

SPACE - THE FINAL FRONTIER

UNIT OVERVIEW

In this unit, students explore the exciting and intriguing world of space. The unit is divided into two main sections. The first, uses lecture style notes combined with interesting assignments and activities to build up an information base. The second centers around four fun activities devoted to space exploration and how a rocket works. Each student receives an **Activity Handbook** that contains related assignments. Students are guaranteed to get a “blast” out of this unit.

PART I - SPACE - THE FINAL FRONTIER

- Notes (using overhead) provide a base of information.
- Lesson topics are:
 - 1) Space, Weightlessness, and Gravity
 - 2) A Day in the Life of a Star
 - 3) Galaxies, Constellations
 - 4) Solar System - The Skydome Model
 - 5) The Solar System - Planets, Asteroids, Moons and Satellites
 - 6) Planet Brochures
 - 7) Planet Song
- Students receive an Activity Handbook that contains assignments and activities related to lesson topics.

PART II - SPACE EXPLORATION and ROCKETS

- Activities include:
 - 1) Space Menu
 - 2) Parachute Making Competition
 - 3) Rocket Boat Competition
 - 4) Egg Splat Competition
 - 5) Exam
- Students complete activities and assignments in their booklets as the unit progresses.

GALAXIES AND CONSTELLATIONS

A galaxy is a group of stars just like a herd is a group of cattle and a class is a group of mature young adults. The only difference is that a galaxy contains about 100 billion stars! The galaxy that the Earth is a part of is called "*The Milky Way*" and is shaped like a spiral.



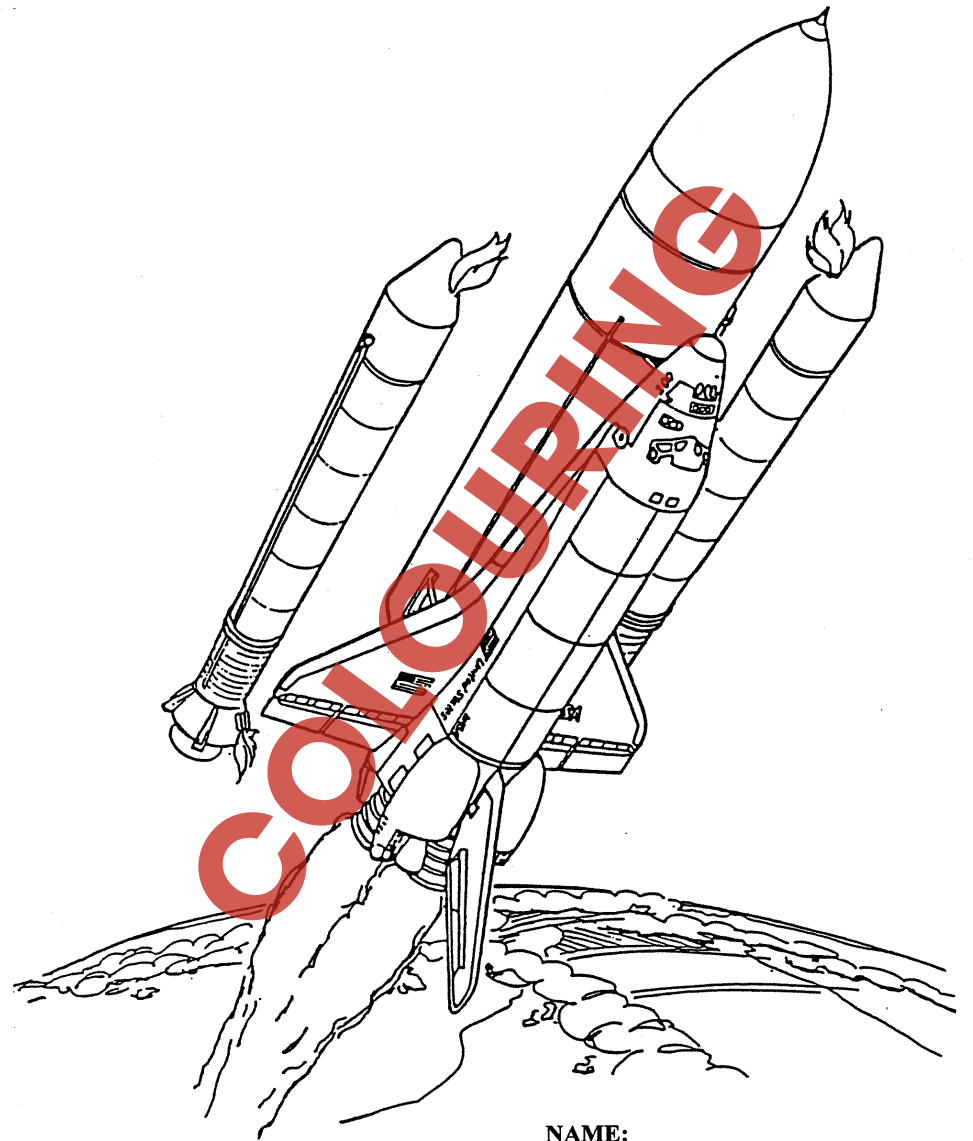
The Milky Way was named when early astronomers looked up at the night sky and saw a milky band of dim stars going across the sky. The Milky Way can be seen on a very dark, clear night, directly overhead, and looks like a white haze of dim stars. (The Greek word for Milk is "Gala")

HOW BIG IS A BILLION?

If a person could make 50 dots on a page in 10 seconds, that person would have one billion dots in 6.3 years. (That is only if the person made dots night and day - never stopping for food, sleep, or an occasional pee break.)

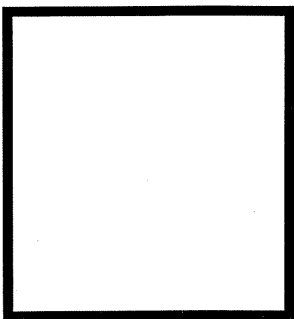
If you had one billion Kraft Dinners, you could serve K.D. for supper, to all the people that could fit into the Skydome - every day of the year, for 55 years!

SPACE - THE FINAL FRONTIER



NAME: _____

CONSTELLATION NAME : _____



AUTHOR : _____

OPTIONAL ACTIVITY - EXTRATERRESTRIAL

Instructions

In this assignment, your job is to create a space alien that lives on one of the planets in the Solar System.

It is very important to make sure that the alien is able to live in the hostile environment of its home planet.

Home Planet _____

Name of Alien _____

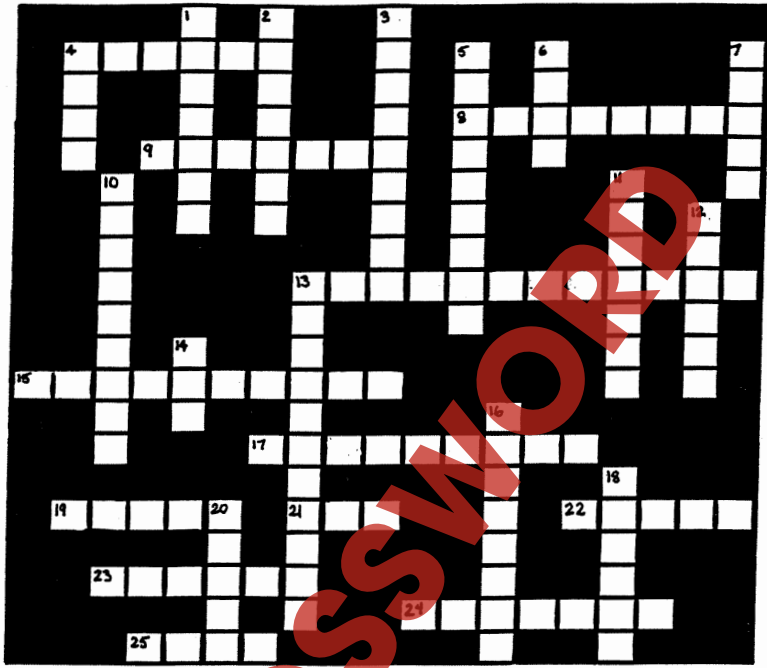
Special Characteristics _____



Be creative with this assignment!

ACTIVITY #6 - SPACE CROSSWORD

See page 20 for Answer Key



ACROSS:

4. ANOTHER NAME FOR SHOOTING STAR
8. FIRST HUMAN IN SPACE
9. HAS A RED SPOT
13. REUSEABLE SPACE SHIP
15. AN OLD, COLD STAR
17. BITS OF SPACE ROCK BETWEEN MARS AND JUPITER
19. DISNEY'S SPACE DOG
21. CLOSEST STAR TO EARTH
22. ONLY PLANET WITH LIFE
23. PROPEL THE ROCKET
24. MAKE UP THE MAN IN THE MOON
25. HELP THE ROCKET GO STRAIGHT

DOWN:

1. SCORCHED PLANET
2. A FORCE CAUSED BY MASS
3. EXPLODING STAR
4. ROMAN GOD OF WAR
5. SPACE ALIENS MIGHT USE THIS TO GET WATER
6. CAPTAIN OF OLD ENTERPRISE: JAMES T. _____
7. THE MORNING STAR
10. A THING THAT ORBITS SOMETHING ELSE
11. FIRST MAN MADE SATELLITE
12. A LARGE GROUP OF STARS
13. ALL THINGS THAT ORBIT THE SUN
14. ISN'T THIS ASSIGNMENT GREAT?
15. THE GALAXY WE ARE IN
18. RINGED PLANET
20. HUNTER IN SPACE



ACTIVITY #8 - REVIEW

NAME: _____

Instructions

All answers should be answered in full sentences unless stated otherwise. (A.I.F.S.)

- 1) Explain why Venus is so hot.

- 2) How does a rocket engine work?

- 3) What are the rings of Saturn made of?

- 4) List three reasons why it would be hard to live on Jupiter.

- _____
- _____
- _____

ACTIVITY #9 - SICK SPACE JOKE

Q: WHY DIDN'T THE WHITE DWARF CROSS THE ROAD?

A: 2044 1862 6063 288 5206 2394 1862 4656 1862 9453 288 414

851 5206 2268 851 2898 3149 288 2394

Instructions

Do the multiplication problems below and put the correct letter in the blanks above to solve the riddle.

Multiply

A	N	O	T	F	H
24	23	37	54	126	48
x 12	x 18	x 23	x 42	x 23	x 97

S	C	R	U	D	E
42	129	137	274	64	38
x 57	x 47	x 69	x 19	x 97	x 49

M	I	L	B	G	
82	26	88	39	73	47
x 17	x 54	x 93	x 27	x 28	x 67

SPACE EXAM

NAME: _____

Instructions

All questions should be answered in full sentences unless stated otherwise. (A.I.F.S.)

1. Fill in the blanks.

- a) The "Red Planet". _____
- b) The "Morning Star". _____
- c) The "largest planet". _____
- d) The planet with a red spot. _____
- e) The only planet that has life. _____
- f) The nearest star to the earth. _____
- g) The constellation known as "The Hunter". _____
- h) The first man-made satellite in space. _____
- i) The name of the galaxy that the earth is a part of. _____

2. Explain why Venus is such a warm planet.

3. Why is Mars called the "Red Planet"?

ACTIVITY #7 - SPACE WORDSEARCH

See page 20 for Answer Key

GBWBFTHDUZY OYOXQP FKEK
 YODMYBOUMTWYMYAWYKLIM
 WQAEKPPKEFRXTNHOUTNAT
 YPFYPJNJTZNVIIRJTBUU
 YOVCRRBBLSEARTH XUUPAJ
 ZPODIIWMYAAEZGHPNJLQM
 RIGWPGEXSGDLLSSYXCWPT
 TATDJDECRWJMETEORXNQF
 TOVDBIUAAANCCNFRGPFJFCD
 UOLFAPGRLPAVONREPU S XG
 PALMRPFGOPSHQTNOTT PFG
 ETILLETASTEROIDSEIWI
 GZBMARSLRTIBGBNNSOPRB
 YLWSPECAKXBNCRATERSUO
 YEKTZNSXIFELULACO IUCJ
 KKEZQMBYAIMTPRLV FONRK
 UGRKLUHHONAWSOH PINVEY
 AFLEHVVENUSKH NZVRMTFML
 LEGGGTGKHXC GQCNRSDYPB

Can you find these words?

SPACESHUTTLE
 SATELLITE
 SUPERNOVA
 PLANETS
 JUPITER
 METEOR
 ENGINE
 ORION
 VENUS
 SUN

SOLARSYSTEM
 BIGDIPPER
 GARGARIN
 CRATERS
 MERCURY
 GALAXY
 STARS
 PLUTO
 MARS

WHITEDWARF
 ASTEROIDS
 MILKYWAY
 SPUTNIK
 GRAVITY
 SATURN
 SPACE
 EARTH
 FINS



ANSWER KEY

Across:

- 4. METEOR
- 8. GARGARIN
- 9. JUPITER
- 13. SPACESHUTTLE
- 15. WHITEDWARF
- 17. ASTEROIDS
- 19. PLUTO
- 21. SUN
- 22. EARTH
- 23. ENGINE
- 24. CRATERS
- 25. FINS

Down:

- 1. MERCURY
- 2. GRAVITY
- 3. SUPERNOVA
- 4. MARS
- 5. BIGDIPPER
- 6. KIRK
- 7. VENUS
- 10. SATELLITE
- 11. SPUTNIK
- 12. GALAXY
- 13. SOLARSYSTEM
- 14. YES
- 16. MILKYWAY
- 18. SATURN
- 20. ORION

G S U B K V
 R U P I I E
 A P I I G A R G A R I N U
 V E G A R G A R I N U
 I T E R D K S S
 T N I S S
 Y O P P G
 V P U A
 A C E S H U T T L E
 L R N A
 L I X
 W A R F K Y
 R M
 A S T E R O I D S
 Y L S
 S U N K E A R T H
 T Y T
 N E W U
 M C R A T E R S
 S Y N

ANSWER KEY

. E K
 M Y A W Y K L I M
 E N H O . T N . .
 B S E A R T H . U U . .
 I Y . A E H P . .
 G E . S G D S S P .
 D . C R W . M E T E O R
 I . A A C R
 P G R L P A V O N R E P U S . .
 P F G O P S N . T T . .
 E T I L L E T A S T E R O I D S E I . Y .
 M A R S L G . N N S O P R .
 A N C R A T E R S U .
 X . F E . U L A . . I U C J
 Y . I . T P R . V . O N R .
 N A . S I N . E .
 V E N U S T . M .
 . Y . .