**Chapter 2: Exploring Space**

**Study Guide**

Name: Class: Date:

**Ch. 2.1 The Science of Rockets**

1) Scientists made major advances in rocket design during World War II. How were rockets used

during WW II?

2) What is Newton’s Third Law of Motion?

3) What is the action force that propels a rocket forward?

4) What is the reaction force that propels a rocket forward?

5) What is the difference between orbital velocity and escape velocity?

5) Know what happens to each stage of a multi-stage rocket once it runs out of fuel.

6) Which part of the multi-stage rocket reaches space?

**Ch. 2.2 The History of Space Exploration**

1) What agency did the US government create in 1958 to be in charge of its space program?

2) What is the timeline for the first humans in space?

a)

b)

c)

3) What did American astronauts bring back from the moon for scientists to study?

4) What are the two main purposes for the space shuttle?

a)

b)

5) The first space station was placed in space by the Soviets. Its name was .

It stayed in orbit for 15 years before it fell to Earth.

6) What is a space station?

7) Today’s space station which started construction in the 1980s and is still being built is:

8) What is a space probe?

9) What is a rover, and typically what is its job?

**Ch. 2.3 Using Space Science on Earth**

1) What are observations satellites used for:

a)

b)

c)

2) How do observation satellites collect data?

3) Examples of what remote sensing might collect:

a)

b)

**SHORT ANSWER QUESTION**S

1) Two challenges posed by the near-vacuum in space:

a)

b)

2) Two “firsts” achieved by the Soviet Union:

a)

b)

c)