

Advance Organizers:

conceptual frameworks that help students to actively construct their knowledge while allowing faculty to effectively convey large amounts of information

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Objectives

By the end of this discussion, participants will be able to:

- Explain the function of *Advance Organizers* in teaching and learning.
- Identify when an Advance Organizer would likely be useful in one's own teaching.
- Propose key elements of an Advance Organizer that one might use.



Workshop plan

- Participant introduction
- What is an ***Advance Organizer***?
- How are Advance Organizers currently being used in Health Sciences Education?
 - Presenter's experience
 - Discussion: How are participants currently using Advance Organizers?
- Think-Pair-Share: How might incorporation of a new Advance Organizer help your teaching? What attributes might your Advance Organizer have
- Wrap-up and reflection



Introductions

- Name
- Department
- Current knowledge about "*Advance Organizers*"



"Advance Organizer"

- Term coined by David Ausubel, MD, PhD (Educational psychologist and psychiatrist)
 - Ausubel, D.P. (1960). The use of advance organizers in the learning and retention of meaningful verbal material. *Journal of Educational Psychology*, 51, 267-272
- Information presented by an instructor that helps the student organize new incoming information



Ausubel: a constructivist who appreciated the role of lecture and the need for content mastery

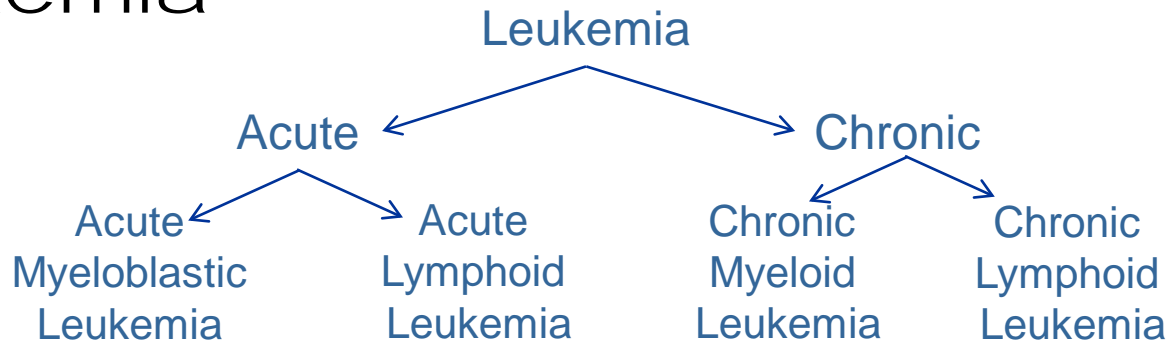


- the most important thing a student brings to a learning situation is what s/he already knows
- students more actively learn from presented information if they are explicitly taught to look for organizing ideas



Examples of *Advance Organizers*

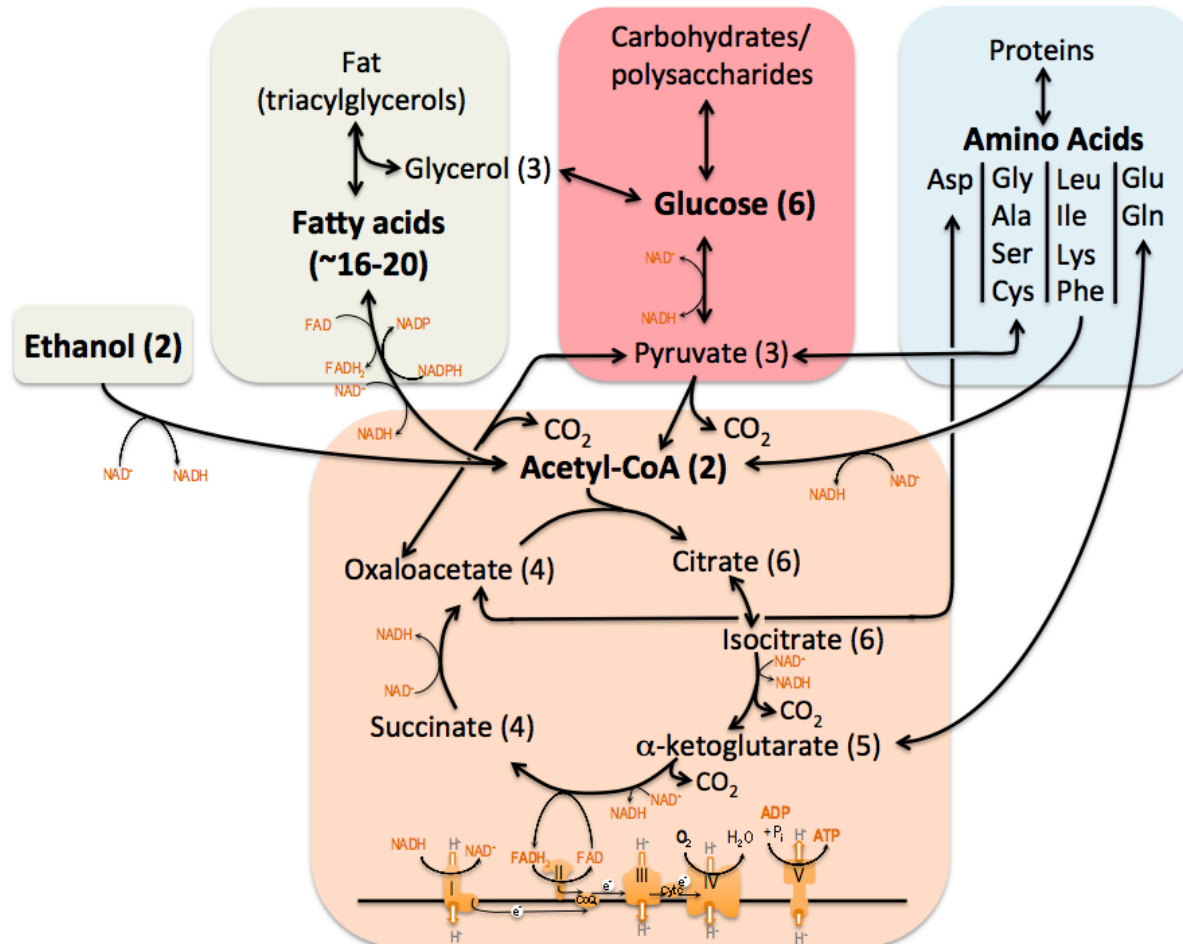
- Symphony
- Leukemia



- Metabolism

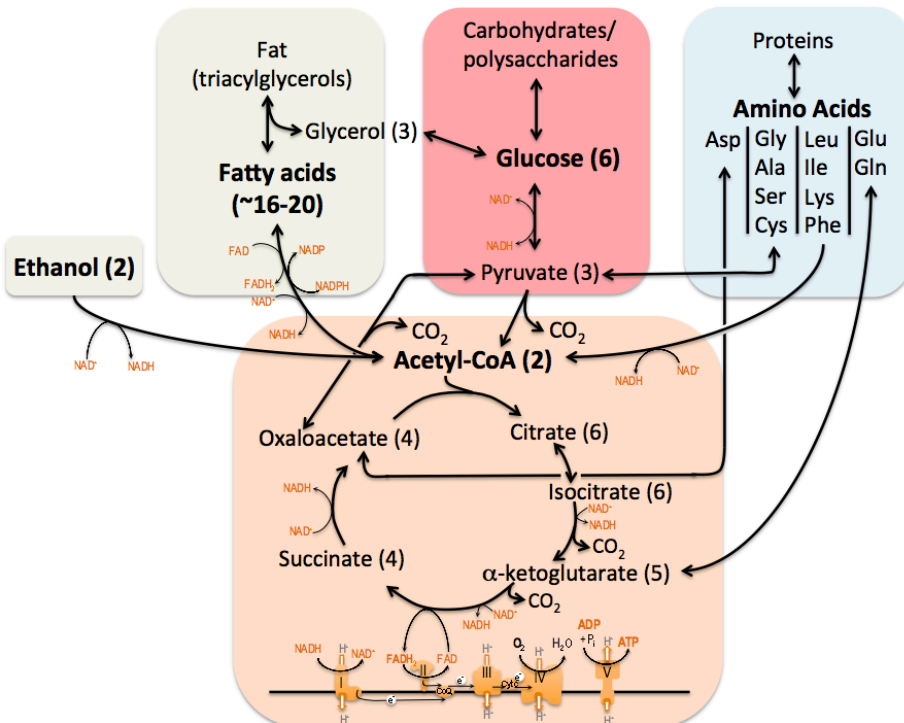


Advance Organizer for metabolism




Utilize this basic framework to answer the following questions:
(Recommended that you work with other students to discuss)

1. What macronutrients do humans catabolize in order to synthesize ATP?
2. What is the first metabolite common to the catabolism of carbohydrates, lipids, proteins and ethanol?
3. How is the energy released from carbon oxidation converted to ATP?
4. Determine whether it is possible for humans to synthesize:



- a. Fatty acids from glucose: Yes or No
- b. Proteins from glucose (assume that all essential amino acids are provided): Yes or No
- c. Glucose from fatty acids: Yes or No
- d. Proteins from fatty acids (assume that all essential amino acids are provided): Yes or No
- e. Glucose from proteins: Yes or No
- f. Fatty acids from proteins: Yes or No
- g. Glucose from ethanol: Yes or No
- h. Fatty acids from ethanol: Yes or No

5. What part of fat can humans convert to glucose? 10



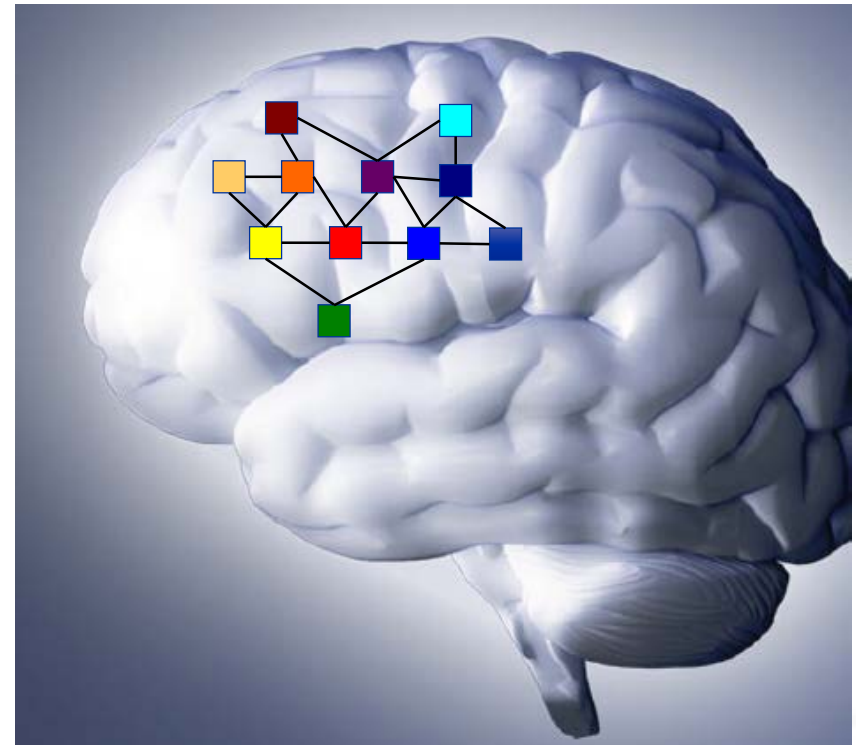
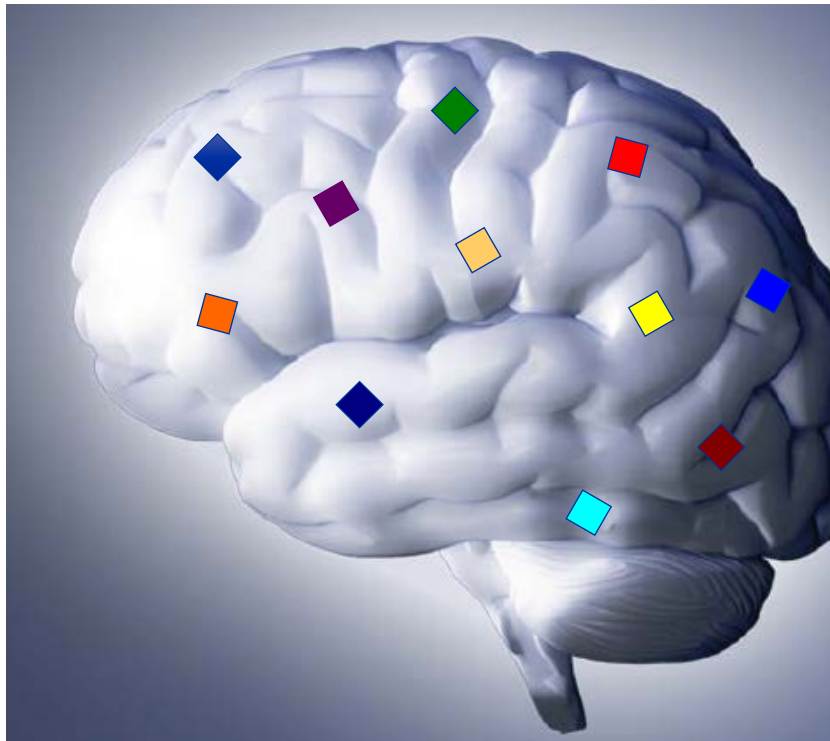
Advance Organizers summary

- an intellectual scaffold for students to appropriately structure ideas and facts
- explain, integrate and interrelate the material in the learning task with previously learned material
- increase the stability and clarity of students' cognitive structures, allowing the students to acquire, organize and retain more information





Rote memorization of random information vs. Construction of cognitively stable structures





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- transmit the system professionals use to structure their understanding and analyze problems



How are you currently using
Advance Organizers (by any
name)?



Think-Pair-Share

1. How might incorporation of a new *Advance Organizer* help your teaching?
2. What attributes might your *Advance Organizer* have?



How might today's discussion
change your current
teaching practices?



Thank you for participating!



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