Exploration Earth™
MISSION OCEAN

Final Mission Orders	
Order	**Station Responsible**
1. Turn on Interior/Exterior Lights	Propulsion Station(SE Page 11)
2. Add Crew/Supplies – 3400lbs Aft Compartment, 6800lbs Forward Compartment (SE Page 13)	Main Trim/Ballast Station (SE Page 11)
3. Fill Main Ballast Tanks (SE Page 14)	Main Trim/Ballast Station
4. Turn power to pumps.	Propulsion Station
5. Add water from Sea to AT using Pump 5 (P5) until the density reaches 1.0000. (SE Page 15)	Main Trim/Ballast Station
6. Turn on power to sensors.	Propulsion Station
7. A. Turn Engine on to Ahead 1/4 (25 amps) B. Come to a heading of 045 using the rudder	Propulsion Station Drive/Dive Stations (SE Page 11)
8. A. Take Temperature and Sulfur Dioxide readings every 1 minute throughout the mission. B. Plot Temperature and Sulfur Dioxide readings C. Record and Plot the submarines position every 1-2 minutes	A. Researcher Station (SE Page 12) B. Temperature & Sulfur Dioxide Plot(s) (SE Page 12) C. Navigator/Navigator Plot(s) (SE Page 12)
9. Drive Submarine to -200 ft (SE page 15, part II, a-f)	Drive/Dive Stations
10. Once Submarine reaches -200 ft, increase speed to ahead 1/2 (50 amps)	Propulsion Station
11. State, "When **Y** =1300, come to heading of 090." Alert team as **Y** coordinate approaches 1300	Navigator/ Navigator Plots
12. When **Y** reaches 1300, turn rudder to come to a heading of 090.	Drive/Dive Stations
13. The Y value should be between 1325 – 1375 at a heading of 090. If it is not, make necessary adjustments.	Navigator/ Navigator Plots Drive/Dive Stations
14. Navigator alert team as **X** approaches **1800.**	Navigator/Navigator Plots

Order	***Station Responsible***
15. When **X reaches 1800**, slow the submarine to a speed between 0 and 1/4, about 12 amps	Propulsion Station
16. Continue forward until the volcano is visually in sight and make any necessary changes in heading.	Navigator/ Navigator Plots Drive/Dive Stations
17. Alert team when SO_2 and Temp readings approach 99/100 range.	Researcher Station Temperature & Sulfur Dioxide Plot(s)
18. Drive around the volcano and take temperature and SO_2 readings.	Drive/Dive Stations Research Station/Temp and SO_2 Plots
19. A. Turn away from volcano at a heading 180. B. Record the Y coordinate when the sub reaches heading of 180	A. Drive/Dive Stations B. Navigator/Navigator Plots
20. Increase speed to ahead 3/4	Propulsion Station
21. Go 500 yards. Navigator/Navigator Plots, **subtract 500** from the Y coordinate recorded in the previous step and alert team as the sub approaches this coordinate.	Drive/Dive Navigator/Navigator Plots **Example: If the Y coordinate you recorded when the heading reached 180 was 1300, then 1300-500 = 800. You will want to alert the team to slow down to 1/4 and come to a heading of 000 at Y =800.**
22. When desired Y coordinate is reached: A. Begin stopping the submarine, by moving the slider to ahead 1/4 B. Come to a heading of 000.	A. Propulsion Station B. Drive/Dive Station
23. Once heading of 000 is reached, **stop completely**, you may have to put the **sub in reverse** to do this by taking the slider bar slightly below zero and then back to 0 when the speed reaches 0.	Propulsion Station
24. Surface by clicking "Sound Alarm and Prepare to Surface" followed by clicking "Surface" in the Main Ballast Tab	Main Trim/Ballast Station
25. In the Mission Log, send a message to tender that sub has surfaced with exact coordinates.	Drive/Dive Team
Mission Complete!	