatty Machine & Manufacturing · School City of Hammond · Hammond, Indiana**  
**Team Hammond · since 1996 · michael\_kobe@ccmail.k12.hammond.in.us**  
**1997 National Champions; Tenth Place, 1998 National Championships**



# MAY

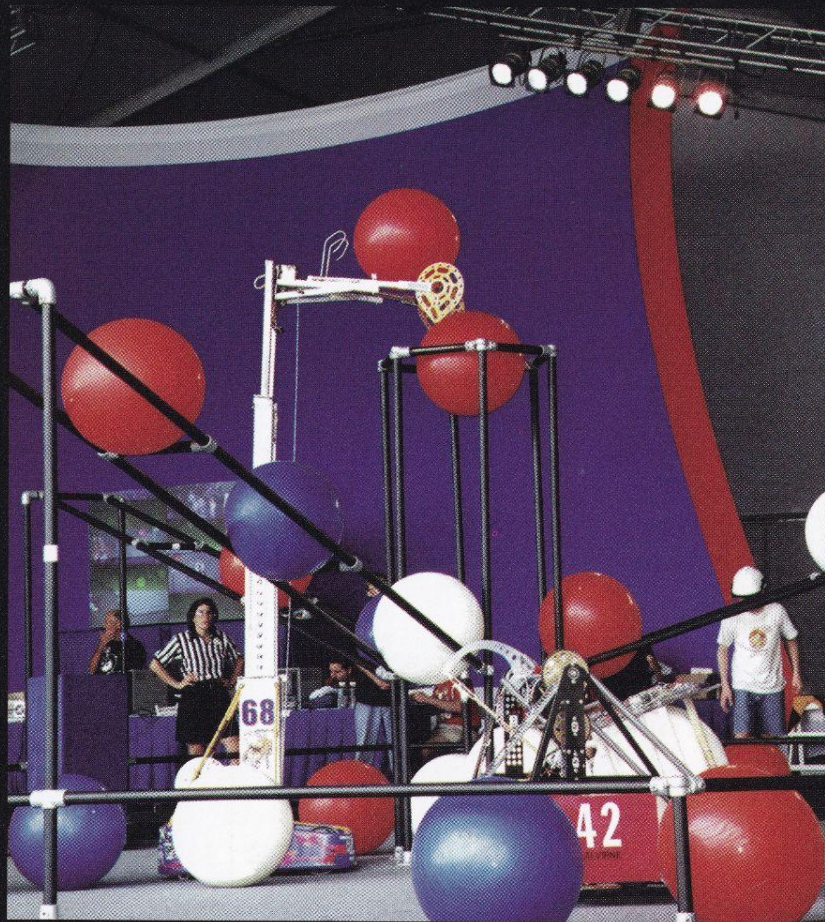
1999

**BEATTY**  
MACHINE & MANUFACTURING CO.

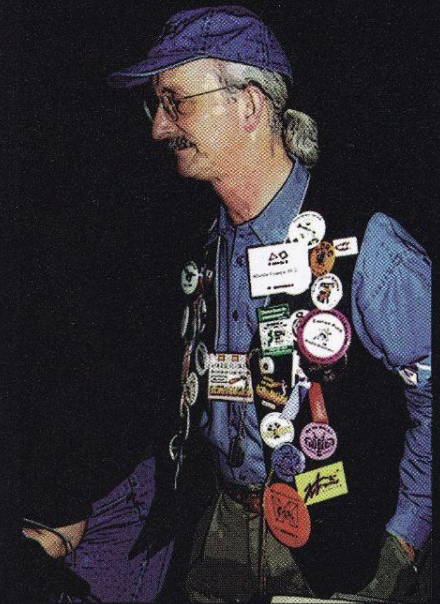


S M T W T F S

		1977 - Jerome Lemelson's original camcorder patent application rejected by patent examiner because it was "ridiculous to think that video recorders could be miniaturized to the size required for portability."				<b>1</b>  1873 - First U.S. postal card issued
<b>2</b>  1886 - Design contest to build iron tower for 1889 Great Exposition begins in France (see 3/31)	<b>3</b>  1897 - J.W. Smith patents lawn sprinkler	<b>4</b>  1999 - National Teacher Appreciation Day	<b>5</b>  1961 - Alan Shepard and "Freedom 7" complete first U.S. sub-orbital flight	<b>6</b>	<b>7</b>  1878 - J.R. Winters receives fire escape patent	<b>8</b>
<b>9</b> Mother's Day	<b>10</b>  1869 - Golden Spike: 1st transcontinental railroad	<b>11</b>  1947 - B.F. Goodrich makes first tubeless tires	<b>12</b>	<b>13</b>  1999 - National Science Olympiad, thru 5/15 <a href="http://www.nso99.uchicago.edu">www.nso99.uchicago.edu</a>	<b>14</b>  1908 - Charles Furnas is first airplane passenger by flying with Wilbur Wright	<b>15</b>
<b>16</b>  1934 - John Dillinger thanks Henry Ford for his speedy V8 car; see <a href="http://www.huskiebrigade.com">www.huskiebrigade.com</a> for a copy of his letter	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b> 1899 - First speeding arrest: ("breakneck speed" of 12 mph) 1927 - Charles Lindbergh flies solo, non-stop from NY to Paris	<b>21</b>  1932 - Amelia Earhart: first woman to fly solo across Atlantic	<b>22</b>
<b>23</b> 1906 - Wright brothers receive patent on airplane 1896 - First auto accident; car collides with bike	<b>24</b> 1844 - Samuel Morse: first telegraph message, Washington to Baltimore 1883 - Brooklyn Bridge opens	<b>25</b>	<b>26</b>	<b>27</b>  1919 - U.S. Navy seaplane makes first transatlantic flight (see 5/20, 6/15)	<b>28</b>	<b>29</b>  1953 - Sir Edmund Hillary & Tenzing Norgay reach summit of Mt. Everest
<b>30</b>	Memorial Day <b>31</b>					



The "T<sup>3</sup>" robot features pincher gripper arms powered by a high helix screw and compound linkage, an elevator lift mechanism modeled after a typical fork truck, and 2-wheel drive at the front of the chassis. The rookie Truck Town Terror team finished 4<sup>th</sup> & 9<sup>th</sup> in two regional competitions and place 21<sup>st</sup> of 166 teams at the nationals in Orlando. At a post-season invitational, they took 1<sup>st</sup> place out of 15 experienced Michigan teams.



MIT professor Woodie Flowers is the emcee at competitions. The FIRST Robotics Competition concept was patterned after his 2.70 "Introduction to Design" engineering course at MIT.

# JUNE

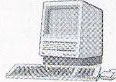

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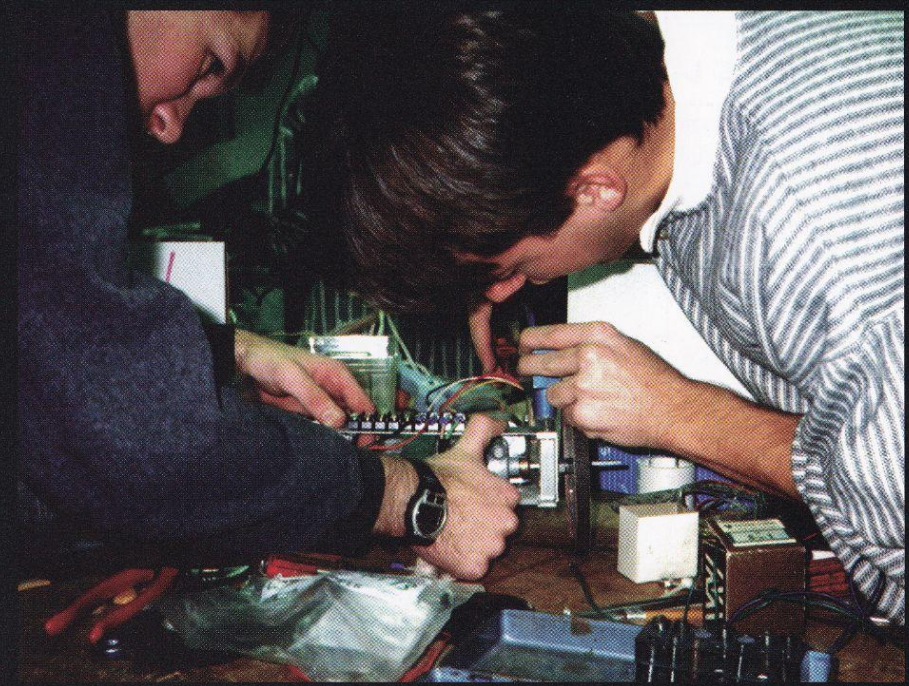
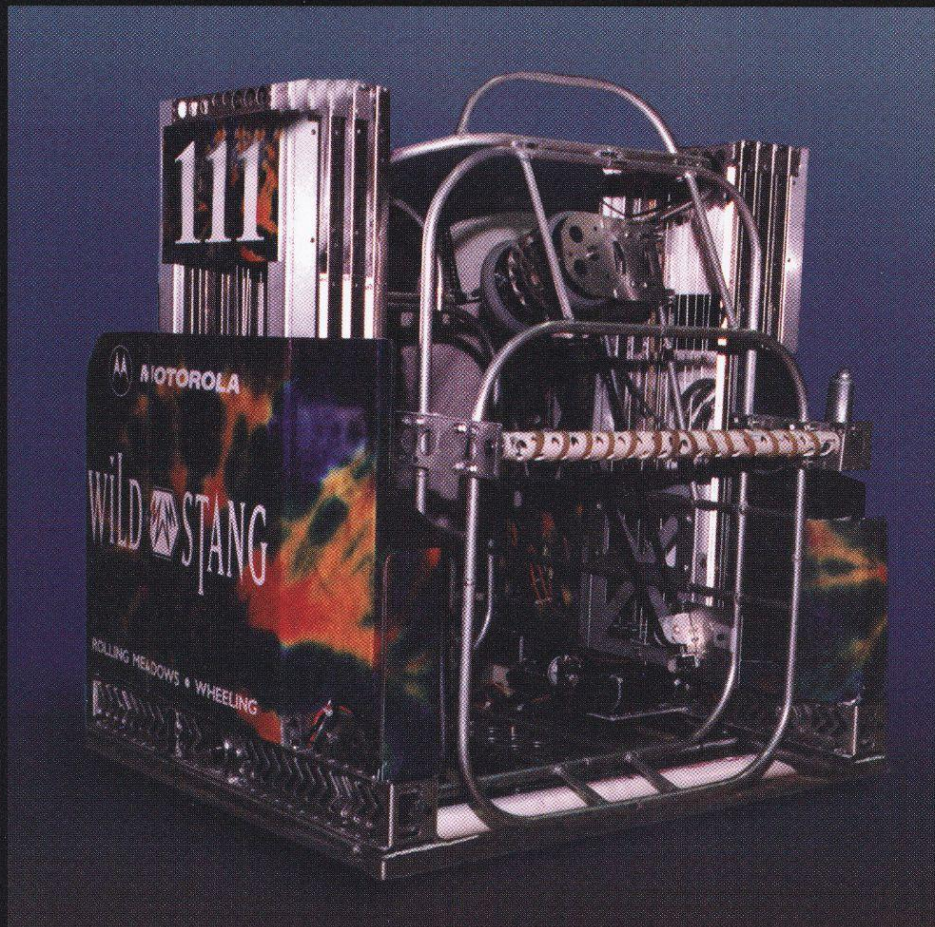


Truck Group



S M T W T F S

		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>  1783 - First hot air balloon demonstration 1977 - First personal computer for sale: Apple II
<b>6</b>	<b>7</b>	<b>8</b> 1924 - George Mallory attempts to climb Mt. Everest "because it is there"	<b>9</b>	<b>10</b>	<b>11</b> 1895 - Charles Duryea patents his "Road Vehicle"	<b>12</b> 1979 - Bryan Allen flies human-powered aircraft across English Channel
<b>13</b>	<b>14</b> <small>Flag Day</small>	<b>15</b> 1752 - Benjamin Franklin proves lightning is electricity 1919 - Alcock & Brown: 1st non-stop transatlantic flight (see 5/20, 5/27)	<b>16</b> 1775 - Congress begins Army Corps of Engineers 1903 - Henry Ford charts Ford Motor Company	<b>17</b>	<b>18</b>	<b>19</b> 1623 - Blaise Pascal born: created first adding machine
<b>20</b> <small>Father's Day</small>	<b>21</b>  1905 - Dwight Huss wins first transcontinental auto race (44 days)	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b> 1903 - Marie Curie reveals discovery of radium	<b>26</b> 1936 - First successful helicopter flight
<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b> 1953 - Corvette offers first production fiberglass body 1905 - Albert Einstein: essay on "The electrodynamics of moving bodies"			1543 - Nicolaus Copernicus publishes "On the Revolutions", first proof that the earth moves



**W**ildStang is a partnership between Motorola and two rival high schools. The team is structured as a mini-corporation so students have the opportunity to work with Motorola engineers and professionals in all aspects of business. Their tie-dyed machine collects 3 balls at a time and extrudes them into the side of the center goal and onto the rails from underneath. WildStang scored a record high of 512 points at the Great Lakes Regional and placed 10<sup>th</sup> at Nationals.

Motorola, Inc. · Wheeling and Rolling Meadows High Schools · Schaumburg, Illinois  
Wildstang · since 1996 · [whs.dist214.k12.il.us/www/activities/first/main.html](http://whs.dist214.k12.il.us/www/activities/first/main.html)  
**Ninth Place, 1997 National Championships; Tenth Place, 1998 National Championships**

# JULY

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MOTOROLA



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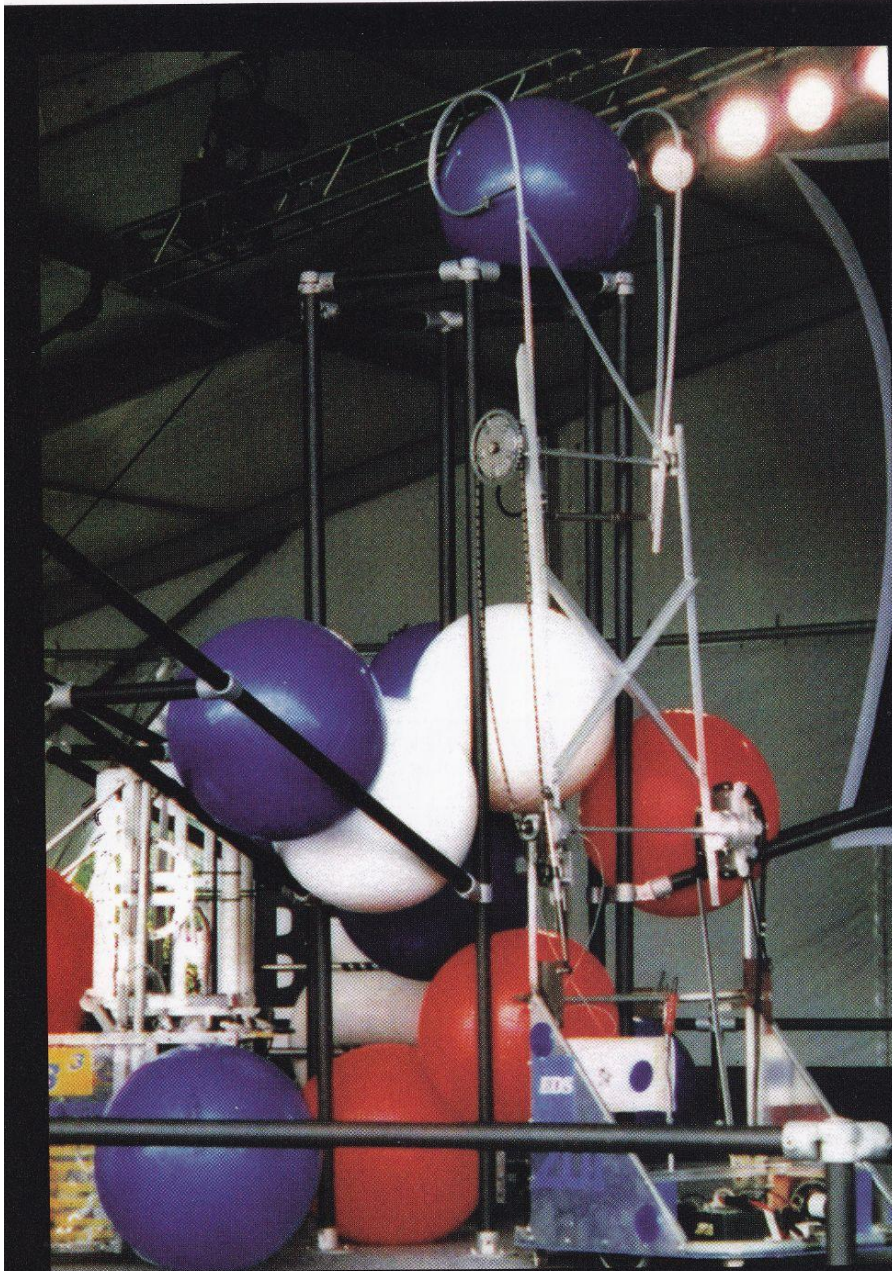
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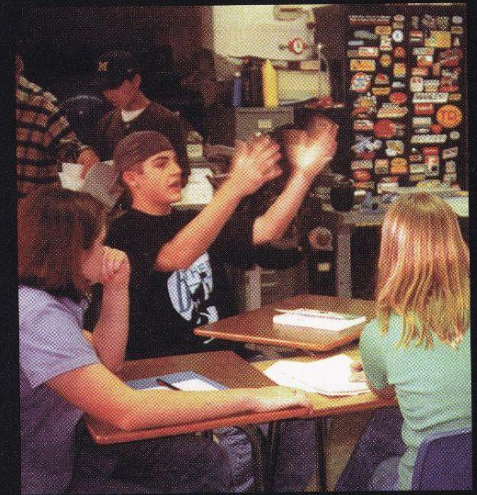
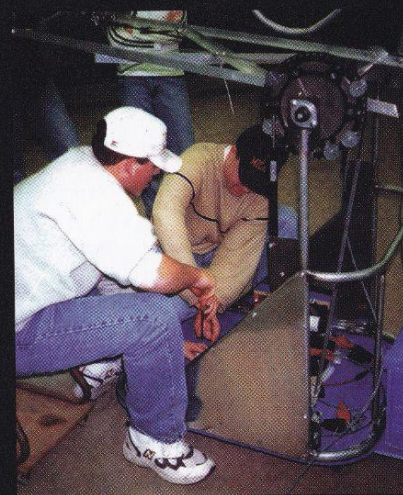
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	 1955 - Motorola introduces the all-transistor car radio, the alternator and the electronic ignition system.			1	 1900 - Five people fly with Count Von Zeppelin on first flight of his airship	2	3
4 Independence Day	5	6	7	8	9	10	11
	1892 - Andrew J. Beard invents rotary steam engine					1893 - Dr. Daniel H. Williams performs first successful heart surgery	
11	12	13	14	15	16	17	18
		1568 - Dean of St. Paul's Cathedral perfects way to bottle beer 1836 - U.S. Patent Office starts numbering patents					1877 - Thomas Edison invents the phonograph, his favorite invention
18	19	20	21	22	23	24	25
1923 - Jerome Lemelson's birth; ~500 patents; VCR, camcorder, fax, Walkman		1969 - Neil Armstrong: "One small step for man, one giant leap for mankind"		1933 - Wiley Post is first to fly solo around the world ("Winnie Mae" - 8 days)			1897 - Amelia Earhart's birthday
25	26	27	28	29	30	31	
1909 - First crossing of English Channel by airplane						1790 - Samuel Hopkins gets first U.S. Patent: method of making potash 1922 - Ralph Samuelson: first in world to waterski	



**R**ochester's rookie robot was built without a sponsor by a dedicated group of 9 students and 4 teachers in the school's auto shop. Their simple yet functional robot uses direct drive for the wheels: no gears, chains or belts. The Great Lakes Regional announcers dubbed them the "Cinderella team" for placing 7<sup>th</sup> of 31 teams. With help from other teams and their new sponsor EDS, they went to the nationals where they placed 27<sup>th</sup> of 166 and received the Worcester Polytechnic Institute Design Innovation Scholarship.





# JULY

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MOTOROLA



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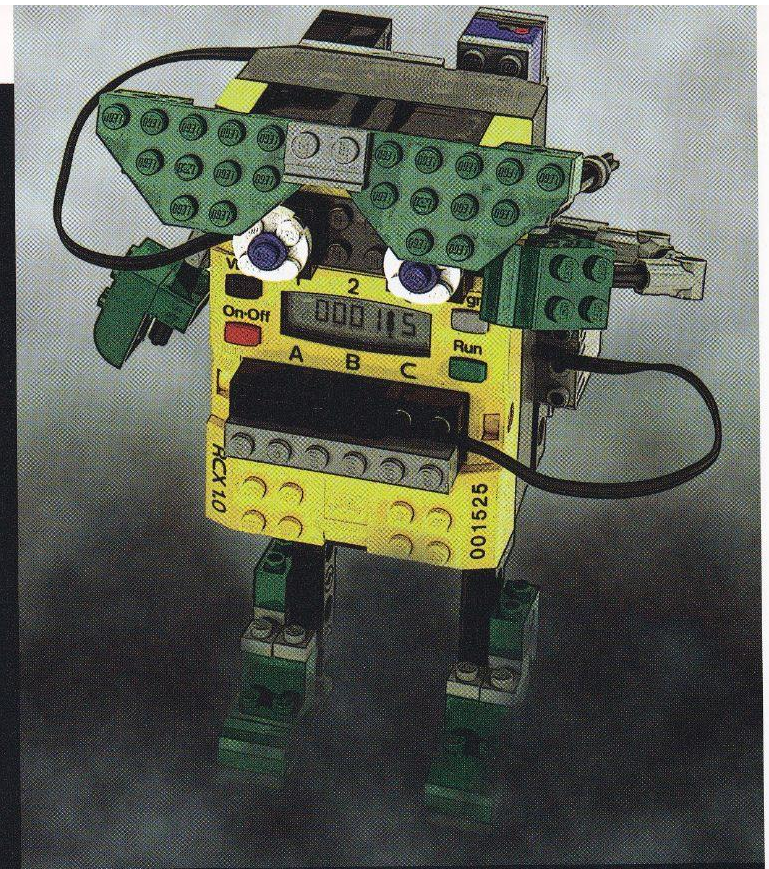
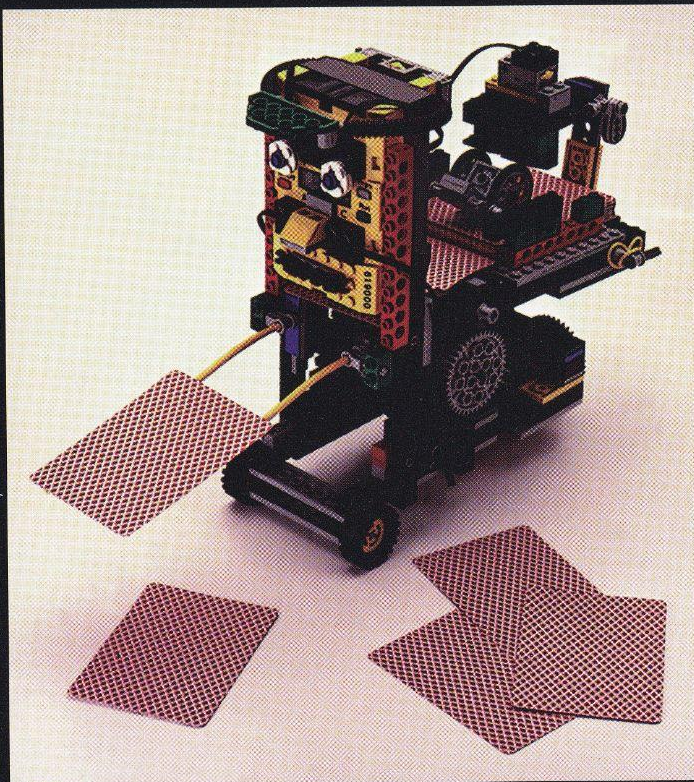
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	 <p>1955 - Motorola introduces the all-transistor car radio, the alternator and the electronic ignition system.</p>			1	 <p>1881 - First international telephone conversation</p> <p>1900 - Five people fly with Count Von Zeppelin on first flight of his airship</p>	3
4 Independence Day	5	6	7	8	9	10
	1892 - Andrew J. Beard invents rotary steam engine				1893 - Dr. Daniel H. Williams performs first successful heart surgery	
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1909 - First crossing of English Channel by airplane						1790 - Samuel Hopkins gets first U.S. Patent: method of making potash 1922 - Ralph Samuelson: first in world to waterski



In 1998, FIRST piloted a smaller scale competition for 4<sup>th</sup>-9<sup>th</sup> grade students. The students build robots using the LEGO MINDSTORMS kit and program them to perform specific tasks during a timed tournament. The entire process takes 4-6 weeks and immerses students in a world of science, technology and FUN! For more information or to sign up for the Fall 1999 LEGO League, visit FIRST's web site at [www.usfirst.org](http://www.usfirst.org) or call them at 800-871-8326, extension 405.

# SEPTEMBER

1999



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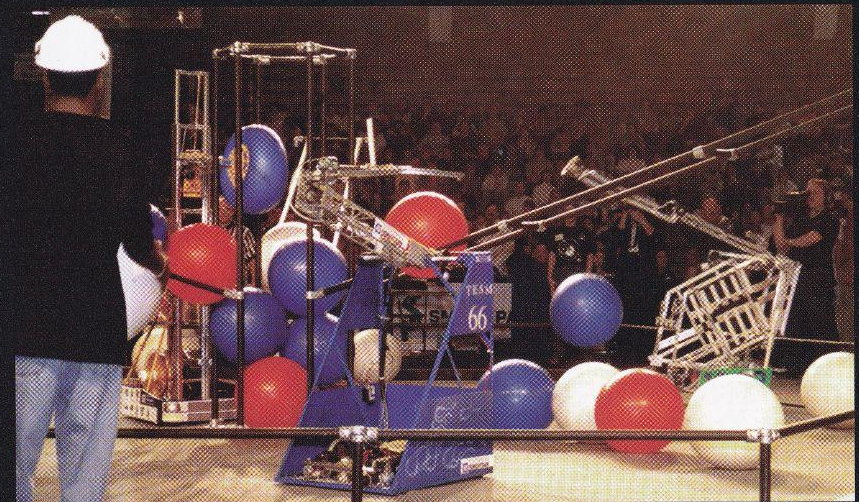
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	<p>1940 - Oldsmobile introduces "HydraMatic" automatic transmission, with clutchless self-shifting and a fluid coupling</p>		<p>1</p> <p>1979 - Pioneer 11 makes first fly-by of Saturn</p>	<p>2</p> <p>1910 - Blanche Scott is first woman pilot to fly solo</p>	<p>3</p>	<p>4</p>  <p>1951 - First transcontinental television broadcast</p>
<p>5</p> <p>1922 - Jimmy Doolittle: first to cross U.S. in less than 24 hrs</p>	<p>6</p> <p>Labor Day</p>	<p>7</p>	<p>8</p>	<p>9</p>	<p>10</p>	<p>11</p> <p>1928 - First bus trip across U.S. (5 days, 14 hrs)</p>
<p>12</p>	<p>13</p>  <p>1899 - pedestrian Henry Bliss is first auto fatality</p>	<p>14</p>	<p>15</p>	<p>16</p> <p>1908 - William C. Durant (Buick-owner) forms GM</p>	<p>17</p>	<p>18</p> <p>1880 - Gabriel Fahrenheit invents thermometer</p> <p>1956 - Garrett Morgan patents decurling comb</p>
<p>19</p>	<p>20</p> <p>Yom Kippur</p>	<p>21</p> <p>1893 - Frank and Charles Duryea drive 1st successful U.S. gas engine auto</p>	<p>22</p>	<p>23</p>	<p>24</p> <p>1960 - U.S.S. Enterprise launched: first nuclear powered aircraft carrier</p>	<p>25</p>
<p>26</p>	<p>27</p>	<p>28</p> <p>1924 - U.S. Army completes first round-the-world flight</p>	<p>29</p>	<p>30</p>		<p>1896 to 1943 - chemurgist George Washington Carver develops &gt;500 products derived from peanuts, sweet potatoes &amp; pecans; by 1940 peanuts are South's 2nd cash crop, after cotton</p>



The FAMS team 66 is a unique collection of high school seniors from 3 local Ypsilanti schools and employees from General Motors Powertrain. Everyone learned about teamwork on a new level, while trying to coordinate the different talents and schedules. This rookie team found FIRST a great experience while getting their “kicks on Route 66.”



# OCTOBER

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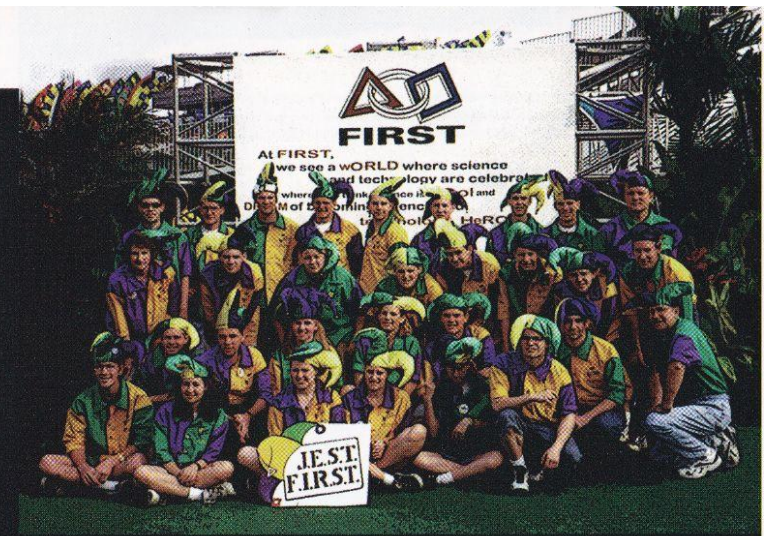
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					<p><b>1</b></p>  <p>1908 - Ford offers \$850 Model T: 20 hp, 45 mph maximum</p>	<p><b>2</b></p>
<p><b>3</b></p>	<p><b>4</b></p>	<p><b>5</b></p> <p>1926 - Route 66, a paved highway from Chicago to Los Angeles, is opened</p>	<p><b>6</b></p>	<p><b>7</b></p> <p>1999 - Science Olympiad Coaches Clinic, michael_kobe@ccmail.k12.hammond.in.us</p>	<p><b>8</b></p>	<p><b>9</b></p>
<p><b>10</b></p> <p>National Metric Day</p> <p>1899 - J.W. Butts patents luggage carrier</p>	<p><b>11</b></p> <p>Columbus Day</p>	<p><b>12</b></p>	<p><b>13</b></p>  <p>1831 - Slave Jo Anderson helps invent the grain harvester reaper</p>	<p><b>14</b></p> <p>1947 - Chuck Yeager breaks sound barrier flying rocket powered Bell X-1</p> <p>1968 - First live telecast from manned U.S. spacecraft</p>	<p><b>15</b></p> <p>1783 - First tethered hot air balloon flight manned by Francois Pilatre de Rozier</p>	<p><b>16</b></p>
<p><b>17</b></p> <p>1937 - Cadillac replaces its V12 with a V16</p>	<p><b>18</b></p>	<p><b>19</b></p>	<p><b>20</b></p>	<p><b>21</b></p>	<p><b>22</b></p>	<p><b>23</b></p>
<p><b>24</b></p> <p>1861 - First transcontinental telegraph line; Pony Express out of business (see 4/3)</p> <p>Halloween <b>31</b></p>	<p><b>25</b></p>	<p><b>26</b></p> <p>1825 - Erie Canal opens, linking Buffalo and NY City</p>	<p><b>27</b></p>	<p><b>28</b></p> <p>1914 - Jonas Salk's birthday: discovered polio vaccine</p> <p>1914 - George Eastman presents color photographic process</p>	<p><b>29</b></p>	<p><b>30</b></p> <p>1888 - Patent of first ballpoint pen</p>



**T**he Jenks Engineering and Science Team recruited financial support from the Jenks Public Schools Foundation, Public Service Co. of Oklahoma, Sabre International, Ferguson Pontiac-GMC, CITGO and others. They demonstrated their rookie robot at schools and museums, on TV, at business meetings, on driveways, in grocery stores — every possible way to spread the word that science and engineering are “jest plain fun!”

# NOVEMBER

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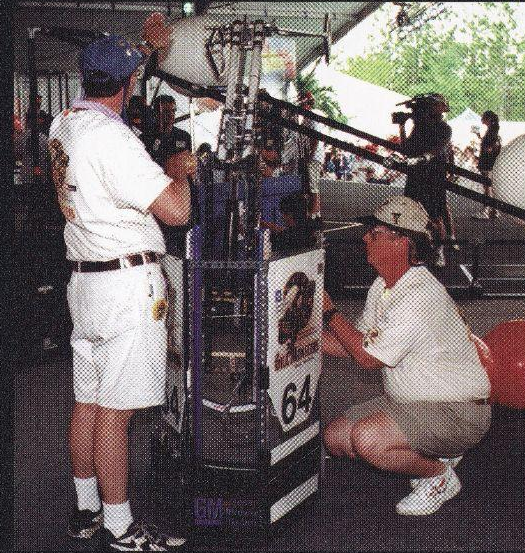


S M T W T F S

	<p><b>1</b></p>  <p>1957 - Mackinac Bridge links Michigan's Upper and Lower Peninsulas</p>	<p><b>2</b></p>	<p><b>3</b></p>	<p><b>4</b></p> <p>1902 - Packard patents H-pattern gearshift</p>	<p><b>5</b></p>	<p><b>6</b></p>
<p><b>7</b></p>	<p><b>8</b></p>	<p><b>9</b></p>	<p><b>10</b></p> <p>1891 - Granville Woods patents electric railway</p>	<p><b>11</b> <small>Veteran's Day</small></p>	<p><b>12</b></p>	<p><b>13</b></p> <p>1946 - 1st artificial snow made from natural cloud</p>
<p><b>14</b></p>	<p><b>15</b></p>	<p><b>16</b></p> <p>1901 - A.C. Bostwick drives first "mile-a-minute" car</p>	<p><b>17</b></p>	<p><b>18</b></p>  <p>1820 - U.S. Navy Captain Nathanial Palmer discovers Antarctica MIT Professor Woodie Flower's Birthday</p>	<p><b>19</b></p>	<p><b>20</b></p> <p>1980 - Paul MacReady's "Solar Challenger" makes its first test flight</p>
<p><b>21</b></p>	<p><b>22</b></p> <p>1935 - 1st commercial airplane crossing of Pacific</p>	<p><b>23</b></p> <p>1897 - Andrew J. Beard patents the "Jenny" automatic railroad coupler</p>	<p><b>24</b></p>	<p><b>25</b> <small>Thanksgiving Day</small></p>	<p><b>26</b></p>	<p><b>27</b></p>
<p><b>28</b></p> <p>1895 - Frank Duryea wins 1st auto race (52 miles/ 7.5 mph)</p>	<p><b>29</b></p>	<p><b>30</b></p>		<p>1901 - Steering wheel replaces tiller on Packard and Orient automobiles</p>		



The rookie Gila Monsters team competed in the Great Lakes, Southwest and National Competitions, placing 6th in the Southwest Regional. Their robot "Gil" has a direct drive propulsion system and a conveyer mechanism which collects up to 4 balls. The gear driven lift mechanism and the PVC gripper provide quick and frequent scoring. The Gila Monsters learned that by combining learning, fun, and competition, people grow and relationships are strengthened.





# DECEMBER

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S M T W T F S

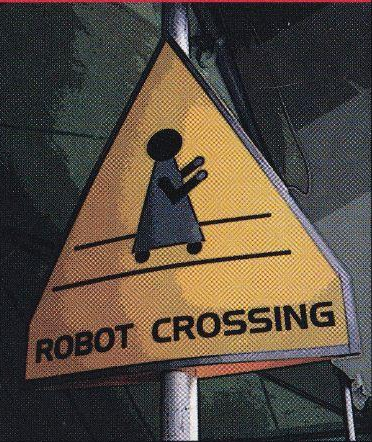
			<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b> Hanukkah
	1930 - Motorola introduces the first commercial car radio			1982 - Barney Clark receives first permanent artificial heart	1967 - Dr. Christian Bernard performs world's 1st heart transplant in South Africa	
<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>
1492 - Christopher Columbus discovers Hispaniola						1894 - Paris: first motor show
<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>
		1911 - Roald Amundsen leads first group to South Pole (see 1/18)		1979 - Stan Barrett breaks sound barrier in rocket powered land vehicle	1903 - Orville Wright: first powered heavier than air flight, Kitty Hawk, NC	
<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b> Christmas
	 1892 - A.T. Brown and G.F. Stillman patent pneumatic tire			1892 - Rudolf Diesel patents compression ignition engine		1642 - Isaac Newton's birthday: invented calculus, motion laws 1821 - Clara Barton's birthday: invented first aid on Civil War battlefield
<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>	
	 1822 - Louis Pasteur's birthday: invented way to purify milk		1908 - Otto Zachow & William Besserdich patent four-wheel auto brakes			

This poem captures the spirit of engineering and the “can-do” spirit that made America great. Whether America continues to be great will depend on whether our generation strives for excellence and passes the “can-do” spirit on to the next generation.

## It Can Be Done



The man who misses all the fun  
Is he who says, “It can’t be done.”  
In solemn pride he stands aloof  
And greets each venture with reproof.  
Had he the power he’d efface  
The history of the human race;  
We’d have no radio or motor cars,  
No streets lit by electric stars;  
No telegraph nor telephone,  
We’d linger in the age of stone.  
The world would sleep if things were run  
By men who say, “It can’t be done.”



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## About this calendar . . .

This calendar was produced by the Huskie Brigade FIRST team, a partnership of GM Powertrain and Pontiac Northern High School. We hope it will inspire people of all ages to set their sights higher, to strive to achieve, and to celebrate science & technology. We hope it will help you keep the FIRST spirit alive all year long.

To request additional copies, or for more information about the inventions and discoveries in this calendar, visit our web site at [www.huskiebrigade.com](http://www.huskiebrigade.com). We only had space to print the headlines; check out our web site for the “rest of the story”. We welcome your feedback and ideas for next year’s calendar!

Special thanks to:

- Dian Newbern & Jim Treadway, Graphic Designers with GM Communications Support Group
- the other FIRST teams who partnered with us on this project.

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