LEARNING ABOUT MARS (by Dr. Ken Grady, 1980) People have always been quite excited about details on Mars because Earth and Mars have many characteristics in common. Just like Earth, Mars turns around itself. It takes Mars twenty-four hours, thirty-seven minutes and twenty-seven seconds to complete one turn, so the day on Mars is a bit longer than ours. Besides, both planets have similar seasons. Because of these similarities, astronomers were quite sure that there was life on Mars. In 1877, with the help of improved telescopes, astronomers saw two tiny objects around Mars. Even serious astronomers said these two very small objects were spacecraft. In fact, they were two moons in orbit around Mars. In the same year, Schiaparelli, a well-known astronomer of the time, drew a map of Mars. Although this was not the first map of Mars, it created a lot of interest among astronomers. The map showed lakes, seas and forests. It also showed narrow lines. Schiaparelli called these lines canali in Italian. The correct English word for canali is channels, but it came into English as canals (which means man-made waterways). Because of this mistake people thought that there were living things on Mars and they built these canals to carry water from one place to another. In 1965 the spacecraft Mariner 4 flew past Mars. It did not land on Mars, but it sent Earth twenty-two photographs. They gave a good idea of the surface of Mars - a place full of craters and high areas of volcanic rock. Then in 1971, Mariner 9 discovered four volcanoes on Mars. They were much larger than the volcanoes here. The largest one, 25 Olympus Mons, was 25 kilometres high and 500 kilometres from side to side. In 1976, two spacecraft, Viking 1 and Viking 2, landed on the surface of Mars. Radio signals from Earth controlled the two spacecraft. Viking 1 and Viking 2 could feel and control their 30 environment. They could also do self-repair. That is, when there was a problem with a part of the spacecraft, they could repair the damage themselves. ;Wng 1 left Cape Canaveral, Florida, for Mars on August 20, "j. > / 5. It travelled around the sun and it took eleven months to complete 35 its trip of almost 1,000 million kilometres. It was very difficult for Viking 1 to find a safe landing place because of the strong winds and the rough rocky surface of Mars. Finally on July 20, 1976, it landed safely on Mars. And Viking 2 landed on Mars on September 3, 1976. 103 40 The two Vikings sent a lot of new information to Earth. For example, they discovered the existence of the gases krypton and xenon in the Martian atmosphere. (Astronomers already knew about carbon dioxide, water vapour, oxygen, nitrogen and argon). Astronomers feel that many more important discoveries about Mars 45 are possible. They expect to find some form of life there in the future. In my opinion, they won't know that for sure until they go to Mars.

A. 1. Line 5, 'both planets' refers to _: .
2. Line 17, 'this mistake* refers to .
a) using the English word canals for the Italian word canali
b) building canals to carry water
c) using the English word channels
d) drawing a map of Mars
3. Line 24, 'here' refers to
a) the surface of Mars
b) in Mariner 9
c) on Earth
d) the four volcanoes on Mars
4. Line 9, 'tiny' means ; .
5. Line 30, 'They could also do self-repair*.
In other words, .
a) there were problems in the spacecraft
b) they could repair the damage themselves
c) they could control their environment

LIVEWORKSHEETS

d) they had difficulty in repairing the damage 104

B. Match the items in the two columns. In column B, there are more items than you need.

1. the name of a volcano on Mars
2. the reasons for the landing problems of Viking 1 on Mars
3. what Schiaparelli's map of Mars showed
4. what controlled Viking 1 and Viking 2
5. the departure and arrival dates of Viking 1
6. the names of the new gases in the Martian atmospere
7. how long it takes Mars to complete one turn around itself

B

a) man-made waterways
b) August 20, 1975 - July 20, 1976
c) craters and high areas of volcanic rock
d) twenty-four hours, thirty-seven minutes, twenty-seven seconds
e) krypton and xenon
f) about 1,000 million kilometres
g) lakes, seas, forests and narrow lines
h) carbon dioxide, water vapour, oxygen, nitrogen and argon
i) Olympus Mons
j) August 20, 1975 - September 3, 1976
k) strong winds and rocky surface
l) the two moons in orbit around Mars
m) radio signals from Earth

C. Mark the statements as True (T) or False (F).

1. The day on Earth is shorter than the day on Mars.
2. Astronomers were interested in Schiaparelli's map because no one had made a map of Mars before 1877.
3. It took Viking 1 almost a year to reach Mars.
4. In the text, Dr. Grady gives the names of four spacecraft which landed on Mars.
5. Astronomers have not lost their hope to find life on Mars. 105

LIVEWORKSHEETS