1
00:00:29,429 --> 00:00:26,310
what is productivity

2
00:00:30,550 --> 00:00:29,439
well in simplest terms it's finding a

3
00:00:34,069 --> 00:00:30,560
better way

4
00:00:35,830 --> 00:00:34,079
a quicker way a less costly way to get

5
00:00:38,790 --> 00:00:35,840
the job done

6
00:00:41,030 --> 00:00:38,800
or it's making changes both big and

7
00:00:44,389 --> 00:00:41,040
small that will improve your work

8
00:00:47,270 --> 00:00:44,399
environment and boost your morale like

9
00:00:49,750 --> 00:00:47,280
better lighting or an upgraded computer

10
00:00:51,750 --> 00:00:49,760
it's working smarter

11
00:00:53,350 --> 00:00:51,760
how do employees feel about being

12
00:00:55,510 --> 00:00:53,360
involved in pets

13
00:00:58,470 --> 00:00:55,520

well we asked some members about their

14
00:00:59,990 --> 00:00:58,480
participation and this is what they said

15
00:01:02,470 --> 00:01:00,000
it was a nice

16
00:01:04,390 --> 00:01:02,480
learning environment for me

17
00:01:06,230 --> 00:01:04,400
through the pet team i was able to learn

18
00:01:07,830 --> 00:01:06,240
how to solve problems with the other

19
00:01:10,390 --> 00:01:07,840
people in my department and i really

20
00:01:12,789 --> 00:01:10,400
enjoy the group process

21
00:01:15,350 --> 00:01:12,799
the benefit i get from the pet

22
00:01:16,789 --> 00:01:15,360
is more a feeling when when you when

23
00:01:19,030 --> 00:01:16,799
you're at the meeting

24
00:01:20,789 --> 00:01:19,040
and you're talking about

25
00:01:22,390 --> 00:01:20,799
the project or whatever you get this

26
00:01:23,749 --> 00:01:22,400
this feeling like you're really doing

27
00:01:25,990 --> 00:01:23,759
something

28
00:01:27,429 --> 00:01:26,000
it's made me more aware of the overall

29
00:01:34,870 --> 00:01:27,439
picture instead of just the little part

30
00:01:39,990 --> 00:01:36,469
launched high above the clouds and

31
00:01:42,230 --> 00:01:40,000
filtering atmosphere on february 14 1980

32
00:01:43,910 --> 00:01:42,240
the solar maximum observatory is a

33
00:01:45,590 --> 00:01:43,920
source of very detailed information

34
00:01:47,190 --> 00:01:45,600
about the sun

35
00:01:49,590 --> 00:01:47,200
for the first nine months of the planned

36
00:01:52,069 --> 00:01:49,600
two-year mission the satellite collected

37
00:01:53,830 --> 00:01:52,079
spectacular new data

38
00:01:55,830 --> 00:01:53,840

hundreds of scientists gathered at

39
00:01:57,429 --> 00:01:55,840
nasa's goddard space flight center in

40
00:01:59,749 --> 00:01:57,439
greenbelt maryland and had ground

41
00:02:02,069 --> 00:01:59,759
observatories around the world to study

42
00:02:04,230 --> 00:02:02,079
the sun and solar flares

43
00:02:06,950 --> 00:02:04,240
scientists made numerous discoveries and

44
00:02:09,990 --> 00:02:06,960
raised many new questions about the sun

45
00:02:12,710 --> 00:02:10,000
then in late 1980 three fuses failed in

46
00:02:14,150 --> 00:02:12,720
the attitude control subsystem module

47
00:02:16,070 --> 00:02:14,160
this meant that the satellite could no

48
00:02:18,710 --> 00:02:16,080
longer point precisely at the

49
00:02:20,390 --> 00:02:18,720
observation areas on the sun

50
00:02:22,550 --> 00:02:20,400
well sepi what was the influence of

51
00:02:24,470 --> 00:02:22,560
apollo and shuttle on your program at

52
00:02:26,630 --> 00:02:24,480
that time

53
00:02:28,630 --> 00:02:26,640
i think we can best answer that question

54
00:02:30,949 --> 00:02:28,640
if we walk up now to the shuttle bay

55
00:02:32,790 --> 00:02:30,959
trainer and take a look at our latest

56
00:02:49,589 --> 00:02:32,800
mms spacecraft that's just been

57
00:02:54,229 --> 00:02:52,070
now that we're up here dutch i think

58
00:02:55,830 --> 00:02:54,239
i can better explain the impact and the

59
00:02:57,830 --> 00:02:55,840
influences that both the apollo and the

60
00:02:59,670 --> 00:02:57,840
shuttle program had on our spacecraft

61
00:03:01,509 --> 00:02:59,680
architecture

62
00:03:04,070 --> 00:03:01,519
perhaps the most single

63
00:03:06,149 --> 00:03:04,080

critical dilemma that was posed to us in

64
00:03:08,710 --> 00:03:06,159
the early 70s

65
00:03:10,949 --> 00:03:08,720
was the dilemma of having to deal

66
00:03:13,350 --> 00:03:10,959
with how to shuttle eyes

67
00:03:19,030 --> 00:03:13,360
and make our spacecraft systems

68
00:03:23,910 --> 00:03:21,110
servicing and repairing unmanned

69
00:03:26,550 --> 00:03:23,920
satellites at space station

70
00:03:28,949 --> 00:03:26,560
robots constructing colonies for men and

71
00:03:32,070 --> 00:03:28,959
women to live and work together on the

72
00:03:35,030 --> 00:03:32,080
moon and the planet mars

73
00:03:38,149 --> 00:03:35,040
these are bold complex space missions

74
00:03:41,670 --> 00:03:38,159
being considered by nasa for the 1990s

75
00:03:43,589 --> 00:03:41,680
and well into the 21st century

76
00:03:44,789 --> 00:03:43,599
to support these spellbinding space

77
00:03:47,670 --> 00:03:44,799
adventures

78
00:04:03,110 --> 00:03:47,680
nasa is directing an aggressive program

79
00:04:07,350 --> 00:04:05,429
one of the key nasa centers developing

80
00:04:09,910 --> 00:04:07,360
state-of-the-art robotics for space

81
00:04:12,149 --> 00:04:09,920
station freedom is nasa's goddard space

82
00:04:13,589 --> 00:04:12,159
flight center just outside of washington

83
00:04:15,270 --> 00:04:13,599
dc

84
00:04:18,069 --> 00:04:15,280
goddard will develop the flight tele

85
00:04:21,509 --> 00:04:18,079
robotics servicer called fts for short

86
00:04:26,070 --> 00:04:23,830
plans call for the fts to assist the

87
00:04:27,990 --> 00:04:26,080
astronauts in the assembly of space

88
00:04:30,629 --> 00:04:28,000

station freedom

89
00:04:32,950 --> 00:04:30,639
while fts will be limited initially to

90
00:04:33,990 --> 00:04:32,960
spacecraft servicing and maintenance

91
00:04:36,390 --> 00:04:34,000
tasks

92
00:04:39,430 --> 00:04:36,400
ultimately it will be able to reach

93
00:04:41,749 --> 00:04:39,440
retrieve and service unmanned satellites

94
00:04:50,150 --> 00:04:41,759
in an unprecedented manner saving

95
00:04:54,390 --> 00:04:52,230
this slide involves

96
00:04:56,230 --> 00:04:54,400
depicts case study four

97
00:04:57,990 --> 00:04:56,240
which was a lunar outpost to mars

98
00:05:00,310 --> 00:04:58,000
evolutionary strategy

99
00:05:03,909 --> 00:05:00,320
that emphasized using the moon

100
00:05:05,590 --> 00:05:03,919
as testing it as a stepping stone

101
00:05:07,350 --> 00:05:05,600
in a place that's only three days from

102
00:05:09,510 --> 00:05:07,360
earth and in terms of learning the

103
00:05:11,430 --> 00:05:09,520
experience and

104
00:05:13,110 --> 00:05:11,440
of how to live and learn to work in an

105
00:05:15,590 --> 00:05:13,120
extraterrestrial environment and develop

106
00:05:17,670 --> 00:05:15,600
that as well as develop the leverage

107
00:05:19,670 --> 00:05:17,680
of extraterrestrial resources the key

108
00:05:21,430 --> 00:05:19,680
thing we looked at here was to what

109
00:05:23,510 --> 00:05:21,440
degree with the resources and the

110
00:05:25,189 --> 00:05:23,520
experience base of the moon give the

111
00:05:27,670 --> 00:05:25,199
capability and leverage your way to

112
00:05:28,950 --> 00:05:27,680
explore onto mars in contrast to case

113
00:05:31,350 --> 00:05:28,960

study two which is the direct

114
00:05:33,430 --> 00:05:31,360
exploration of mars from earth i think

115
00:05:35,830 --> 00:05:33,440
it's the first time we've set up a

116
00:05:37,350 --> 00:05:35,840
contrasting case on a system i get

117
00:05:38,790 --> 00:05:37,360
excited when i hear john talk about

118
00:05:40,390 --> 00:05:38,800
building the ships

119
00:05:43,350 --> 00:05:40,400
because that's really what the program's

120
00:05:44,870 --> 00:05:43,360
all about it's about exploration

121
00:05:56,390 --> 00:05:44,880
and consequently i'm very excited about

122
00:06:01,430 --> 00:05:59,029
nasa update brought to you by internal

123
00:06:02,710 --> 00:06:01,440
communications at nasa headquarters in

124
00:06:06,469 --> 00:06:02,720
washington

125
00:06:09,110 --> 00:06:06,479
hello and welcome to nasa update after

126
00:06:11,830 --> 00:06:09,120
having to delay launch for 24 hours

127
00:06:14,390 --> 00:06:11,840
because of sheer winds at high altitudes

128
00:06:17,430 --> 00:06:14,400
the space shuttle atlantis lifted off

129
00:06:20,550 --> 00:06:17,440
pad 39b at kennedy space center december

130
00:06:23,029 --> 00:06:20,560
2nd just one minute before its launch

131
00:06:26,070 --> 00:06:23,039
window would have closed and then after

132
00:06:28,870 --> 00:06:26,080
a classified four day nine hour and five

133
00:06:32,469 --> 00:06:28,880
minute mission the atlantis glided in

134
00:06:35,350 --> 00:06:32,479
for touchdown on runway one seven at

135
00:06:39,430 --> 00:06:35,360
edwards air force base in california at

136
00:06:41,590 --> 00:06:39,440
6 36 pm eastern time tuesday

137
00:06:44,469 --> 00:06:41,600
atlantis's commander hoot gibson and

138
00:06:46,710 --> 00:06:44,479

pilot guy gardner tested the shuttle's

139
00:06:52,150 --> 00:06:46,720
newly designed brakes and nose wheel

140
00:06:57,909 --> 00:06:54,710
and finally on december 5th nasa

141
00:07:00,230 --> 00:06:57,919
celebrated pioneer venus 2's 10th year

142
00:07:02,150 --> 00:07:00,240
circling the planet venus

143
00:07:05,110 --> 00:07:02,160
at nasa's ames research center in

144
00:07:07,510 --> 00:07:05,120
california there was cake and champagne

145
00:07:08,710 --> 00:07:07,520
in honor of the little spacecraft that

146
00:07:11,350 --> 00:07:08,720
could

147
00:07:13,510 --> 00:07:11,360
and earlier at a news conference held to

148
00:07:16,150 --> 00:07:13,520
discuss the achievements of the pioneer

149
00:07:18,469 --> 00:07:16,160
project scientists stressed the

150
00:07:20,710 --> 00:07:18,479
parallels between the greenhouse effect

151
00:07:24,390 --> 00:07:20,720
on venus where surface temperatures are

152
00:07:27,350 --> 00:07:24,400
reported at 900 degrees and the earth dr

153
00:07:30,550 --> 00:07:27,360
donald hunton said venus is an allegory

154
00:07:32,550 --> 00:07:30,560
of what a future earth could be

155
00:07:34,309 --> 00:07:32,560
this is not just a chicken little

156
00:07:36,710 --> 00:07:34,319
running around and saying the sky is

157
00:07:39,110 --> 00:07:36,720
going to fall it's something real

158
00:07:40,950 --> 00:07:39,120
something we understand something that

159
00:07:42,150 --> 00:07:40,960
can happen and something that really

160
00:07:44,870 --> 00:07:42,160
does happen

161
00:07:47,110 --> 00:07:44,880
and we should not ignore these warnings

162
00:07:49,749 --> 00:07:47,120
there are times when there are chicken

163
00:07:52,950 --> 00:07:49,759

littles of course uh in environmental

164
00:07:56,070 --> 00:07:52,960
areas and other areas but this these two

165
00:07:58,629 --> 00:07:56,080
examples of stratospheric pollution and

166
00:08:01,589 --> 00:07:58,639
greenhouse effect are real those are not

167
00:08:05,110 --> 00:08:01,599
the sky is falling

168
00:08:08,230 --> 00:08:05,120
and that's it for this edition of nasa

169
00:08:13,350 --> 00:08:08,240
update i'm jim kakowski in washington