

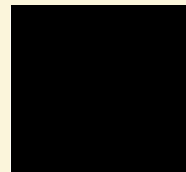
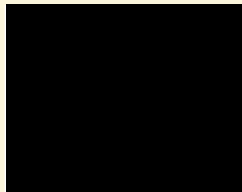
A. Answer the following items briefly.

1. Discuss the major features of chemiosmosis and its role in ATP synthesis.
2. Explain the principle of energy coupling.
3. Compare and contrast chemiosmosis in the mitochondria and the chloroplast.

B. The whole class will play roles of the different components in a chemiosmotic process. For this activity, consider a hypothetical electron transport chain composed of three cytochromes (cyt X, cyt Y, and cyt Z).

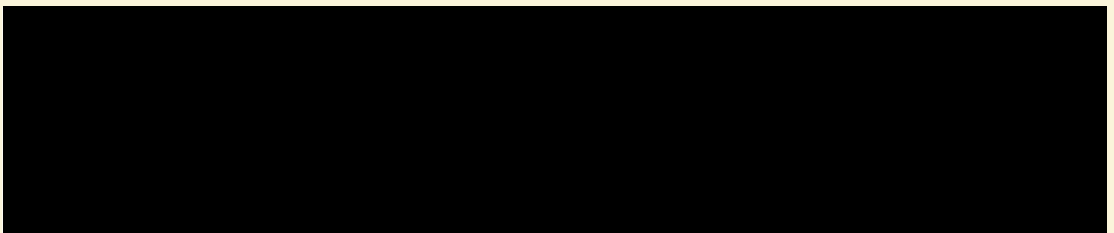
MATERIALS

- name tags with the following labels:
cyt X
cyt Y
- cardboards with the following labels:
NADH
NAD⁺
- sticky tape
- blackboard



PROCEDURE

1. Your teacher will assign your roles. You will be given your appropriate name tags.
2. Recall the components of chemiosmosis. Decipher what each student needs to do and which labeled cardboard each student should carry.



5. Show how “ATP Synthase,” the second component of chemiosmosis, makes the ATPs.