

**Grade / Age: 14-18**

**Topic: Decomposition of the Human Body/Stages of Death**

**Subject area: Biology/Forensics**

**Keywords: Decomposition, Death, Body**

**Single/ team work: either**

**Language: English**

**Duration: 2x60 minute periods**

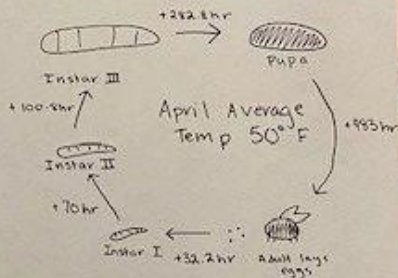
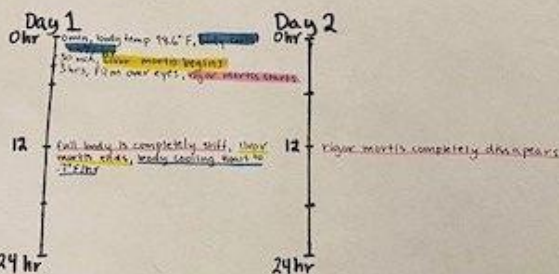
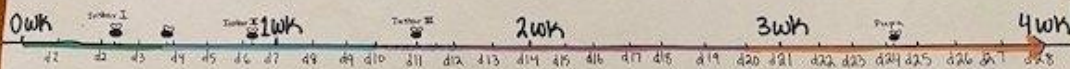
**Description of the Task:**

- 1) You will create a timeline on either a large sheet of paper OR in another medium to represent the changes that the decomposing body undergoes in the first 3-4 weeks after death.
- 2) Use a **different color** for tracking each of the following changes:
  - a. temperature loss/ algor mortis
  - b. rigor mortis
  - c. blowfly activity: egg through adult (other insects encouraged but optional)- assume average spring temperatures in Seattle
  - d. livor mortis
  - e. stages of decomposition/appearance of body
- 3) Your timeline should start at time "zero" (moment of death) and stretch on from there to end at "4 weeks since death"

**Solutions of the Task:**

Timeline of Events After Death

Liz Bell  
P.6



Fresh  
From time of death  
skin tight/grey in colour  
muscles relax  
bladder/bowels relax



Bloat  
after 3-4 days  
Body swells, starting  
at the gut



Putrefaction  
10-20 days to begin  
follows something  
"ripping" during bloat  
Body fluid drains



Dry remains  
skin and soft tissues  
are hardly present,  
though fingernails and  
hair remain (can happen as soon  
as 20 days)



A BRIEF TIMELINE OF

# BODY DECOMPOSITION

Key

Red- Algor Mortis

Orange- Rigor Mortis

Green- Livor Mortis

Blue- Blowfly Lifecycle

Purple- stages of decomposition





## Body Decomposition Timeline

### Day 1

**0:00** **At the time of death:**  
Skin tightens and becomes gray in color. All muscles relax, bladder and bowels empty. At ideal temperatures, body will decrease 1.4 degrees per hour for the first 12 hours.



**0:30** **30 minutes to 12 hours**  
Livor Mortis begins; body loses color as blood settles.

**0:00** **At or soon after time of death:**  
Blowflies land on body and lay eggs within the first few minutes (assuming weather conditions allow, i.e. sun, wind, rain, etc.)

**3:00** **Hour 3 - 4:**  
Rigor mortis begins, body starts to stiffen starting at the head and moving down.

**3:00** **Hour 3:**  
Corneal clouding begins, film spreads over eyes.

**12:00** **After 12 hours:**  
Body temperature drops at a rate of 0.7 degrees F per hour in standard conditions

**12:00** **Hour 12:**  
Body becomes entirely stiff.

**23:00** **Hour 23:**  
Layed eggs reach Instar I.

### Day 2

**12:00** **Day 2, Hour 12:**  
Rigor mortis completely disappears.



### Day 3

**3 - 4** **Day 3 to 4:**  
Body begins to bloat; gasses in the body begin in the gut. Front of body begins to swell.  
  
Body as notable, unpleasant odor and loses its lung fluid through the nose and mouth.

**2:00** **Day 3, Hour 2:**  
Maggots reach Instar II,

**24:00** **End of day 3:**  
Instar II reaches Instar III.

### Day 4



**1:00** **Around day 4:**  
Putrefaction begins, soft tissues rapidly disappear and the body begins to collapse in on itself. This stage can last up to several weeks.

**Prior knowledge:**

- stages of death
- entomology

**Comments:**

**Rubric Used here**

	5	4/3	2	1/0	Score of 5
<b>"Dates"/Events Since Death</b>	All dates indicated on timeline are correct and are sequenced in the proper order	At least 1 of the dates or sequences is not in the proper order	At least 2 of the dates or sequences are not in the proper order	At least 3 of the dates or sequences are not in the proper order	_____
<b>Notes</b>	The timeline contained at least <b>15 events</b> related to the topic	The timeline contained at least 10 events related to the topic	The timeline contained at least 7 events related to the topic	The timeline contained less than 3 events related to the topic	_____
<b>Legibility</b>	Project is neat and writing is legible with no grammatical or typographical errors	Project is neat and writing is legible with few grammatical or typographical errors	Project is not neat, but writing is legible with no grammatical or typographical errors	Project is neither neat nor legible, may have some errors	_____
<b>Eye Appeal</b>	Project uses at least 5 colors	Project uses at least 3 colors	Project uses 2 colors	Project is written in pencil or pen	_____
<b>Pictures</b>	Project uses at least 5 appropriate pictures	Project uses 3-4 appropriate pictures	Project uses 2 appropriate pictures	Project uses 0-1 appropriate pictures	_____

- This timeline project can be modified to include a variety of topics, depending on what the class is covering or where student interest lay.
- there is a 'yuck' factor to this project which might take some extra support from the teacher, depending on the group of students.

**Connection to other subjects/topics/areas:**

- C.S.I., natural history, biology, online timeline software (Canva, etc.)