

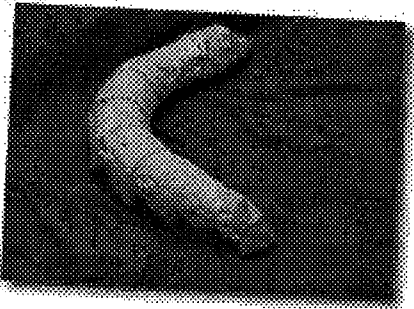
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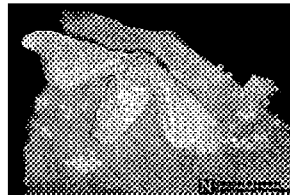
Case Study One : Amino Acids And Evolution

Purpose :

Silkworm vs. Hornworm vs. Fruit fly



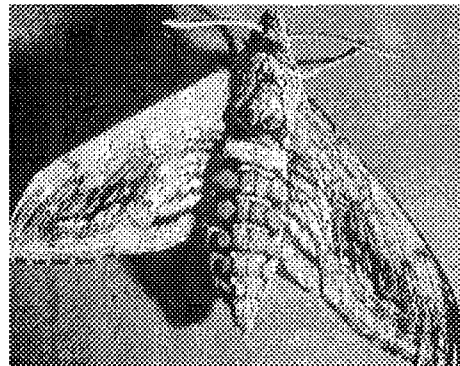
Silkworm Larva



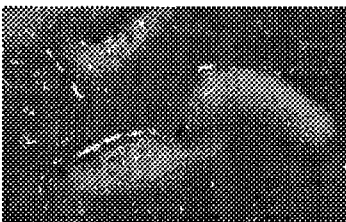
Silkworm Moth



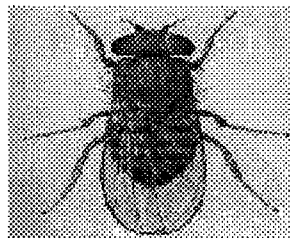
Hornworm Larva



Hornworm Moth



Fruit fly Larvae



Fruit fly

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Fill In Table 2 To calculate the percentage of each amino acid in each organism's *cytochrome c* enzyme.

TABLE 2 : Amino Acid Percentage

Abbreviation	Amino Acid Name	Silkworm Moth	Hornworm Moth	Fruit fly
Ala	Alanine	10 %		
Arg	Argenine			
AsA	Aspartic Acid			
Cys	Cysteine			
GluA	Glutamic Acid			
Gly	Glycine			
His	Histidine			
Leu	Leucine			
Lys	Lysine			
Met	Methionine			
Phe	Phenylalanine			
Pro	Proline			
Ser	Serine			
Thr	Threonine			
Try	Tryptophan			
Tyr	Tyrosine			
Val	Valine			

- Use Table 1 to complete procedures 3 and 5. Complete all other procedures on a piece of lined paper under the Title : Case Study One : Procedures

Table 1: Amino Acid Sequence

	1	2	3	4	5	6	7	8	9	10
Silkworm	Cys	Ala	His	Cys	Ala	AsA	Leu	Val	Try	Ser
Hornworm	Cys	Ala	His	Cys	Ala	AsA	Leu	His	Try	Ser
Fruitfly	Cys	GluA	His	Cys	Ala	AsA	Leu	GluA	Try	Ser
	11	12	13	14	15	16	17	18	19	20
Silkworm	Met	GluA	His	Leu	Arg	Phe	Ala	Ser	His	GluA
Hornworm	Met	GluA	His	Leu	Arg	Phe	Ala	Ser	His	GluA
Fruitfly	Met	GluA	His	Leu	Arg	Phe	Ala	Ser	His	GluA
	21	22	23	24	25	26	27	28	29	30
Silkworm	Thr	His	Tyr	Try	Ala	Pro	Phe	AsA	Val	Thr
Hornworm	Thr	Cys	Tyr	Try	Ala	Pro	Phe	AsA	Val	Thr
Fruitfly	Thr	Cys	Tyr	Try	Ala	Pro	His	AsA	Val	Thr
	31	32	33	34	35	36	37	38	39	40
Silkworm	GluA	Tyr	Pro	Met	Gly	Val	Arg	Met	Lys	Phe
Hornworm	GluA	Tyr	Pro	Met	Gly	Val	Arg	Met	Lys	Phe
Fruitfly	GluA	Tyr	Pro	Met	Gly	Ala	Arg	Met	Lys	Phe
	41	42	43	44	45	46	47	48	49	50
Silkworm	Thr	Met	Gly	His	AsA	His	Ala	His	Try	GluA
Hornworm	Thr	Met	Gly	His	AsA	His	Ala	His	Try	GluA
Fruitfly	Thr	Met	Gly	His	AsA	His	Ala	His	Try	GluA

a) Complete the table in your lab book.