

Name: \_\_\_\_\_ Band: \_\_\_\_\_

**Lab 9.1**

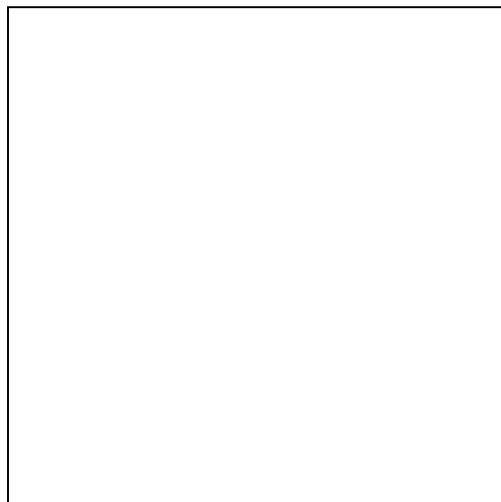
**Lab Objective:** To observe the process of sublimation, and to explain why it is possible for a substance to “skip” the liquid state when a solid becomes a liquid.

Materials:

- |                    |           |                |
|--------------------|-----------|----------------|
| 1. iodine crystals | 2. Beaker | 3. Watch Glass |
| 4. Burner          | 5. Ice    | 6. Ring Stand  |

Procedure:

1. Obtain a few crystals of iodine and place in the beaker.
2. Cover the beaker with a clean, DRY watch glass.
3. Place some ice on top of the watch glass.
4. Heat the beaker **SLOWLY**.
5. When all of the purple gas is gone, stop heating.
6. Record your observations.



**Draw what you observed today in the box: (2 points)**

**Observations:** In a well-composed sentence, *completely* describe what you observed during this experiment. Don't forget the role of the ice and watchglass! (2 points)

---

---

---

**Summary Questions: (1 point each)**

1. Fully describe the process of sublimation.

---

---

---

2. How could the process of sublimation be used to separate a mixture?

---

---

---

3. From an energetic perspective, as discussed in class today, why might sublimation be surprising?

---

---

---

4. Why do you think Iodine was used in this experiment and not another substance?

---

---

---

5. Ice will sublime, but not “usually”. Make a realistic hypothesis about when ice may sublime.

---

---

---