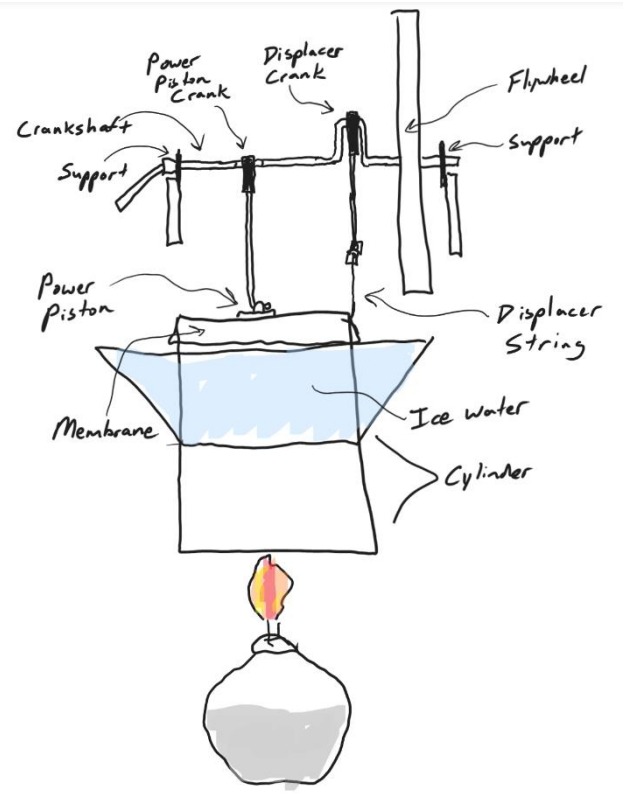
Stirling Engine Questions, Part 1 Name: _____

In diagram #1, on the right…



1. What is the position of the displacer crank?
   Highest Point *Lowest Point* *Middle*
2. Where in the cylinder is the displacer?
   Top *Bottom* *Middle*
3. Where is most of the air in the cylinder?
   Top *Bottom* *Middle*
4. What is happening to the motion of the air molecules in the cylinder?
   Speeding up *Slowing Down* *Nothing*
5. Why is this happening to the air molecules in the cylinder?
6. What is happening to the power piston?
   It's being forced upward
   It's being forced downward
   It's not moving
7. Why is this happening to the power piston?
8. What is happening to the mass of the air inside the cylinder?
   Increasing *decreasing* *No change*
9. Explain why this is happening to the mass?
10. What is happening to the volume of the air inside the cylinder?
    Increasing *decreasing* *No change*
11. Explain why this is happening to the volume of the air in the cylinder?
12. What is happening to the density of the air in the cylinder?
    Increasing *decreasing* *No change*
13. Explain why this is happening to the air's density.

In diagram #2 (on the right)…

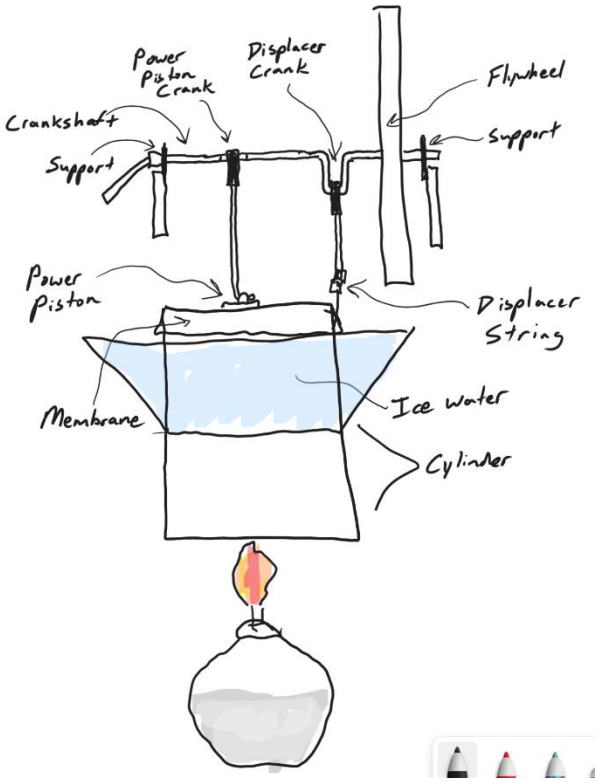
14. What is the position of the displacer crank?
Highest Point Lowest Point Middle

15. Where in the cylinder is the displacer?
Top Bottom Middle

16. Where is most of the air in the cylinder?
Top Bottom Middle

17. What is happening to the motion of the air molecules in the cylinder?
Speeding up Slowing Down Nothing

18. Why is this happening to the air molecules in the cylinder?



19. What is happening to the power piston?
It's being forced upward
It's being forced downward
It's not moving

20. Why is this happening to the power piston?

21. What is happening to the mass of the air inside the cylinder?
Increasing decreasing No change

22. Explain why this is happening to the mass?

23. What is happening to the volume of the air inside the cylinder?
Increasing decreasing No change

24. Explain why this is happening to the volume of the air in the cylinder?

25. What is happening to the density of the air in the cylinder?
Increasing decreasing No change

26. Explain why this is happening to the air's density.