Name:_____Period: _____Sci Number:___

1 pt ec

Explore Activity

How might scientists use this method to count the number of stars in the sky?
Be thinking of that as you complete the activity:

Estimating the Number of Rice Grains

1. Take the sheet of black construction paper that has 2 inch squares. This represents the night sky

2. Spill a teaspoon of rice onto the black paper

3. Count the number of grains of rice in one square: record the number: _____
   Repeat this step with another square: _____
   Repeat this step with 3rd square: _____
   Repeat this step with 4th square: _____

4. Add the 4 squares together and divide by 4 (to get the average) record the number: _____

5. Count the total number of squares on the piece of paper: _____

6. Multiply the number of squares _____ x your average _____ = _____
   This will give you an estimate of the total number of grains of rice on the paper.

7. Count the grains of rice to get the "actual" total. record the number: _____

8. How close were you based on your number from step 6? _____

Conclusion: How might scientists use this method to count the number of stars in the sky?

_____
_____
_____
_____

Windows to the Universe Scavenger Hunt

Go to: http://www.windows2universe.org

1. In what year was Sputnik launched? (A) 1983 (B) 1925 (C) 1957 (D) 1940

2. Which one of these planets has never been visited by a satellite or probe?
(A) Neptune (B) Saturn (C) Uranus (D) Pluto

3. Effort and determination brought humans into space and to the Moon. What planet are humans most likely to visit? (A) Mercury (B) Venus (C) Mars (D) Pluto

4. Formation of the solar system is in part due to the explosion of a nearby star. What is star explosion called?
(A) Nebula (B) Galaxy (C) Open Cluster (D) Supernova

5. Meteorites are thought to have formed within the solar system during the:
(A) Early phase (B) Middle phase (C) Late phase (D) Recent phase

6. How old is the solar system? (A) 4.5 x 109 yrs (B) 4.6 x 109 yrs (C) 4.7 x 109 yrs (D) 4.8 x 109 years

7. How many years marks the reversal of the Sun's magnetic field? (A) 11 (B) 10.5 (C) 22 (D) 25

8. In this century, what has been the solar cycle number? (A) 9.5 (B) 10.5 (C) 11.5 (D) 12.5

9. What was the period from 1645 to 1715 called?
(A) Maunder minimum (B) Wolf minimum (C) Hubble minimum (D) Planck minimum

10. From 1700 to 1800, the greatest number of sunspots was just over:
(A) 10 sunspots (B) 35 sunspots (C) 100 sunspots (D) 150 sunspots

11. During which of these time periods was the solar activity the least?
(A) 1705 (B) 1815 (C) 1885 (D) 1925

12. What is the lighter-colored region around the dark center of a sunspot called?
(A) pixel (B) corona (C) penumbra (D) granicular

13. What part of the Sun is directly below the photosphere?
(A) radiation zone (B) core (C) chromosphere (D) convection zone

14. What satellite above the Sun is gathering sun data? (A) Hubble (B) Magellan (C) Yohkoh (D) Mariner

15. What is the average salinity of the Earth's ocean?
(A) 35 ppt (B) 2 ppt (C) 125 ppt (D) 900 ppt

16. The Alvin submersible is used to explore the depths of the ocean. Just how deep are trenches in the ocean?
(A) 10 feet (B) 10 miles (C) 4 miles (D) 26 miles

17. There are volcanoes on Earth. Are there volcanoes on other bodies (planets or moons) in the solar system?
(A) Yes (B) No

18. How many layers does the Earth's atmosphere have? (A) 2 (B) None (C) 15 (D) Five