

## AP Physics 1:

### October Sky

Name: \_\_\_\_\_

1. What country launched the world's first man-made satellite, Sputnik, into Earth orbit on October 4, 1957?
2. Because Sputnik travels at 18,000 mph, it can make an orbit of Earth every \_\_\_\_ minutes.
3. Satellites passing overhead are visible in a clear dark sky one hour after \_\_\_\_\_ and one hour before \_\_\_\_\_.
4. Sputnik travels at a height of \_\_\_\_\_ miles above the Earth.
5. Describe what Sputnik looked like passing through the sky:
6. What did Homer use as the fuel for his first rocket?
7. What happened to the Vanguard rocket launched by Dr. Werhner Von Braun?
8. Rocketry was invented by the \_\_\_\_\_, as early as 1000 AD.
9. Homer learns about potassium chlorate and sulfur to use as \_\_\_\_\_ for his rockets.

10. What is Homer's motivation for building these rockets?

11. The purpose of the nozzle in a rocket is to direct the flow of \_\_\_\_\_.

12. Miss Riley says, "Science requires \_\_\_\_\_."

13. What do the boys build at Cape Coalwood to use for launching rockets?

14. When potassium chlorate and sugar are combined with heat, oxygen and expanding gases are produced, making an effective rocket \_\_\_\_\_.

15. What lab safety equipment do the students use in the classroom?

16. When the rockets exploded, heat from the exhaust was melting the \_\_\_\_\_.

17. When rocket fuel combusts, the nozzle directs a hot river of gas that reaches the speed of \_\_\_\_\_.

18. If the mass of the propellant compared to the mass of the rocket is too little, increase the \_\_\_\_\_ of the rocket.

19. The properties of alcohol are that it is stable and dilutes \_\_\_\_\_.

20. What measurement do the rocket boys make during the rocket flights to calculate the height of the rocket?

21. Who told Homer at the national science fair "Congratulations and good luck"?

Research the Rosetta Mission and write a 4-5 sentence summary of the mission.