Credit: benlarhome via Flickr

1
00:00:04,630 --> 00:00:02,710
[Music]

2
00:00:07,430 --> 00:00:04,640
what's up for december

3
00:00:10,310 --> 00:00:07,440
your early evening highlights a chance

4
00:00:13,190 --> 00:00:10,320
to catch a comet and the annual geminid

5
00:00:15,430 --> 00:00:13,200
meteors on december 6 through the 10th

6
00:00:18,070 --> 00:00:15,440
look westward following sunset for the

7
00:00:20,470 --> 00:00:18,080
moon visiting venus saturn and jupiter

8
00:00:22,230 --> 00:00:20,480
in turn the moon's crescent fills out as

9
00:00:24,230 --> 00:00:22,240
it appears higher in the sky each

10
00:00:26,550 --> 00:00:24,240
evening over the course of the week

11
00:00:29,109 --> 00:00:26,560
enjoy the view of dazzling venus as our

12
00:00:31,109 --> 00:00:29,119
evening star while it lasts though our

13
00:00:32,709 --> 00:00:31,119

cloud-covered neighbor planet will sink

14
00:00:34,870 --> 00:00:32,719
ever closer to the horizon during the

15
00:00:35,910 --> 00:00:34,880
month disappearing for most of us by new

16
00:00:37,910 --> 00:00:35,920
year's

17
00:00:40,229 --> 00:00:37,920
it'll reappear in late january as a

18
00:00:42,069 --> 00:00:40,239
morning planet preceding the sunrise and

19
00:00:45,029 --> 00:00:42,079
won't be back in evening skies until

20
00:00:46,790 --> 00:00:45,039
december of next year

21
00:00:48,709 --> 00:00:46,800
next in december there's a recently

22
00:00:50,389 --> 00:00:48,719
discovered comet on its way into the

23
00:00:52,709 --> 00:00:50,399
inner solar system that might be worth

24
00:00:54,630 --> 00:00:52,719
trying to observe it's known as comet

25
00:00:56,869 --> 00:00:54,640
leonard and it'll be at its closest to

26
00:00:58,470 --> 00:00:56,879
earth on december 12th just a couple of

27
00:01:00,389 --> 00:00:58,480
weeks before it reaches its closest

28
00:01:02,709 --> 00:01:00,399
distance from the sun

29
00:01:04,229 --> 00:01:02,719
now comets are notoriously difficult to

30
00:01:06,950 --> 00:01:04,239
predict in terms of brightness and

31
00:01:08,550 --> 00:01:06,960
visibility comet leonard is predicted to

32
00:01:10,789 --> 00:01:08,560
peak at a brightness that will probably

33
00:01:12,149 --> 00:01:10,799
require binoculars to spot it

34
00:01:14,149 --> 00:01:12,159
there's a chance it could be bright

35
00:01:16,789 --> 00:01:14,159
enough to see with the unaided eye but

36
00:01:18,710 --> 00:01:16,799
again with comets you really never know

37
00:01:20,710 --> 00:01:18,720
in the first couple of weeks of december

38
00:01:23,350 --> 00:01:20,720

comet leonard can be found in the east

39
00:01:25,190 --> 00:01:23,360
before sunrise passing between arcturus

40
00:01:26,870 --> 00:01:25,200
and the handle of the big dipper it

41
00:01:28,550 --> 00:01:26,880
approaches the horizon right around the

42
00:01:30,230 --> 00:01:28,560
time of its closest approach to earth

43
00:01:32,310 --> 00:01:30,240
meaning it'll likely be brighter but

44
00:01:34,230 --> 00:01:32,320
more challenging to observe it then

45
00:01:36,230 --> 00:01:34,240
switches over to being an evening object

46
00:01:38,069 --> 00:01:36,240
after around december 14th for just a

47
00:01:39,990 --> 00:01:38,079
little while after the sun sets as it

48
00:01:41,990 --> 00:01:40,000
begins its long haul outward from the

49
00:01:44,149 --> 00:01:42,000
sun again progressively fading in

50
00:01:45,910 --> 00:01:44,159
brightness

51
00:01:48,230 --> 00:01:45,920
finally the geminid meteors are a

52
00:01:49,670 --> 00:01:48,240
highlight of december skies each year

53
00:01:52,149 --> 00:01:49,680
this year's meteor shower peaks

54
00:01:53,670 --> 00:01:52,159
overnight on december 13th and 14th

55
00:01:55,429 --> 00:01:53,680
apart from the weather the phase of the

56
00:01:57,030 --> 00:01:55,439
moon is usually the main factor in

57
00:01:58,709 --> 00:01:57,040
whether a meteor shower will have good

58
00:02:00,550 --> 00:01:58,719
viewing any given year

59
00:02:02,550 --> 00:02:00,560
this year the moon will be almost 80

60
00:02:05,270 --> 00:02:02,560
percent full at the peak of the geminids

61
00:02:07,270 --> 00:02:05,280
which isn't ideal however that bright

62
00:02:09,430 --> 00:02:07,280
moon will set somewhere around 2am

63
00:02:11,990 --> 00:02:09,440

wherever you're located leaving a couple

64
00:02:13,830 --> 00:02:12,000
of hours for meteor watching before dawn

65
00:02:15,910 --> 00:02:13,840
the meteors appear to radiate from the

66
00:02:18,630 --> 00:02:15,920
constellation gemini which you'll find

67
00:02:20,309 --> 00:02:18,640
high in the west now while most annual

68
00:02:22,229 --> 00:02:20,319
meteor showers are caused by earth

69
00:02:24,710 --> 00:02:22,239
passing through trails of dust-sized

70
00:02:26,150 --> 00:02:24,720
particles of comet debris the geminids

71
00:02:27,910 --> 00:02:26,160
are one of the few meteor showers that

72
00:02:30,070 --> 00:02:27,920
are caused by debris from an asteroid

73
00:02:31,750 --> 00:02:30,080
that crosses earth's orbit in this case

74
00:02:33,910 --> 00:02:31,760
one called faithan

75
00:02:35,589 --> 00:02:33,920
recently nasa scientists shared findings

76
00:02:37,589 --> 00:02:35,599
that suggest the difference between an

77
00:02:40,229 --> 00:02:37,599
asteroid and a comet might be less clear

78
00:02:42,229 --> 00:02:40,239
than we realized with fizzing sodium on

79
00:02:44,949 --> 00:02:42,239
faithan playing the same role as

80
00:02:46,790 --> 00:02:44,959
vaporizing ice on comets and whether you

81
00:02:49,110 --> 00:02:46,800
catch a glimpse of comet leonard or

82
00:02:50,710 --> 00:02:49,120
meteors from asteroid faithan both are

83
00:02:52,390 --> 00:02:50,720
reminders of the deep connections

84
00:02:54,309 --> 00:02:52,400
between earth and the rest of the solar

85
00:02:57,670 --> 00:02:54,319
system that we discover because we look

86
00:02:59,030 --> 00:02:57,680
outward and we explore

87
00:03:02,790 --> 00:02:59,040
here are the phases of the moon for

88
00:03:06,309 --> 00:03:04,470

you can catch up on all of nasa's

89
00:03:09,270 --> 00:03:06,319
missions to explore the solar system and

90
00:03:11,270 --> 00:03:09,280
beyond at nasa.gov i'm preston dykes