Chad Segrist

Teacher:	Mr. C.Segrist
Time:	2012-2013 school year

The Course Organizer

Course Dates: January - April

① THIS COURSE:

Biology 2 - Q3

is about: expanding students understanding of the interaction and interdependence of biological systems within the environment.

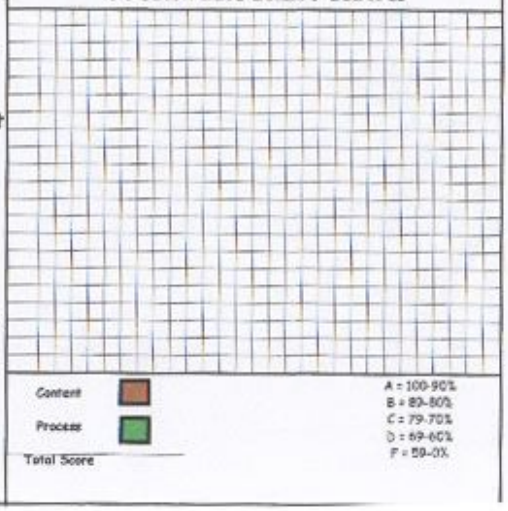
② COURSE QUESTIONS:

1. How have changes and discoveries helped to create new ideas on the processes that affect living organisms?
2. What are the relationships among living organisms that help explain the history of life?
3. How has the evolution of living organisms affected the development of life on Earth?
4. How do the interrelationships and interdependence of organisms affect life within an ecosystem?
5. Why is the interaction of matter, energy, and organisms important to life?
6. What is the relationship between structures of different organisms?
7. How do cycles affect living things?
8. How can we think critically to make relationships between evidence and explanations in a scientific investigation?
9. Why are non-living things important to the life of an organism?
10. **How does human activity impact the environment locally, nationally, and globally?**

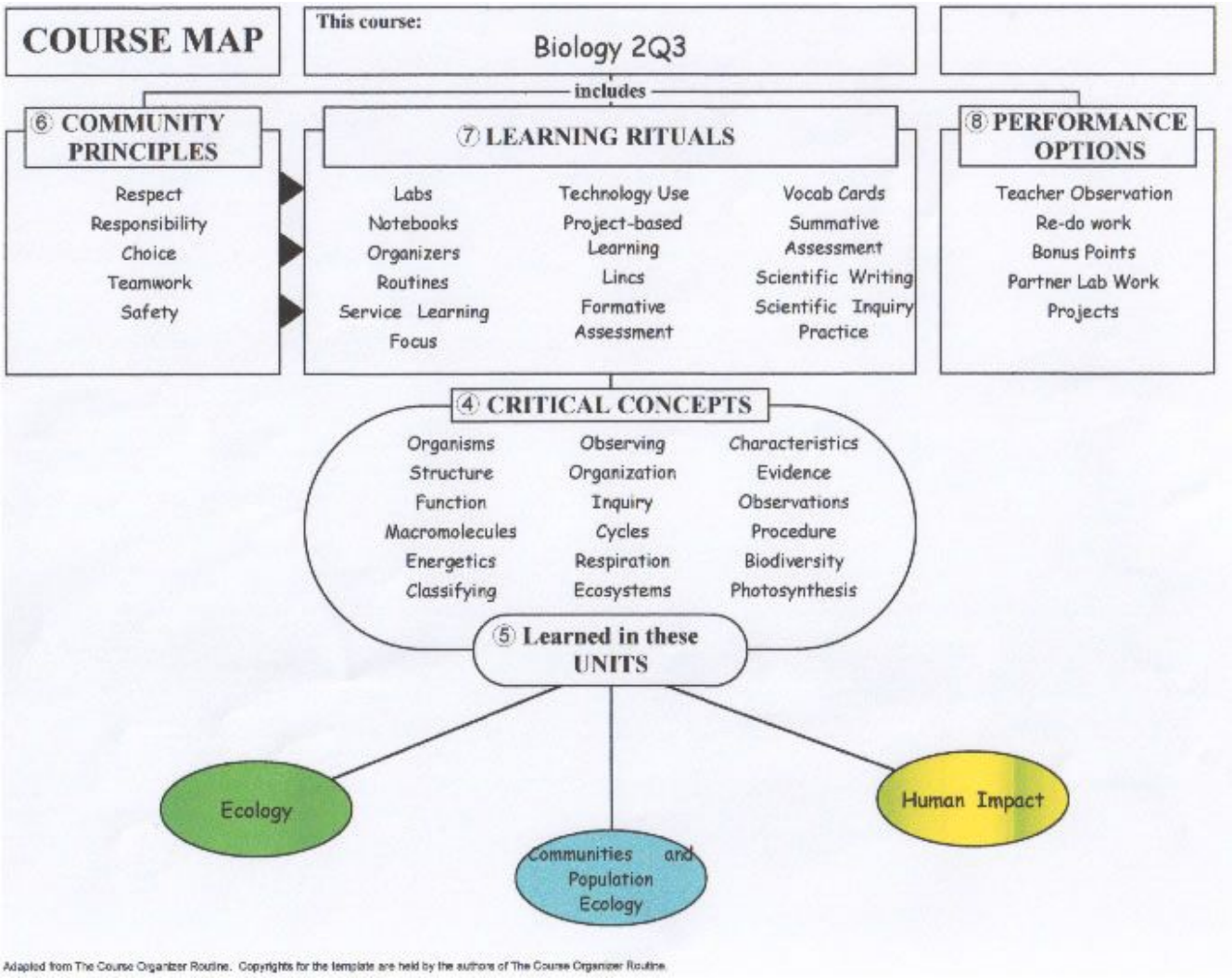
③ COURSE STANDARDS:

What?	*How?*	*Value?*
CONTENT:		
Participation	daily practice of critical content	30%
Classwork	demonstrate understanding	20%
Labwork	understanding concepts	20%
Assessment	applying/demonstrating	20%
Homework	examples/details	10%
PROCESS:		
Participate	attend each and every day	2 pts/day
Lab reports	complete after each lab with partner	pass/fail
Preparation	prepared each and every day	1 pts/day
Service learning projects	complete 1 SLP/semester	20% of semester grade

COURSE PROGRESS GRAPH



Adapted from The Course Organizer Routine. Copyrights for the template are held by the authors of The Course Organizer Routine.



Notes

Students will understand the nature/process of science and demonstrate an ability to practice scientific reasoning by applying it to the design, execution, and evaluation of scientific reasoning.

Students will demonstrate their understanding that scientific knowledge is gathered through various forms of direct and indirect observations, inquiry, and the testing of this information by methods that include, but not limited to, experimentation.

Students will describe the interaction of plants and animals in the absence of humans.

Students will debate the effects of global warming and climate change on the earth using field study techniques and web-based data collection sources.

Students will develop a plan, gather information, and create a presentation using technology, namely remote-sensing, GPS, and GIS, to support their understanding of climatic succession and human impact on an abandoned urban field.

HSCE/HPI:
B1.1 - A-h
B1.2 - A-k
B2.4 - A
B3.1-4 A-F
B5.1-3

Climate Literacy Principles:
* 5A-E: Our understanding of the climate system is improved through the observations, theoretical studies, and modeling.
* 6A-E: Human activities are impacting the climate system.
* 7A-F: Climate change will have consequences for the Earth system and human lives.

The Unit Organizer

NAME Mr. C. Segrist
DATE 11/2012 - 12/2012

④ BIGGER PICTURE

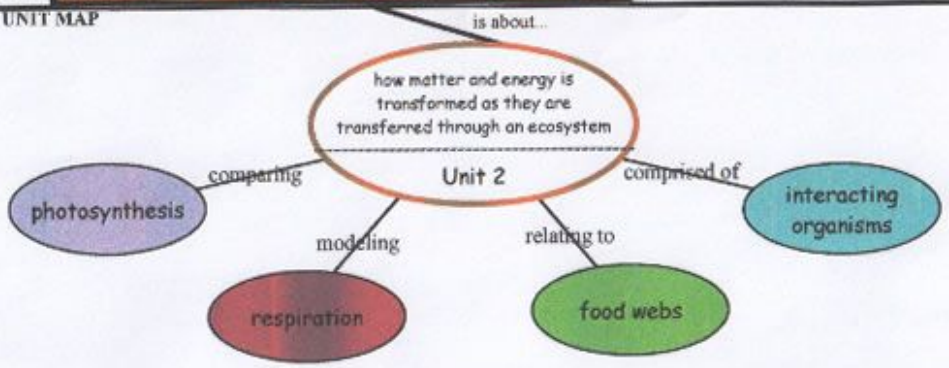
ECOLOGY

② LAST UNIT/Experience	① CURRENT UNIT	③ NEXT UNIT/Experience
Cell energetics	Ecosystems	Communities and population ecology

⑧ UNIT SCHEDULE

1	CO Introduction	NOV.
2	Pre-test	12/1
3	UO Co-consruction	12/2
4	LINCS Routine	ongoing
5	PS Lab 2.1 w/report	12/6
6	Carbon cycling Lab	12/7
7	Presentation Intro	12/9
8	5 E's Lesson	ongoing
9	Vocab cards/review	ongoing
10	review-reteach-reinforce	ongoing
11	Post-test	12/17

⑤ UNIT MAP



⑦ UNIT SELF-TEST QUESTIONS

1. What process leads to energy transfer throughout an ecosystem?
2. How is energy released in an ecosystem?
3. Why is the transfer of matter important to living organisms?
4. What role does living and non-living matter play in the transfer of energy?
5. How are the processes for energy transfer expressed chemically? How can you interpret them?

⑥ UNIT RELATIONSHIPS

create
contrast
processes
describe
cause/affect
relate

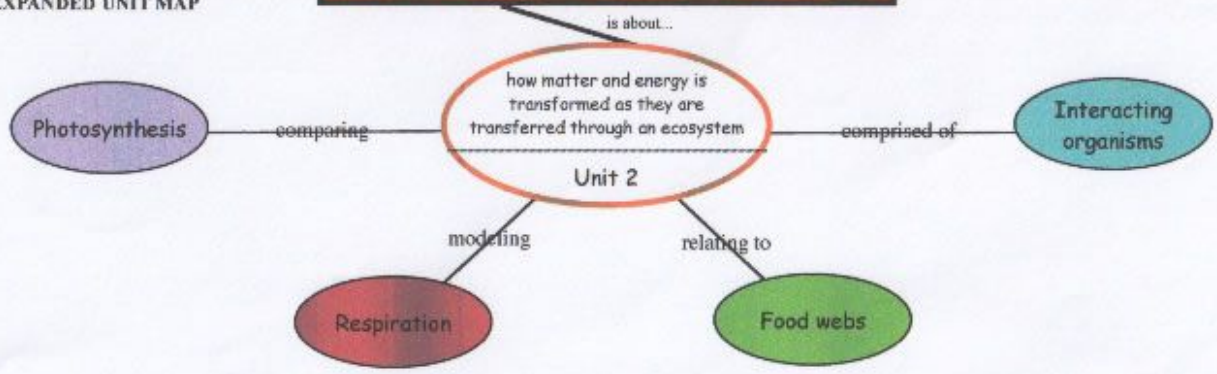
The Unit Organizer

NAME _____

DATE _____

Ecosystems

(9) EXPANDED UNIT MAP



(10) NEW UNIT SELF-TEST QUESTIONS

Students will co-construct expanded unit map as we progress.

Self-test questions will come from student inquiry throughout the unit.

Notes

See CO - Biology 2 - Q3.

LINCS Terms:
ecosystem
carbon cycling
carbon load
photosynthesis
respiration
CO2
matter

Additional Lab: CO2 to Temperature Insect Lab