

# Probe Design

## EXAMPLE ANSWER SHEET

**Task:** You want to find out if any of the moons of Jupiter have magnetic fields. You have a tight budget, so you need to design the least expensive probe possible. Design a probe by putting check marks next to those items you would include.

### Probe Type

- ☒ Flyby
- ☐ Orbiter
- ☐ Lander

### Communication

- ☐ Low Gain Antenna
- ☒ High Gain Antenna

### Power Source

- ☐ Battery
- ☒ Solar Panels
- ☐ Thermoelectric Generator

### Instruments

- ☐ Barometer
- ☐ Magnetometer
- ☐ Spectrograph
- ☐ RADAR
- ☐ Seismograph
- ☒ Thermometer
- ☐ Infrared Camera
- ☐ Wide Angle Camera
- ☐ Narrow Angle Camera

Name\_\_\_\_\_

Class Period\_\_\_\_\_

**Task:** You are considering Titan as a possible home for one of the alien species, and you need to know its atmospheric pressure, what its atmosphere is made of, and whether or not it has earthquakes. Design a probe by putting check marks next to those items you would include.

**Probe Type**

- ☐ Flyby
- ☐ Orbiter
- ☒ Lander

**Communication**

- ☐ Low Gain Antenna
- ☒ High Gain Antenna

**Power Source**

- ☐ Battery
- ☐ Solar Panels
- ☒ Thermoelectric Generator

**Instruments**

- ☒ Barometer
- ☐ Magnetometer
- ☒ Spectrograph
- ☐ RADAR
- ☒ Seismograph
- ☐ Thermometer
- ☐ Infrared Camera
- ☐ Wide Angle Camera
- ☐ Narrow Angle Camera

Name \_\_\_\_\_

Class Period \_\_\_\_\_

## Probe Design

**Task:** You would like to design the least expensive probe possible to find out more about temperature ranges of several areas on Mercury. Put check marks next to those items you would include.

### Probe Type

- ☐ Flyby
- ☒ Orbiter
- ☐ Lander

### Communication

- ☒ Low Gain Antenna
- ☐ High Gain Antenna

### Power Source

- ☒ Battery
- ☒ Solar Panels
- ☐ Thermoelectric  
Generator
- \*Battery inclusion  
optional; solar inclusion  
not optional

### Instruments

- ☐ Barometer
- ☐ Magnetometer
- ☐ Spectrograph
- ☐ RADAR
- ☐ Seismograph
- ☐ Thermometer
- ☒ Infrared Camera
- ☐ Wide Angle Camera
- ☐ Narrow Angle Camera

Name\_\_\_\_\_

Class Period\_\_\_\_\_

### Probe Design

**Task:** You think that Pluto may be a good home for the Akona, but need to know if it has water or earthquakes. You would also like to take pictures of broad areas of its surface to look for possible mountain ranges. Design a probe by putting check marks next to those items you would include.

#### Probe Type

- ☐ Flyby
- ☐ Orbiter
- ☒ Lander

#### Communication

- ☐ Low Gain Antenna
- ☒ High Gain Antenna

#### Power Source

- ☐ Battery
- ☐ Solar Panels
- ☒ Thermoelectric Generator

#### Instruments

- ☐ Barometer
- ☐ Magnetometer
- ☒ Spectrograph
- ☐ RADAR
- ☒ Seismograph
- ☐ Thermometer
- ☐ Infrared Camera
- ☒ Wide Angle Camera
- ☐ Narrow Angle Camera