Decomposition Timeline

Purpose

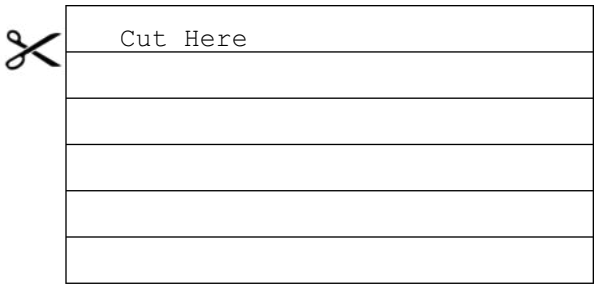
Research the event that take place during decomposition in order to better estimate time of death.

Background

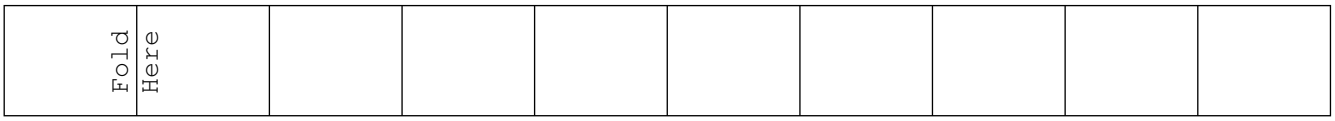
Understanding what happens to a body after death is helpful to crime scene investigators in determining when the death occurred. In addition to the actual physical conditions present in the corpse, researchers study the kinds and life stages of insects present in a decaying body to help pinpoint the time of death. There are five decomposition stages. Many factors influence how quickly the decomposition stages progress, such as temperature, moisture and whether the body is exposed or buried. Decomposition is faster at high temperatures, if the body has traumatic injuries, or if the remains are exposed.

Procedure

1. Cut a long 6” strip of butcher paper to use as your time line.



2. Divide the strip into 10 equal squares fold along the lines making a booklet. This will be used front and back to give you 20 squares.



3. Research the stages of decomposition and take notes ing the table below.
4. Be sure to use and define each of the following terms from your research
    a. Rigor mortis
    b. Algor mortis
    c. Livor motis
    d. Autoyse
    e. Initial Decay
    f. Putrefaction
    g. Black Putrefaction
    h. Dry Decay
    i. Butyric Fermentation
5. Once you have finished your research, transfer the information you have gathered onto your timeline. Use proper spelling and grammar. Include at least five colors and five appropriate pictures (no gore).

6. Use What you have learned to answer the questions on the scenario cards at the end of the lab

Title Page	Title, name, period
Introduction	**Define death and decomposition.**
0 hr	
1 hr	
2 hr	
4 hr	
8 hr	
12 hr	
24 hr	
30-32 hr	

36 hr	
48-72 hr	
2 days	
4 days	
6-10 days	
10-20 days	
20-50 days	
Over 50 days	
Calculating Time of Death Through Temperature Change	**1 hr = _____** **7 hr = _____** **3 hr = _____** **9 hr = _____** **5 hr = _____** **11 hr = _____**
Works Cited	

Decomposition Questions

Scenario Questions

Victim 1

1)

2)

3)

Victim 2

1)

2)

3)

Victim 3

1)

2)

3)

Victim 4

1)

2)

3)

Victim 5

1)

2)

3)

Victim 6

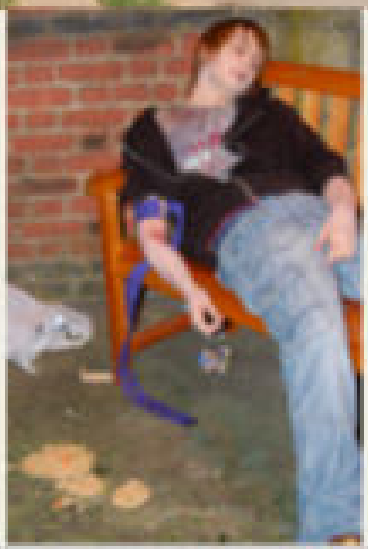
1)

2)

3)

Victim 1

- An unidentified male was found in an abandoned house south Dallas. His body temperature was recorded to be 91.6°F. When officers arrive, they found his body to be in rigor mortis, with only his legs showing signs of not being in rigor mortis. His eyes were open but did not show signs of corneal clouding.
- 1) What was his time of death?
- 2) What piece of information is inconsistent with the other(s)?
- 3) What was his cause of death?

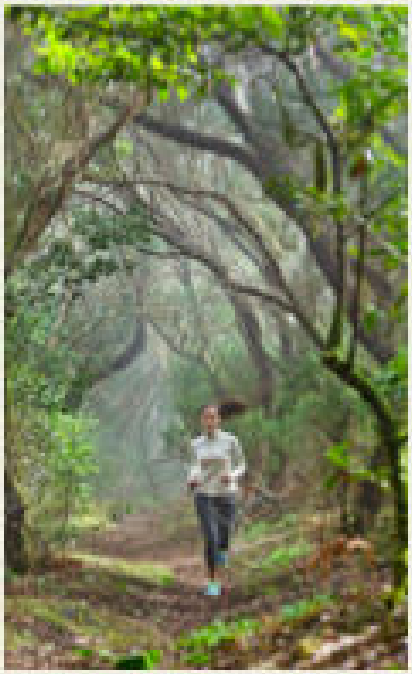


Victim 2

- A middle-aged woman was found floating at the bottom of a pool. Her temperature was recorded to be 84°F. Neighbors saw the victim 3 hours before, when she ate food from their BBQ. When the coroner performed the autopsy, food was found in her stomach but not her small intestine.
- 1) *When was the time of death?*
- 2) *Which piece of information contradicts your finding?*
- 3) *Why is that piece of information "inaccurate"?*

Victim 3

- A woman was reported missing while out jogging. During a police search, her body was found on the trail hours later. She was still in her track suit and was sweaty at the time of her death. A suspect quickly confessed he had killed her 6 hours before police found her.
- 1) *What should her body temperature be when she was found by the police?*
- 2) *If her temperature was 88°F, what 2 factors accelerated her heat loss?*
- 3) *What factor would have slowed down her heat loss?*



Victim pictured above

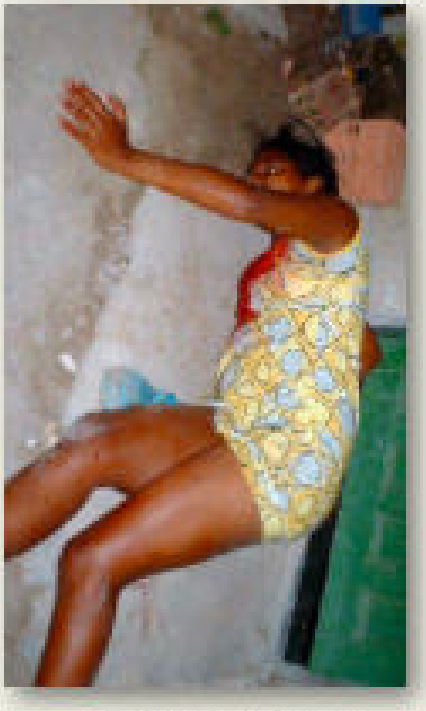
Victim 4

- A morbidly obese man was found in a park bench dressed in sweatpants on a cold, windy day. According to first responders, his jaw and neck were stiff while the rest of his body wasn't. Donuts were found in his stomach but not intestines.
- 1) *When was his time of death?*
- 2) *What 2 factors accelerated his heat loss?*
- 3) *What 2 factor would have slowed down his heat loss?*

Victim pictured above

Victim 5

- A woman was found in her an alleyway behind her house. Her body showed signs of rigor mortis, except her jaws, which were no longer stiff. Her cause of death was due to blood loss from multiple stab wounds.
- 1) *When was her time of death?*
- 2) *If her eyes were closed, would they have cloudy corneas?*
- 3) *At hour 30, what body parts would be limp? Which ones would be undergoing rigor mortis at hour 36?*



Victim pictured above

Victim 6

- An elderly gentleman was discovered dead in his bedroom. His last visitor was a neighbor dropping off mail over a week ago. When first responders discovered the body, it was completely limp, with no signs of rigor mortis. His skin showed signs of blisters and bloating had set in only in his abdomen.
- 1) *When was his time of death?*
- 2) *What is the next step in decomposition in his body?*
- *3) What would the most likely manner death be for him?*