The Scientific Method: Walking On The Beach

A. Number the statements below in correct order of Scientific Method.

	A	The scientist goes back to the lab and does the following: 1. Fills two beakers with 1L of fresh water. 2. Dissolves 35 g of salt in one of the beakers. 3. Places both beakers in a freezer at a temp. of -5^0C. 4. Leaves both beakers in the freezer for 24 hours.
	B	The scientist wonders if adding a different chemical (ie. sugar) would give the same results. He decides to do an experiment to test that the next time.
	C	The scientist writes, "If dissolved salt affects the freezing point of water, then the more salt, the lower the freezing point".
	D	The scientist goes to a library and reads a number of articles about the physical properties of solutions (ie. water and salt).
	E	A scientist walking along a beach by the ocean in the winter notices that the ocean is unfrozen. Yet in the city there are pools of fresh water that are frozen. He wonders why sea water freezes at a lower temperature than fresh water.
	F	After 24 hours, the scientist examines both beakers and finds the fresh water to be frozen but the salt water is still liquid. He records this in his notebook.
	G	The scientist sits at a desk and writes, "My guess is that there is a relationship between the freezing temperature of water and the presence of salt in the water".
	H	The scientist has the answer: the presence of salt in the sea water causes it to freeze at a lower temperature.

B. Write the letter for the statement that contains:

1. Question to be solved: _____
2. Background research: _____
3. Hypothesis: _____
4. Prediction: _____
5. Experiment: _____
6. Observations + recording data: _____
7. Conclusions: _____
8. Revising the experiment: _____

C. On the back of this page, identify the variables:

- Independent
- Dependent
- Controlled