1
00:00:11,749 --> 00:00:02,230
here's a look at some of the top nasa

2
00:00:16,310 --> 00:00:14,390
with 2014 marking the 45th anniversary

3
00:00:18,710 --> 00:00:16,320
of neil armstrong's historic first step

4
00:00:20,710 --> 00:00:18,720
on the moon nasa outlined plans for

5
00:00:23,910 --> 00:00:20,720
america's next giant leap in space

6
00:00:26,150 --> 00:00:23,920
exploration to send astronauts to mars

7
00:00:27,990 --> 00:00:26,160
to prepare for that leap nasa stepped up

8
00:00:29,750 --> 00:00:28,000
development in 2014 of many

9
00:00:31,029 --> 00:00:29,760
game-changing technologies and

10
00:00:32,870 --> 00:00:31,039
capabilities

11
00:00:35,030 --> 00:00:32,880
the agency worked on solar electric

12
00:00:37,030 --> 00:00:35,040
propulsion technology which could enable

13
00:00:38,310 --> 00:00:37,040

cost-effective trips to deep space

14
00:00:42,630 --> 00:00:38,320
destinations

15
00:00:44,549 --> 00:00:42,640
mission in the 2020s to an asteroid

16
00:00:47,270 --> 00:00:44,559
placed into orbit around the moon by a

17
00:00:49,990 --> 00:00:47,280
robotic spacecraft as part of nasa's

18
00:00:51,990 --> 00:00:50,000
asteroid redirect mission nasa plans to

19
00:00:54,229 --> 00:00:52,000
announce more specific details in

20
00:00:57,029 --> 00:00:54,239
december about potential candidate

21
00:00:59,830 --> 00:00:57,039
asteroids and the design of the mission

22
00:01:01,670 --> 00:00:59,840
the successful first flight test in june

23
00:01:04,229 --> 00:01:01,680
of the saucer-shaped low-density

24
00:01:06,390 --> 00:01:04,239
supersonic decelerator demonstrated an

25
00:01:08,630 --> 00:01:06,400
inflatable system that could be used to

26
00:01:12,550 --> 00:01:08,640
land heavier and larger payloads than

27
00:01:14,149 --> 00:01:12,560
ever before on planets with atmospheres

28
00:01:16,550 --> 00:01:14,159
the international space station

29
00:01:18,230 --> 00:01:16,560
continued its role as a unique platform

30
00:01:20,550 --> 00:01:18,240
off the earth where astronauts are

31
00:01:23,030 --> 00:01:20,560
working for the earth with biomedical

32
00:01:25,749 --> 00:01:23,040
research and with payloads delivered by

33
00:01:28,390 --> 00:01:25,759
commercial partners spacex and orbital

34
00:01:30,950 --> 00:01:28,400
sciences corporation such as the first

35
00:01:33,590 --> 00:01:30,960
3d printer in space which could be used

36
00:01:35,429 --> 00:01:33,600
to manufacture parts in space

37
00:01:36,710 --> 00:01:35,439
and the addition of an earth science

38
00:01:39,030 --> 00:01:36,720

instrument to the space station's

39
00:01:41,590 --> 00:01:39,040
exterior to monitor ocean surface wind

40
00:01:43,990 --> 00:01:41,600
speed and direction for use in weather

41
00:01:46,870 --> 00:01:44,000
forecasting and for monitoring large

42
00:01:49,429 --> 00:01:46,880
scale changes in earth's climate

43
00:01:52,310 --> 00:01:49,439
in september nasa selected two u.s

44
00:01:54,389 --> 00:01:52,320
commercial providers boeing and spacex

45
00:01:56,870 --> 00:01:54,399
to develop the systems to transport

46
00:01:59,350 --> 00:01:56,880
astronauts from u.s soil to and from the

47
00:02:01,350 --> 00:01:59,360
space station with a goal of ending the

48
00:02:03,749 --> 00:02:01,360
nation's sole reliance on russia in

49
00:02:05,990 --> 00:02:03,759
2017.

50
00:02:08,309 --> 00:02:06,000
development of the rocket and spacecraft

51
00:02:11,270 --> 00:02:08,319
designed to carry astronauts on nasa's

52
00:02:13,350 --> 00:02:11,280
journey to mars progressed in 2014.

53
00:02:15,190 --> 00:02:13,360
the green light was given in august to

54
00:02:17,430 --> 00:02:15,200
start building the space launch system

55
00:02:19,750 --> 00:02:17,440
heavy lift rocket following successful

56
00:02:21,830 --> 00:02:19,760
completion of a key review

57
00:02:24,710 --> 00:02:21,840
new manufacturing facilities began

58
00:02:26,710 --> 00:02:24,720
testing operations and prototypes built

59
00:02:29,030 --> 00:02:26,720
with new more lightweight composite

60
00:02:31,190 --> 00:02:29,040
materials were evaluated

61
00:02:33,190 --> 00:02:31,200
in november the fully assembled orion

62
00:02:35,110 --> 00:02:33,200
spacecraft was moved to its launch pad

63
00:02:37,350 --> 00:02:35,120

at cape canaveral air force station in

64
00:02:39,670 --> 00:02:37,360
florida for its maiden flight test in

65
00:02:41,990 --> 00:02:39,680
december

66
00:02:44,390 --> 00:02:42,000
nasa's fleet of mars robotic explorers

67
00:02:46,150 --> 00:02:44,400
continued its work in 2014.

68
00:02:48,150 --> 00:02:46,160
the mars atmosphere and volatile

69
00:02:50,309 --> 00:02:48,160
evolution spacecraft arrived at the red

70
00:02:52,550 --> 00:02:50,319
planet in september as the newest member

71
00:02:54,630 --> 00:02:52,560
of the fleet maven is on a mission to

72
00:02:57,110 --> 00:02:54,640
investigate how the past loss of

73
00:02:58,790 --> 00:02:57,120
atmospheric gases impacted the martian

74
00:03:00,790 --> 00:02:58,800
climate through time

75
00:03:02,869 --> 00:03:00,800
samples from the first rock drilled at

76
00:03:05,430 --> 00:03:02,879
the base of mount sharp by the curiosity

77
00:03:07,509 --> 00:03:05,440
rover provided the first confirmation of

78
00:03:09,910 --> 00:03:07,519
a mineral mapped from orbit by the mars

79
00:03:11,589 --> 00:03:09,920
reconnaissance orbiter and the science

80
00:03:14,149 --> 00:03:11,599
instruments were selected for the mars

81
00:03:17,190 --> 00:03:14,159
2020 rover the next robotic explorer

82
00:03:18,949 --> 00:03:17,200
nasa will send to mars in 2020 it will

83
00:03:21,430 --> 00:03:18,959
conduct unprecedented science and

84
00:03:23,509 --> 00:03:21,440
exploration technology investigations

85
00:03:25,589 --> 00:03:23,519
including potential habitability of the

86
00:03:29,030 --> 00:03:25,599
current environment and directly

87
00:03:30,869 --> 00:03:29,040
searching for signs of past life

88
00:03:34,070 --> 00:03:30,879

nasa's role in studying and protecting

89
00:03:36,470 --> 00:03:34,080
our home planet has never been stronger

90
00:03:39,350 --> 00:03:36,480
nasa administrator charlie bolden called

91
00:03:41,190 --> 00:03:39,360
2014 the year of earth for nasa with the

92
00:03:43,910 --> 00:03:41,200
agency planning to launch five earth

93
00:03:45,430 --> 00:03:43,920
science missions within a year's time

94
00:03:47,030 --> 00:03:45,440
the first images from the global

95
00:03:48,710 --> 00:03:47,040
precipitation measurement mission

96
00:03:51,270 --> 00:03:48,720
launched in february of an

97
00:03:52,710 --> 00:03:51,280
extra-tropical cyclone illustrated the

98
00:03:55,190 --> 00:03:52,720
mission's ability to provide

99
00:03:57,110 --> 00:03:55,200
next-generation detailed observations of

100
00:03:59,750 --> 00:03:57,120
global precipitation

101
00:04:02,229 --> 00:03:59,760
in april nasa celebrated earth day with

102
00:04:04,470 --> 00:04:02,239
a hugely popular online global selfie

103
00:04:06,949 --> 00:04:04,480
postings from around the world to help

104
00:04:08,949 --> 00:04:06,959
promote environmental awareness

105
00:04:11,030 --> 00:04:08,959
and the test data from the orbiting

106
00:04:13,429 --> 00:04:11,040
carbon observatory 2 mission following

107
00:04:16,229 --> 00:04:13,439
its launch in july confirmed the health

108
00:04:18,150 --> 00:04:16,239
of the spacecraft's instruments oco-2

109
00:04:20,629 --> 00:04:18,160
will help track our impact on the amount

110
00:04:22,469 --> 00:04:20,639
of carbon dioxide in the atmosphere and

111
00:04:25,430 --> 00:04:22,479
the various human-made and natural

112
00:04:28,150 --> 00:04:25,440
sources of co2

113
00:04:30,870 --> 00:04:28,160

2014 included new discoveries new

114
00:04:33,830 --> 00:04:30,880
intriguing mysteries and new reasons to

115
00:04:36,070 --> 00:04:33,840
explore our solar system and beyond in

116
00:04:38,469 --> 00:04:36,080
november the european space agency's

117
00:04:40,950 --> 00:04:38,479
rosetta spacecraft which has three nasa

118
00:04:43,110 --> 00:04:40,960
instruments on board successfully landed

119
00:04:45,670 --> 00:04:43,120
its file robotic probe on the surface of

120
00:04:48,070 --> 00:04:45,680
a speeding comet the first ever soft

121
00:04:50,150 --> 00:04:48,080
landing of a spacecraft on a comet

122
00:04:52,230 --> 00:04:50,160
and nasa's kepler space telescope

123
00:04:55,030 --> 00:04:52,240
discovered a new earth-sized planet in

124
00:04:57,990 --> 00:04:55,040
april about 500 light years from us that

125
00:04:59,670 --> 00:04:58,000
also may have liquid water

126
00:05:01,590 --> 00:04:59,680
the agency's premier aeronautics

127
00:05:04,070 --> 00:05:01,600
research centers continue to work on

128
00:05:06,710 --> 00:05:04,080
solutions to help improve the safety

129
00:05:09,510 --> 00:05:06,720
efficiency and comfort of air travel

130
00:05:10,870 --> 00:05:09,520
while reminding people nasa is with you

131
00:05:13,029 --> 00:05:10,880
when you fly

132
00:05:15,430 --> 00:05:13,039
a demonstration in november featured a

133
00:05:17,189 --> 00:05:15,440
wing that can change shape and flight

134
00:05:19,029 --> 00:05:17,199
this could lead to technology for

135
00:05:22,390 --> 00:05:19,039
quieter and more fuel-efficient

136
00:05:23,990 --> 00:05:22,400
airliners in september nasa co-hosted an

137
00:05:26,550 --> 00:05:24,000
event that showcased two new

138
00:05:28,710 --> 00:05:26,560

technologies being evaluated that could

139
00:05:30,870 --> 00:05:28,720
improve takeoff time predictability of

140
00:05:32,870 --> 00:05:30,880
flights and help flight dispatchers

141
00:05:41,350 --> 00:05:32,880
choose more efficient routes around bad

142
00:05:46,629 --> 00:05:44,230
and in may nasa celebrated the renaming

143
00:05:48,790 --> 00:05:46,639
of its dryden flight research center to

144
00:05:51,430 --> 00:05:48,800
the neil a armstrong flight research

145
00:05:55,430 --> 00:05:51,440
center and designated hugh dryden's name

146
00:06:00,150 --> 00:05:57,110
that's a look back at some of the top

147
00:06:05,029 --> 00:06:00,160
nasa stories of 2014. keep up with us in