Sky Quest – Student Response Sheet

School: _____ V JV1 JV2 JV3

Student Names: _____

For each answer, fill in the blank or circle the correct response

Station 1

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

Station 2

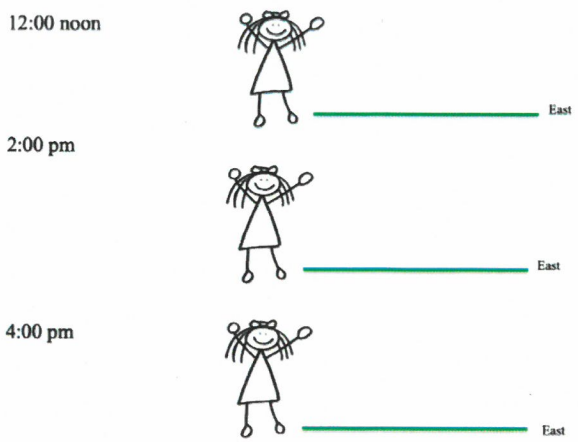
9. _____
10. _____
11. _____

Station 3

12. _____
13. YES or NO
14. A B C D
15. A B C D

Station 4

16. (6pts)



Station 5

17. A B C D
18. _____
19. A B C D
20. _____

Station 6

21. A B C D
22. A B C D
23. A B C D
24. A B C D

Station 7

25. DAY or NIGHT
26. (3 pts)_____
_____
_____

Station 8

27. _____
28. _____
29. (2 pts)_____
_____
30. _____
31. _____

Station 9

32. _____
33. _____
34. _____
35. _____
36. _____

Station 10

37. A B C D
38. _____
39. _____
40. _____
41. _____

Station 11

42. _____
43. _____
44. _____
45. _____
46. _____
47. _____
48. _____
49. _____

Station 12

50. A B C D
51. _____
52. A B C D
53. A B C D

Station 13

54. (5 pts)

Station 14

55. _____
56. _____
57. _____

Station 15

58. A B C D
59. _____
60. A B C D

Station 16

61. A B C D E F G H
62. A B C D E F G H
63. A B C D E F G H
64. A B C D E F G H
65. _____

Station 17

66. _____
67. A B C D E
68. _____
69. _____

Station 18

70. A B C D
71. A B C D
72. _____

Station 19

73. _____
74. _____
75. _____
76. _____
77. _____

Station 20

78. A B C D
79. (3 pts)

80.

Total pts: 93

Sky Quest – Student Response Sheet

School: 1 pt unless noted V JV1 JV2 JV3

Student Names: Tiebreakers: Station 1, 8, 16, 11, 18, 20

For each answer, fill in the blank or circle the correct response

Station 1

1. Uranus
2. Neptune
3. Earth
4. Mars
5. Saturn
6. Jupiter
7. Venus
8. Mercury

Station 2

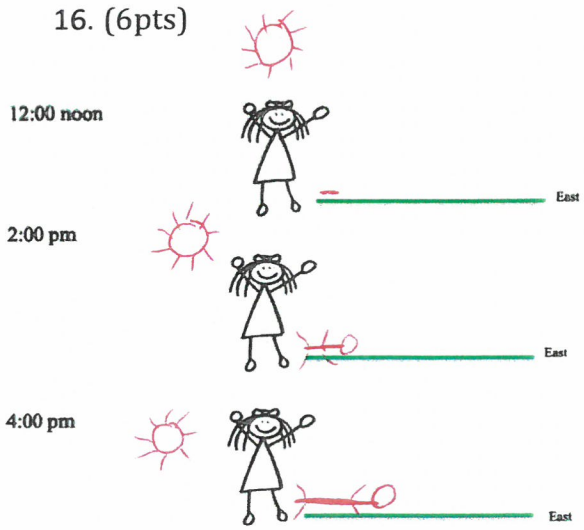
9. Meteor
10. Meteroid
11. ~~meteorite~~ meteorite

Station 3

12. DAY
13. YES or (NO)
14. A (B) C D
15. A (B) C D

Station 4

16. (6pts)



Station 5

17. A B (C) D
18. revolution
19. A B C (D)
20. rotating

Station 6

21. (A) B C D
22. A B (C) D
23. A (B) C D
24. A (B) C D

Station 7

25. (DAY) or NIGHT
26. (3 pts) The light bounces off the moon (reflects) and that is what we see from the sun

Station 8

27. Vega
28. Aldebaran
29. (2 pts) either order Castor + Pollux
30. Polaris
31. Regulus

Station 9

32. Mars
33. Mercury
34. Saturn
35. Uranus
36. Venus

Station 10

37. A B (C) D
38. 1
39. 5
40. 3
41. 6

Station 11

42. Hot Pink
43. Green
44. Yellow
45. Brown
46. (Shiny) Blue
47. Purple
48. Pink
49. Orange

Station 12

50. A B C (D)
51. Larger
52. A B C (D)
53. A B C (D)

Station 13

54. (5 pts)

- in this order, or mirror image
- Size does not matter
- labeled

Station 14

55. Canis Major
56. Andromeda
57. Sirius

Station 15

58. (A) B C D
59. Spring
60. A (B) C D

Station 16

61. A B (C) D E F G H
62. A (B) C D E F G H
63. A B C D E (F) G H
64. A B (C) D E F (G) H Both for pt
65. 28 days or 1 Month

Station 17

66. Full Moon
67. A B (C) D E
68. Accept Anything B/n 1-2hrs
69. It is red

Station 18

70. (A) B C D
71. A (B) C D
72. Gravity

Station 19

73. Ursa Minor
74. Ursa Major
75. Scorpius
76. Orion
77. Cassiopeia

Station 20

78. (A) B C D
79. (3 pts)

Mercury
Venus
Earth
Mars
Jupiter
Saturn
Uranus
Neptune

3 pts = in order
2 pts - 2 mixed
1 pts - 4 mixed

80. If they have a mnemonic of any kind +1

Station 1

Name the planets shown on the cards at this station. They are numbered on the back of each card.

#1 - #8

WORD BANK	
Earth	Neptune
Jupiter	Saturn
Mars	Uranus
Mercury	Venus

Station 2

Identify whether each of the following is a METEOR, METEORITE or METEOROID

9. 

Note: this sample was collected here on Earth

10. 

Note: these are floating in space

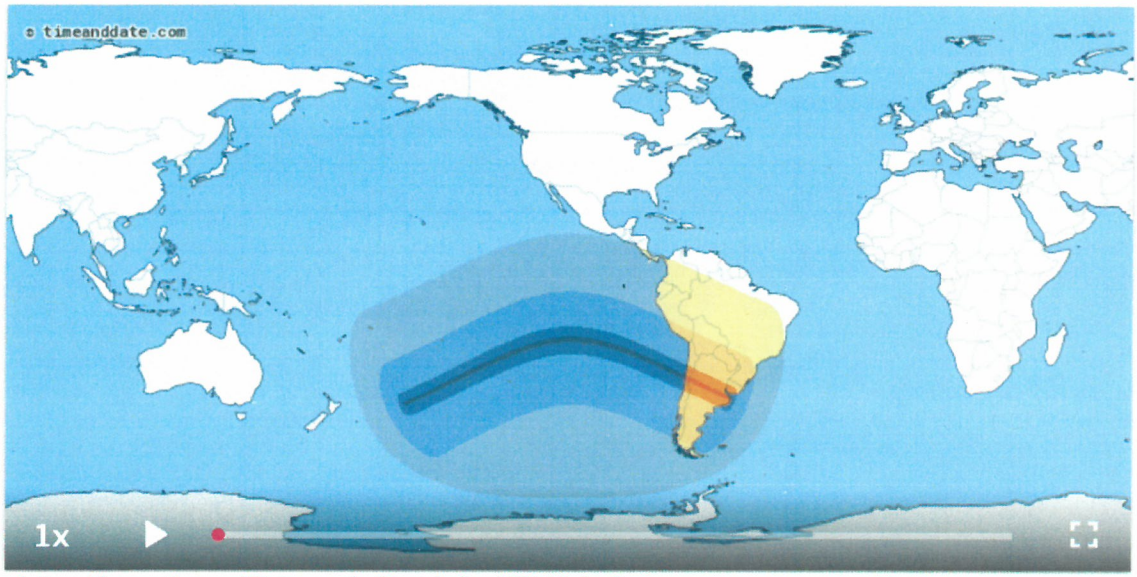
11. 

Note: these are also called shooting stars

Station 3

12. Do solar eclipses happen during the day or at night?

The next total solar eclipse will happen on July 2, 2019. Below is the shadow path of that eclipse.



Source: https://www.timeanddate.com/eclipse/solar/2019-july-2

13. Will we be able to see this eclipse in NC?

14. What causes the shadow on the earth?
    a. The moon blocks the sun's rays
    b. The sun blocks the moon's rays
    c. Another planet blocks the sun's rays
    d. Earth blocks the sun's rays

15. How long do solar eclipses last?
    a. A few seconds
    b. A few minutes
    c. A few hours
    d. 1 day

Station 4

16. Maria decided to trace her shadow at 12:00pm (noon), 2:00pm and 4:00pm . She stood in the same location all three times. Use the picture of Maria on your answer sheet to draw in **THE SUN** and her **SHADOW** for each of these 3 times.

12:00 noon

East

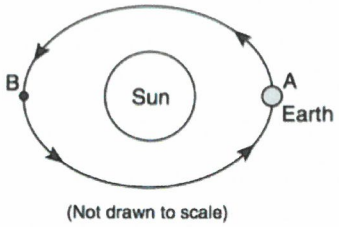
2:00 pm

East

4:00 pm

East

Station 5



The diagram above shows Earth travelling around the Sun. Letters A & B show 2 locations in Earth's orbit.

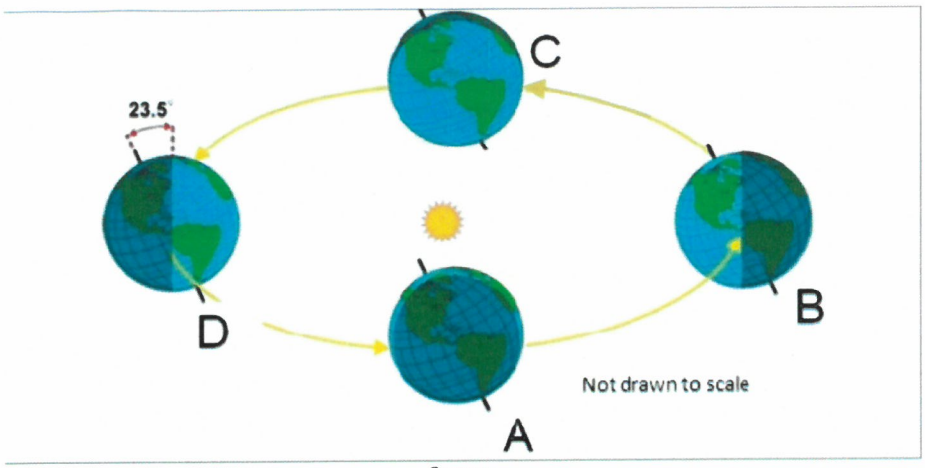
17. How long will it take for Earth to travel from point A to point B?
    a. 24 hours
    b. 1 month
    c. 6 months
    d. 12 months

18. Is one trip around the sun called a rotation or revolution?

19. The Earth spinning on its axis causes:
    a. Seasons
    b. Years
    c. Months
    d. Days

20. Is this spinning on an axis called rotating or revolving?

Station 6



Source:
https://www.google.com/search?rlz=1C5CHFA_enUS793US793&biw=1425&bih=817&tbm=isch&sa=1&ei=T31uXJ2YNoq1_Ab3tZ6wAw&q=unlabeled+seasons+diagram&oq=unlabeled+seasons+diagram&gs_l=img.3..0.7444.9208..9350...0.0..0.62.504.10.....1....1..gws-wiz-img.....0i7i30.XHuExZeQknk#imgrc=eCaD4FuZEcSwmM:

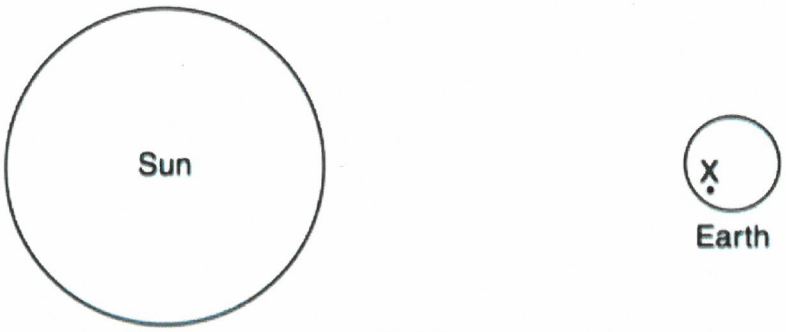
21. The number of daylight hours in North Carolina changes with the:
    a. Season of the year
    b. Moon's changing appearance
    c. Direction of the wind
    d. Arrival of a severe storm

22. If the Earth was not tilted on its axis, in other words, if its axis was perpendicular to its orbit, which of the following would be true?
    a. We would still have seasons, but there wouldn't be as much difference between cold and hot average monthly temperatures
    b. We would have two seasons: a mild winter and a mild summer
    c. We would not have any seasons. All of the Earth would have the same average annual temperature
    d. We would not have any seasons. The equator would still have the highest average annual temperature

23. Which letter on the diagram above shows Summer in North Carolina?

24. Which of these explains what a solstice is?
    a. When the hours of day and night are equal
    b. When the Sun is at its highest or lowest
    c. When the hours of daylight are longer than the hours of night
    d. When the hours of daylight are shorter than the hours of night

Station 7



The diagram above shows the Earth & Sun in Space. A location on Earth is labeled X.

25. Is it day or night at location X?

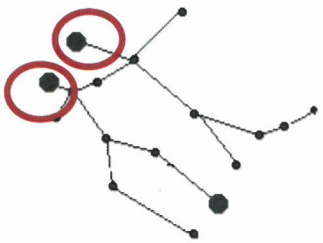
This fun agamograph shows day and night.

26. Explain how we see the moon at night.

Station 8

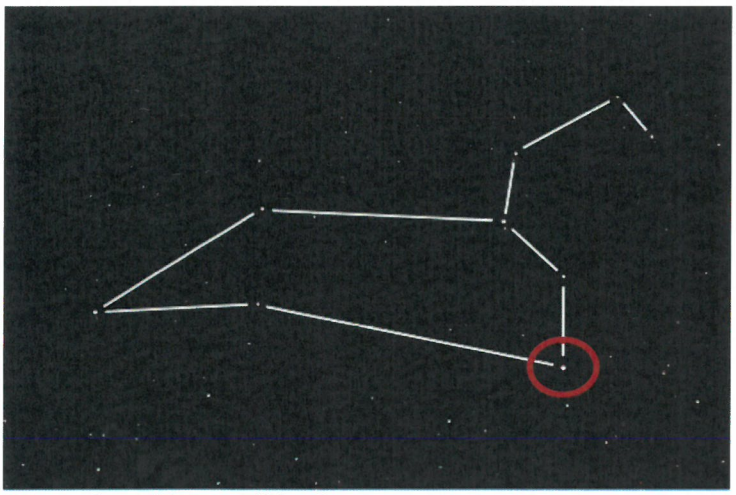
Identify the Alpha stars for each constellation listed or shown here.

27. Lyra
28. Taurus



29. both, in either order

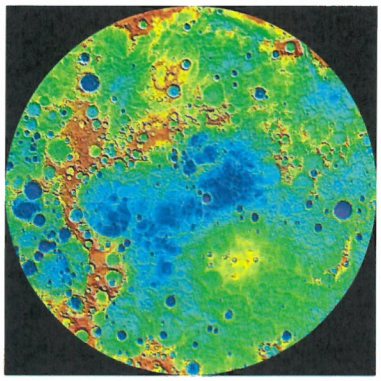
30. What is the name of the North Star?

31. 
Source: http://www.allthesky.com

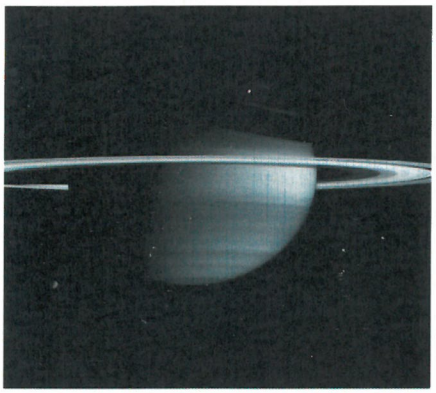
Word Bank		
Aldebaran	Castor	Regulus
Antares	Deneb	Sirius
Arcturus	Polaris	Spica
Betelgeuse	Pollux	Vega

Station 9

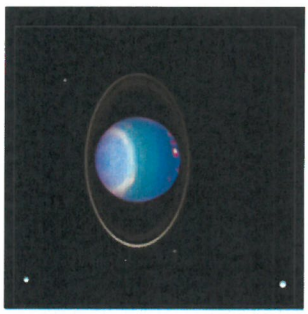
32. NASA's InSight lander acquired this image of the area in front of the lander on February 18, 2019, Sol 81 of the InSight mission. This is sometimes called the Red Planet. What planet is this?
Image Credit: NASA/JPL-Caltech



33. This shaded map shows that the solar system's smallest planet has many craters and extinct volcanoes. What planet is this?
Image credit: NASA/Johns Hopkins University Applied Physics Laboratory/Carnegie Institution of Washington



34. While this planet is best known for its rings, it has many moons too. The largest moon, Titan, can be seen in the lower left corner. Image credit: NASA/JPL/Space Science Institute



35. Voyager 2 is the only spacecraft to fly by this planet that spins on its side. Image credit: NASA/JPL/STScI

36. Days are longer than years on this hot planet that rotates backwards.
Image credit: NASA/JPL

WORD BANK	
Earth	Neptune
Jupiter	Saturn
Mars	Uranus
Mercury	Venus

Station 10

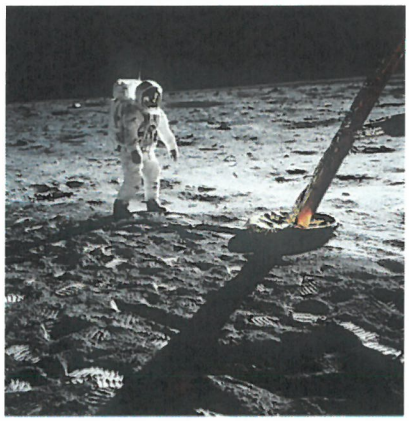


Image credit: NASA

This is a picture of astronaut Buzz Aldrin standing on the surface of the moon.

37. What is the moon made of?
    a. Cheese
    b. Gas
    c. Rocks
    d. Water and Ice

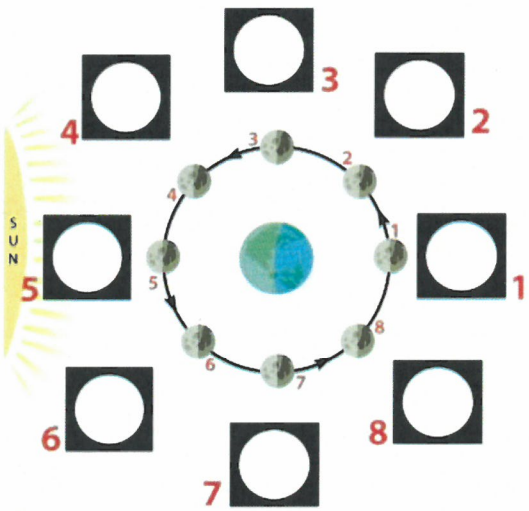
38. How many moons does Earth have?

Look at the diagram to the right.

39. Which number shows a new moon?

40. Which number shows a third quarter moon?

41. At which number would you see this in the sky?



Station 11

This is a scaled model of the solar system. That means that the circles represent how big each planet would be compared to the others. Determine which planet is represented by each color. In case you have trouble with the colors, the color names are written on them as well. Remember – these are not the real planet colors, but it would be cool if they were!

42. Earth
43. Jupiter
44. Mars
45. Mercury
46. Neptune
47. Saturn
48. Uranus
49. Venus

Station 12

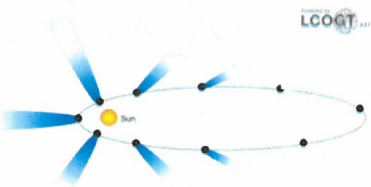
Dec. 31, 2018: At 2:43 p.m. EST, while many on Earth prepared to welcome the New Year, NASA's OSIRIS-REx spacecraft, 70 million miles (110 million kilometers) away, carried out a single, eight-second burn of its thrusters—and broke a space exploration record.

The spacecraft entered into orbit around the asteroid Bennu, and made Bennu the smallest object ever to be orbited by a spacecraft.
Credit: NASA/Goddard/University of Arizona

50. The asteroid belt is located between what 2 planets?
    a. Mercury & Mars
    b. Earth & Jupiter
    c. Saturn & Jupiter
    d. Mars & Jupiter

51. Pluto, the object your parents thought was a planet, but now astronomers say is not, is much smaller than Earth. Is Pluto larger or smaller than large asteroids like Bennu?

52. This diagram shows the orbit of what planetary object?
    a. Planetoid
    b. Moon
    c. Asteroid
    d. Comet

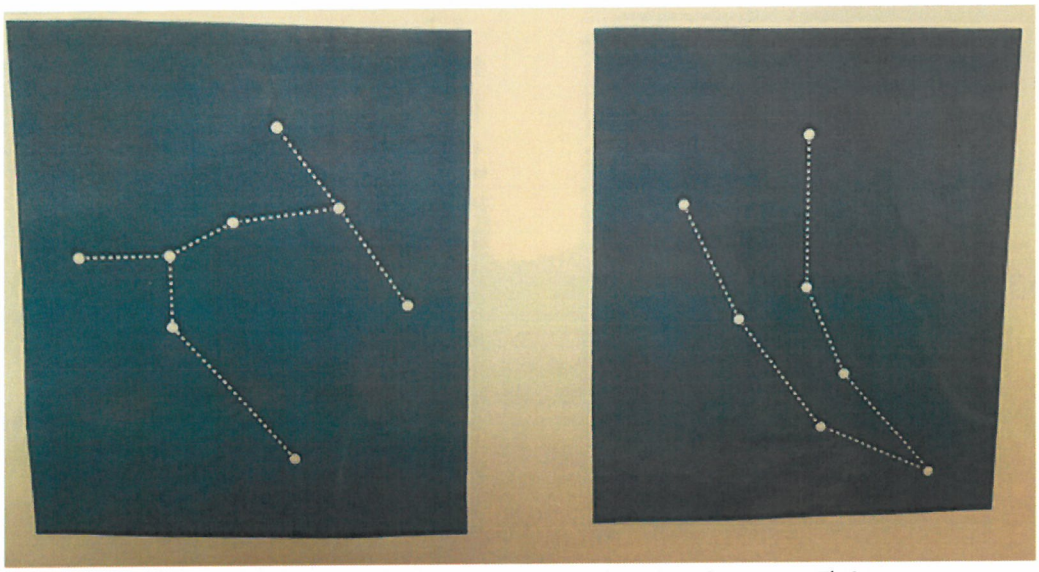


53. In 1986, the European spacecraft Giotto became one of the first spacecraft ever to encounter and photograph this object. from the sun. What is the object? Image Credit: Giotto Project, ESA
    a. Planetoid
    b. Moon
    c. Asteroid
    d. Comet

Station 13

54. This picture is a telescope projection showing the solar eclipse that occurred on August 21, 2017. On your answer sheet, draw the relative position of the Sun, Earth, and Moon for a Solar eclipse. They do not have to be drawn to scale, but you should label each one.

Station 14



55. 56.

Identify the constellations shown here.

57. What is the Alpha star for # 55?

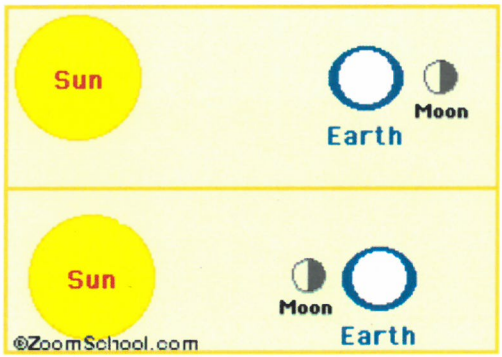
Word Bank			
Aquila	Cassiopeia	Hydra	Perseus
Andromeda	Capricornus	Leo	Scorpius
Aquarius	Cepheus	Libra	Taurus
Bootes	Cygnus	Lyra	Ursa Major
Cancer	Draco	Orion	Ursa Minor
Canis Major	Gemini	Pegasus	Virgo

Word Bank		
Aldebaran	Castor	Regulus
Antares	Deneb	Sirius
Arcturus	Polaris	Spica
Betelgeuse	Pollux	Vega

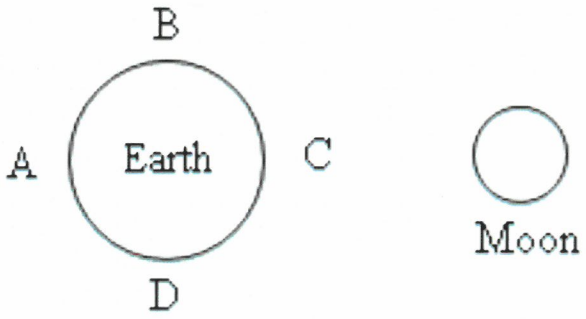
Station 15

58. Earth's tides are caused by the gravitational pull of:
    a. The Moon
    b. The Sun
    c. Asteroids
    d. The Outer planets

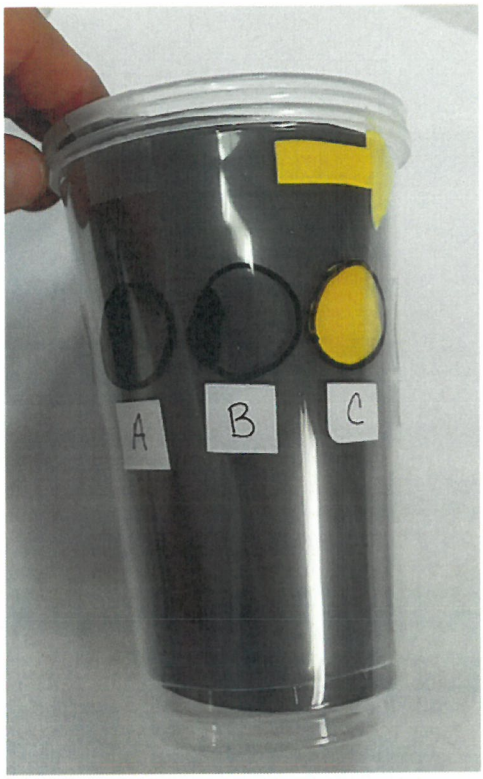
59. Does the figure below show a neap tide or spring tide?



60. Which points on the diagram of the earth would have the lowest Low tides?
    a. A and B
    b. A and C
    c. C and D
    d. B and D



Station 16



Turn the inside cup in the direction of the arrow and look at the different phases of the moon. The yellow is what you would see.

61. Which letter shows a full moon?

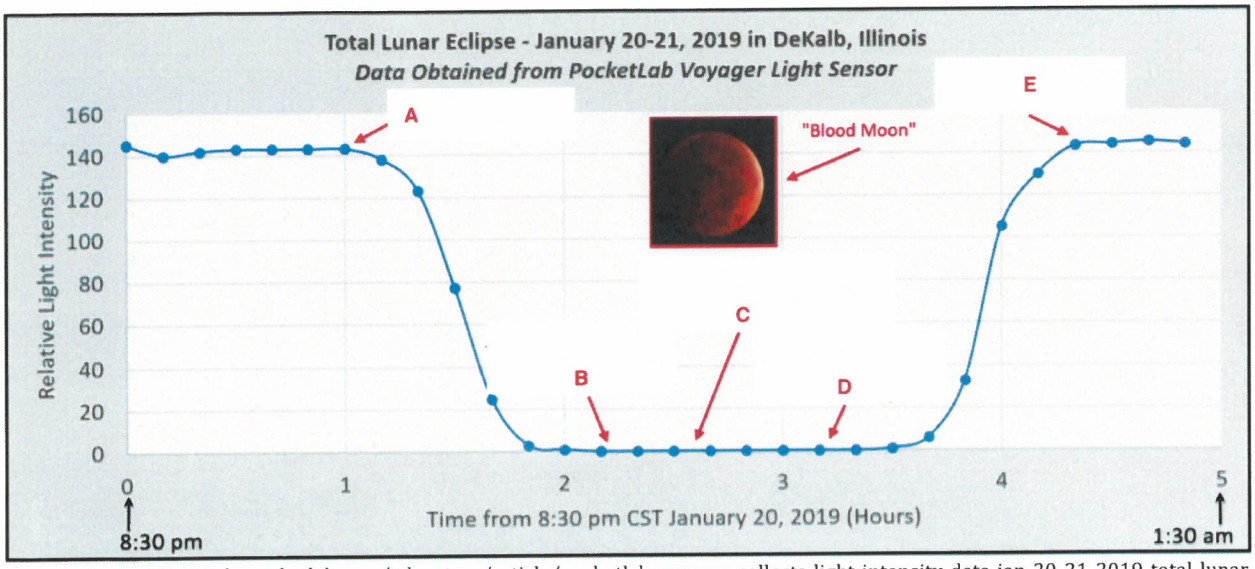
62. Which letter shows a waxing gibbous?

63. Which letter show a waning crescent?

64. Which letters (there are 2) show the moon during the highest high tides?

65. How long does it take the moon to go through all the phases one time?

Station 17



Source: https://www.thepocketlab.com/educators/article/pocketlab-voyager-collects-light-intensity-data-jan-20-21-2019-total-lunar

This data was collected by analyzing pictures of the moon during the total lunar eclipse that happened on Jan 20/21, 2019. Luminosity is how bright something is.

66. What phase of the moon was it this night?

67. Which letter on the graph shows the maximum eclipse?

68. How long did the total eclipse last?

69. Why was this moon called a "Blood Moon"?

Station 18

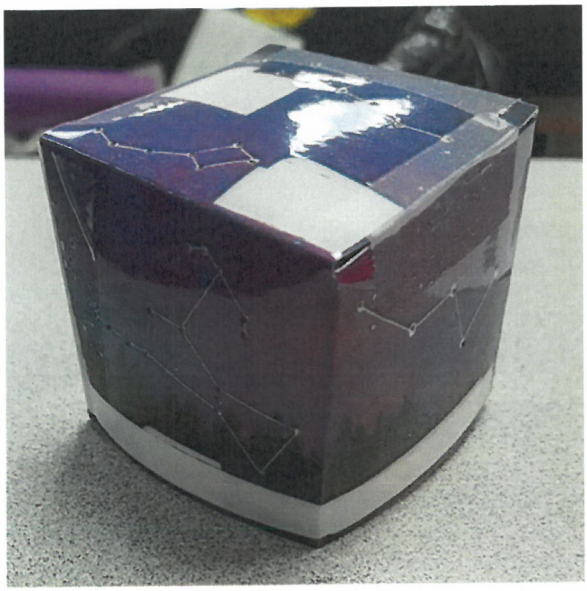
70. Where would you weigh the most if you could stand on each of these objects?
    a. The Sun
    b. The Moon
    c. Earth
    d. Jupiter

71. Where could you jump the highest?
    a. The Sun
    b. The Moon
    c. Earth
    d. Jupiter

72. What force keeps us standing on Earth and the Earth in orbit around the Sun?

Astronaut Noguchi is pictured near fresh tomatoes floating freely inside the International Space Station. (NASA)

Station 19



Do some star gazing with this constellation luminary and identify each of the constellations labeled.

#73 – 77

Word Bank			
Aquila	Cassiopeia	Hydra	Perseus
Andromeda	Capricornus	Leo	Scorpius
Aquarius	Cepheus	Libra	Taurus
Bootes	Cygnus	Lyra	Ursa Major
Cancer	Draco	Orion	Ursa Minor
Canis Major	Gemini	Pegasus	Virgo

Station 20

78. How many stars do we have in our solar system?
    a. 1
    b. 2
    c. 25
    d. Millions, and we are still finding more

79. Name the 8 planets in order from the Sun.

80. Bonus point – do you have a sentence to help you remember this order?

WORD BANK	
Earth	Neptune
Jupiter	Saturn
Mars	Uranus
Mercury	Venus