

# Survey and Statistics

What is Your  
Favorite Subject?

How Many  
Different  
Sports Do You  
Play Well?

How Many  
Times a Week  
Do You Eat  
Lunch?



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**Survey and Statistics**  
**Lesson 10**  
**Time Lines**

**Objectives:**

Students will create a time line on themselves.

**Materials Needed:**

Time line worksheet Lesson 10 or blank paper  
An example time line(see pages 35-38).

**Opening Activity:**

Show a time line of your own history or a famous person's. Explain each stage. An example time line of the lunar and planetary space explorations is included on pages 35-38.

**Activity:**

- 1) Explain that a time line shows the major events of a certain history. Brainstorm on some examples of major events in the student's lives. Some examples:
  - a) Moving to a new home
  - b) Divorce or marriage of parents or family members
  - c) Going to a new school
  - d) Any major health issues (illnesses, broken bones)
  - e) Any special events
- 2) Have the students jot down the major events of their own life.
- 3) The students should organize the events in sequential order beginning with the oldest event and ending with the most recent event.
- 4) The graph on the next page is divided into 30 sections. Each line can represent a certain time period of their lives. For example, every 6 months. The students should place the events on the appropriate lines.

**Closure:**

The time line on pages 35-38 represents lunar and planetary explorations from 1957 – 2006. Using a large sheet of butcher paper, cut out each event and glue them onto the butcher paper. Be sure the space the time equally. You should first put the years onto the butcher paper and then glue the events. It is suggested to leave about 2 inches per year.





### Time Line for Planetary and Lunar Exploration (Courtesy of NASA)

1.	October 1957	Sputnik 1 - 4 -	Earth Orbiter
2.	November 1957	Sputnik 2 - 3 -	Earth Orbiter
3.	February 1958	Explorer 1 - 1 -	Earth Orbiter
4.	March 1958	Vanguard 1 - 17 -	Earth Orbiter
5.	August 1958	Pioneer 0 - 17 -	Attempted Lunar Orbit (Launch Failure)
6.	September 1958	Luna 1958A - 23 -	Attempted Lunar Impact? (Launch Failure)
7.	October 1958	Pioneer 1 - 11 -	Attempted Lunar Orbit (Launch Failure)
8.	October 1958	Luna 1958B - 12 -	Attempted Lunar Impact? (Launch Failure)
9.	Nov 1958	Pioneer 2 - 8 -	Attempted Lunar Orbit (Launch Failure)
10.	Dec 1958	Luna 1958C - 4 -	Attempted Lunar Impact? (Launch Failure)
11.	Dec 1958	Pioneer 3 - 6 -	Attempted Lunar Flyby (Launch Failure)
12.	Jan 1959	Luna 1 - 2 -	Lunar Flyby (Attempted Lunar Impact?)
13.	March 1959	Pioneer 4 - 3 -	Lunar Flyby
14.	June 1959	Luna 1959A - 16 -	Attempted Lunar Impact? (Launch Failure)
15.	Sep 1959	Luna 2 - 12 -	Lunar Impact
16.	Oct 1959	Luna 3 - 4 -	Lunar Flyby
17.	Nov 1959	Pioneer P-3 - 26	Attempted Lunar Orbiter (Launch Failure)
18.	April 1960	Luna 1960A - 15 -	Attempted Lunar Flyby (Launch Failure)
19.	April 1960	Luna 1960B - 18 -	Attempted Lunar Flyby (Launch Failure)
20.	Sept 1960	Pioneer P-30 - 25	Attempted Lunar Orbiter (Launch Failure)
21.	Oct 1960	Marsnik 1 (Mars 1960A) - -	Attempted Mars Flyby (Launch Failure)
22.	Oct 1960	Marsnik 2 (Mars 1960B) - -	Attempted Mars Flyby (Launch Failure)
23.	Dec 1960	Pioneer P-31 - 15 -	Attempted Lunar Orbiter (Launch Failure)
24.	Feb 1961	Sputnik 7 - 4 -	Attempted Venus Impact
25.	Feb 1961	Venera 1 - 12 -	Venus Flyby (Contact Lost)
26.	Aug 1961	Ranger 1 - 23 -	Attempted Lunar Test Flight
27.	Nov 1961	Ranger 2 - 18 -	Attempted Lunar Test Flight
28.	Jan 1962	Ranger 3 - 26 -	Attempted Lunar Impact
29.	Apr 1962	Ranger 4 - 23 -	Lunar Impact
30.	Jul 1962	Mariner 1 - 22 -	Attempted Venus Flyby (Launch Failure)
31.	Aug 1962	Sputnik 23 - 25 -	Attempted Venus Flyby
32.	Aug 1962	Mariner 2 - 27 -	Venus Flyby
33.	Sep 1962	Sputnik 24 - 1	Attempted Venus Flyby
34.	Sep 1962	Sputnik 25 - 12 -	Attempted Venus Flyby
35.	Oct 1962	Ranger 5 - 18	Attempted Lunar Impact
36.	Oct 1962	Sputnik 29 - 24 -	Attempted Mars Flyby
37.	Nov 1962	Mars 1 - 1 -	Mars Flyby (Contact Lost)
38.	Nov 1962	Sputnik 31 - 4 -	Attempted Mars Flyby
39.	Jan 1963	Sputnik 33 - 4	Attempted Lunar Lander
40.	Feb 1963	Luna 1963B - 2 -	Attempted Lunar Lander (Launch Failure)
41.	Apr 1963	Luna 4 - 2 -	Attempted Lunar Lander
42.	Nov 1963	Cosmos 21 - 11 -	Attempted Venera Test Flight?
43.	Jan 1964	Ranger 6 - 30 -	Lunar Impact (Cameras Failed)
44.	Feb 1964	Venera 1964A - 19 -	Attempted Venus Flyby (Launch Failure)
45.	Mar 1964	Venera 1964B - 1 -	Attempted Venus Flyby (Launch Failure)
46.	Mar 1964	Luna 1964A - 21 -	Attempted Lunar Lander (Launch Failure)
47.	Mar 1964	Cosmos 27 - 27 -	Attempted Venus Flyby

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48.	Apr 1964	Zond 1 - 2 -	Venus Flyby (Contact Lost)
49.	Apr 1964	Luna 1964B - 20 -	Attempted Lunar Lander (Launch Failure)
50.	Jun 1964	Zond 1964A - 4 -	Attempted Lunar Lander (Launch Failure)
51.	Jul 1964	Ranger 7 - 28 -	Lunar Impact
52.	Nov 1964	Mariner 3 - 5 -	Attempted Mars Flyby
53.	Nov 1964	Mariner 4 - 28 -	Mars Flyby
54.	Nov 1964	Zond 2 - 30 -	Mars Flyby (Contact Lost)
55.	Feb 1965	Ranger 8 - 17 -	Lunar Impact
56.	Mar 1965	Cosmos 60 - 12 -	Attempted Lunar Lander
57.	Mar 1965	Ranger 9 - 21 -	Lunar Impact
58.	Apr 1965	Luna 1965A - 10 -	Attempted Lunar Lander? (Launch Failure)
59.	May 1965	Luna 5 - 9 -	Lunar Impact (Attempted Soft Landing)
60.	Jun 1965	Luna 6 - 8 -	Attempted Lunar Lander
61.	Jul 1965	Zond 3 - 18 -	Lunar Flyby
62.	Oct 1965	Luna 7 - 4 -	Lunar Impact (Attempted Soft Landing)
63.	Nov 1965	Venera 2 - 12 -	Venus Flyby (Contact Lost)
64.	Nov 1965	Venera 3 - 16 -	Venus Lander (Contact Lost)
65.	Nov 1965	Cosmos 96 - 23 -	Attempted Venus Lander?
66.	Nov 1965	Venera 1965A - 23 -	Attempted Venus Flyby (Launch Failure)
67.	Dec 1965	Luna 8 - 3 -	Lunar Impact (Attempted Soft Landing?)
68.	Jan 1966	Luna 9 - 31 -	Lunar Lander
69.	Mar 1966	Cosmos 111 - 1 -	Attempted Lunar Orbiter?
70.	Mar 1966	Luna 10 - 31 -	Lunar Orbiter
71.	Apr 1966	Luna 1966A - 30 -	Attempted Lunar Orbiter? (Launch Failure)
72.	May 1966	Surveyor 1 - 30 -	Lunar Lander
73.	Jul 1966	Explorer 33 - 1 -	Attempted Lunar Orbiter
74.	Aug 1966	Lunar Orbiter 1 - 10 -	Lunar Orbiter
75.	Aug 1966	Luna 11 - 24 -	Lunar Orbiter
76.	Sep 1966	Surveyor 2 - 20 -	Attempted Lunar Lander
77.	Oct 1966	Luna 12 - 22 -	Lunar Orbiter
78.	Nov 1966	Lunar Orbiter 2 - 6 -	Lunar Orbiter
79.	Dec 1966	Luna 13 - 21 -	Lunar Lander
80.	Feb 1967	Lunar Orbiter 3 - 4 -	Lunar Orbiter
81.	Apr 1967	Surveyor 3 - 17 -	Lunar Lander
82.	May 1967	Lunar Orbiter 4 - 8 -	Lunar Orbiter
83.	Jun 1967	Venera 4 - 12 -	Venus Probe
84.	Jun 1967	Mariner 5 - 14 -	Venus Flyby
85.	Jun 1967	Cosmos 167 - 17 -	Attempted Venus Probe
86.	Jul 1967	Surveyor 4 - 14	Attempted Lunar Lander
87.	Jul 1967	Explorer 35 (IMP-E) - -	Lunar Orbiter
88.	Aug 1967	Lunar Orbiter 5 - 1 -	Lunar Orbiter
89.	Sep 1967	Surveyor 5 - 8 -	Lunar Lander
90.	Sep 1967	Zond 1967A - 28 -	Attempted Lunar Test Flight (Launch Failure)
91.	Nov 1967	Surveyor 6 - 7 -	Lunar Lander
92.	Nov 1967	Zond 1967B - 22 -	Attempted Lunar Test Flight (Launch Failure)
93.	Jan 1968	Surveyor 7 - 7 -	Lunar Lander
94.	Feb 1968	Luna 1968A - 7 -	Attempted Lunar Orbiter (Launch Failure)
95.	Mar 1968	Zond 4 - 2 -	Test Flight
96.	Apr 1968	Luna 14 - 7 -	Lunar Orbiter
97.	Apr 1968	Zond 1968A - 23 -	Attempted Lunar Test Flight? (Launch Failure)
98.	Sep 1968	Zond 5 - 15 -	Lunar Flyby and Return to Earth
99.	Nov 1968	Zond 6 - 10 -	Lunar Flyby and Return to Earth
100.	Dec 1968	Apollo 8 - 21 -	Manned Lunar Orbiter
101.	Jan 1969	Venera 5 - 5 -	Venus Probe
102.	Jan 1969	Venera 6 - 10 -	Venus Probe
103.	Jan 1969	Zond 1969A - 20 -	Attempted Lunar Flyby and Return (Launch Failure)

104. Feb 1969	Luna 1969A - 19 -	Attempted Lunar Rover? (Launch Failure)
105. Feb 1969	Zond L1S-1 - 21 -	Attempted Lunar Orbiter (Launch Failure)
106. Feb 1969	Mariner 6 - 25 -	Mars Flyby
107. Mar 1969	Mariner 7 - 27 -	Mars Flyby
108. Mar 1969	Mars 1969A - 27 -	Attempted Mars Lander? (Launch Failure)
109. Apr 1969	Mars 1969B - 2	Attempted Mars Lander? (Launch Failure)
110. Apr 1969	Luna 1969B - 15 -	Attempted Lunar Sample Return? (Launch Failure)
111. May 1969	Apollo 10 - 18 -	Manned Lunar Orbiter
112. Jun 1969	Luna 1969C - 14 -	Attempted Lunar Sample Return? (Launch Failure)
113. Jul 1969	Zond L1S-2 - 3	Attempted Lunar Orbiter (Launch Failure)
114. Jul 1969	Luna 15 - 13	Lunar Orbiter (Attempted Lunar Lander?)
115. Jul 1969	Apollo 11 - 16	Manned Lunar Landing
116. Aug 1969	Zond 7 - 7 -	Lunar Flyby and Return to Earth
117. Sep 1969	Cosmos 300 - 23 -	Attempted Lunar Sample Return?
118. Oct 1969	Cosmos 305 - 22 -	Attempted Lunar Sample Return?
119. Nov 1969	Apollo 12 - 14 -	Manned Lunar Landing
120. Feb 1970	Luna 1970A - 6 -	Attempted Lunar Sample Return? (Launch Failure)
121. Feb 1970	Luna 1970B - 19 -	Attempted Lunar Orbiter? (Launch Failure)
122. Apr 1970	Apollo 13 - 11 -	Manned Lunar Mission (Landing Aborted)
123. Aug 1970	Venera 7 - 17 -	Venus Lander
124. Aug 1970	Cosmos 359 - 22 -	Attempted Venus Probe
125. Sep 1970	Luna 16 - 12 -	Lunar Sample Return
126. Oct 1970	Zond 8 - 20 -	Lunar Flyby and Return to Earth
127. Nov 1970	Luna 17/Lunokhod 1 - 10 -	Lunar Rover
128. Jan 1971	Apollo 14 - 31 -	Manned Lunar Landing
129. May 1971	Mariner 8 - 8 -	Attempted Mars Flyby (Launch Failure)
130. May 1971	Cosmos 419 - 10 -	Attempted Mars Orbiter/Lander
131. May 1971	Mars 2 - 19 -	Mars Orbiter/ Attempted Lander
132. May 1971	Mars 3 - 28 -	Mars Orbiter/ Lander
133. May 1971	Mariner 9 - 30 -	Mars Orbiter
134. Jul 1971	Apollo 15 - 26 -	Manned Lunar Landing
135. Sep 1971	Luna 18 - 2 -	Attempted Lunar Sample Return
136. Sep 1971	Luna 19 - 28 -	Lunar Orbiter
137. Feb 1972	Luna 20 - 14 -	Lunar Sample Return
138. Mar 1972	Pioneer 10 - 3 -	Jupiter Flyby
139. Mar 1972	Venera 8 - 27 -	Venus Probe
140. Mar 1972	Cosmos 482 - 31 -	Attempted Venus Probe
141. Apr 1972	Apollo 16 - 16 -	Lunar Manned Landing
142. Nov 1972	Soyuz L3 - 23 -	Attempted Lunar Orbiter (Launch Failure)
143. Dec 1972	Apollo 17 - 7 -	Lunar Manned Landing
144. Jan 1973	Luna 21/Lunokhod 2 - 8 -	Lunar Rover
145. Apr 1973	Pioneer 11 - 5 -	Jupiter/Saturn Flyby
146. Jun 1973	Explorer 49 (RAE-B) - 10 -	Lunar Orbiter/Radio Astronomy
147. Jul 1973	Mars 4 - 21 -	Mars Flyby (Attempted Mars Orbiter)
148. Jul 1973	Mars 5 - 25 -	Mars Orbiter
149. Aug 1973	Mars 6 - 5 -	Mars Lander (Contact Lost)
150. Aug 1973	Mars 7 - 9 -	Mars Flyby (Attempted Mars Lander)
151. Nov 1973	Mariner 10 - 4 -	Venus/Mercury Flybys
152. Jun 1974	Luna 22 - 2 -	Lunar Orbiter
153. Oct 1974	Luna 23 - 28 -	Attempted Lunar Sample Return
154. Jun 1975	Venera 9 - 8 -	Venus Orbiter and Lander
155. Jun 1975	Venera 10 - 14	Venus Orbiter and Lander
156. Aug 1975	Viking 1 - 20 -	Mars Orbiter and Lander
157. Sep 1975	Viking 2 - 9 -	Mars Orbiter and Lander
158. Oct 1975	Luna 1975A - 16 -	Attempted Lunar Sample Return?
159. Aug 1976	Luna 24 - 9 -	Lunar Sample Return

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160.	Aug 1977	Voyager 2 - 20 -	Jupiter/Saturn/Uranus/Neptune Flyby
161.	Sep 1977	Voyager 1 - 5 -	Jupiter/Saturn Flyby
162.	May 1978	Pioneer Venus 1 - 20 -	Venus Orbiter
163.	Aug 1978	Pioneer Venus 2 - 8 -	Venus Probes
164.	Aug 1978	ISEE-3/ICE - 12 -	Comet Giacobini-Zinner and Halley Flybys
165.	Sep 1978	Venera 11 - 9 -	Venus Orbiter and Lander
166.	Sep 1978	Venera 12 - 14 -	Venus Orbiter and Lander
167.	Oct 1981	Venera 13 - 30 -	Venus Orbiter and Lander
168.	Nov 1981	Venera 14 - 4 -	Venus Orbiter and Lander
169.	Jun 1983	Venera 15 - 2 -	Venus Orbiter
170.	Jun 1983	Venera 16 - 7 -	Venus Orbiter
171.	Dec 1984	Vega 1 - 15 -	Venus Lander and Balloon/Comet Halley Flyby
172.	Dec 1984	Vega 2 - 21 -	Venus Lander and Balloon/Comet Halley Flyby
173.	Jan 1985	Sakigake - 7 -	Comet Halley Flyby
174.	Jul 1985	Giotto - 2 -	Comet Halley Flyby
175.	Aug 1985	Suisei (Planet-A) - 18 -	Comet Halley Flyby
176.	Jul 1988	Phobos 1 - 7 -	Attempted Mars Orbiter/Phobos Landers
177.	Jul 1988	Phobos 2 - 12 -	Mars Orbiter/Attempted Phobos Landers
178.	May 1989	Magellan - 4 -	Venus Orbiter
179.	Oct 1989	Galileo - 18 -	Jupiter Orbiter/Probe
180.	Jan 1990	Hiten - 24 -	Lunar Flyby and Orbiter
181.	Oct 1990	Ulysses - 06 -	Jupiter Flyby and Solar Polar Orbiter
182.	Sep 1992	Mars Observer - 25 -	Attempted Mars Orbiter (Contact Lost)
183.	Jan 1994	Clementine - 25 -	Lunar Orbiter/Attempted Asteroid Flyby
184.	Feb 1996	NEAR - 17 -	Asteroid Eros Orbiter
185.	Nov 1996	Mars Global Surveyor - 07 -	Mars Orbiter
186.	Nov 1996	Mars 96 - 16 -	Attempted Mars Orbiter/Landers
187.	Dec 1996	Mars Pathfinder - 04 -	Mars Lander and Rover
188.	15 Oct 1997	Cassini - -	Saturn Orbiter
189.	Oct 1997	Huygens - 15 -	Titan Probe
190.	Jan 1998	Lunar Prospector - 7 -	Lunar Orbiter
191.	Aug 1998	Planet-B - 6 -	Mars Orbiter
192.	Oct 1998	Deep Space 1 (DS1) - -	Asteroid and/or Comet Flyby
193.	Dec 1998	Mars Climate Orbiter - -	Mars Orbiter
194.	Jan 1999	Mars Polar Lander - 3 -	Mars Lander
195.	Jan 1999	Deep Space 2 (DS2) - 3 -	Mars Penetrator
196.	Feb 1999	Stardust - 6 -	Comet Coma Sample Return
197.	Feb/Mar 1999	Lunar-A - -	Lunar Orbiter and Penetrators
198.	Jan 2001	Genesis - -	Solar Wind Sample Return
199.	Mar 2001	Mars Surveyor 2001	Orbiter - 7 - Mars Orbiter
200.	Apr 2001	Mars Surveyor 2001	Lander - 5 - Mars Lander/Rover
201.	Jan 2002	Muses-C - -	Asteroid Lander and Sample Return
202.	Jul 2002	CONTOUR - -	Fly-by of three Comet Nuclei
203.	2002	Pluto-Kuiper Express - -	Proposed Flyby of Pluto and Kuiper Belt
204.	Jan 2003	Rosetta - 23 -	Comet Orbiter and Lander
205.	May 2003	Champlion/DS4 - -	Comet Sample Return
206.	May 2003	Mars Surveyor 2003 - -	Mars Orbiter and Lander
207.	2003	Europa Orbiter - -	Proposed Europa Orbiter
208.	2003	Selene - -	Lunar Orbiter
209.	July 2005	Mars Surveyor 2005 - -	Mars Orbiter and Lander
210.	2006	Mercury Orbiter - -	Mercury Orbiter