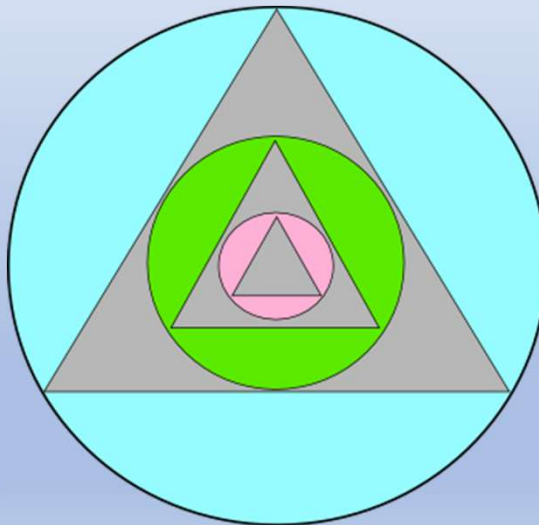
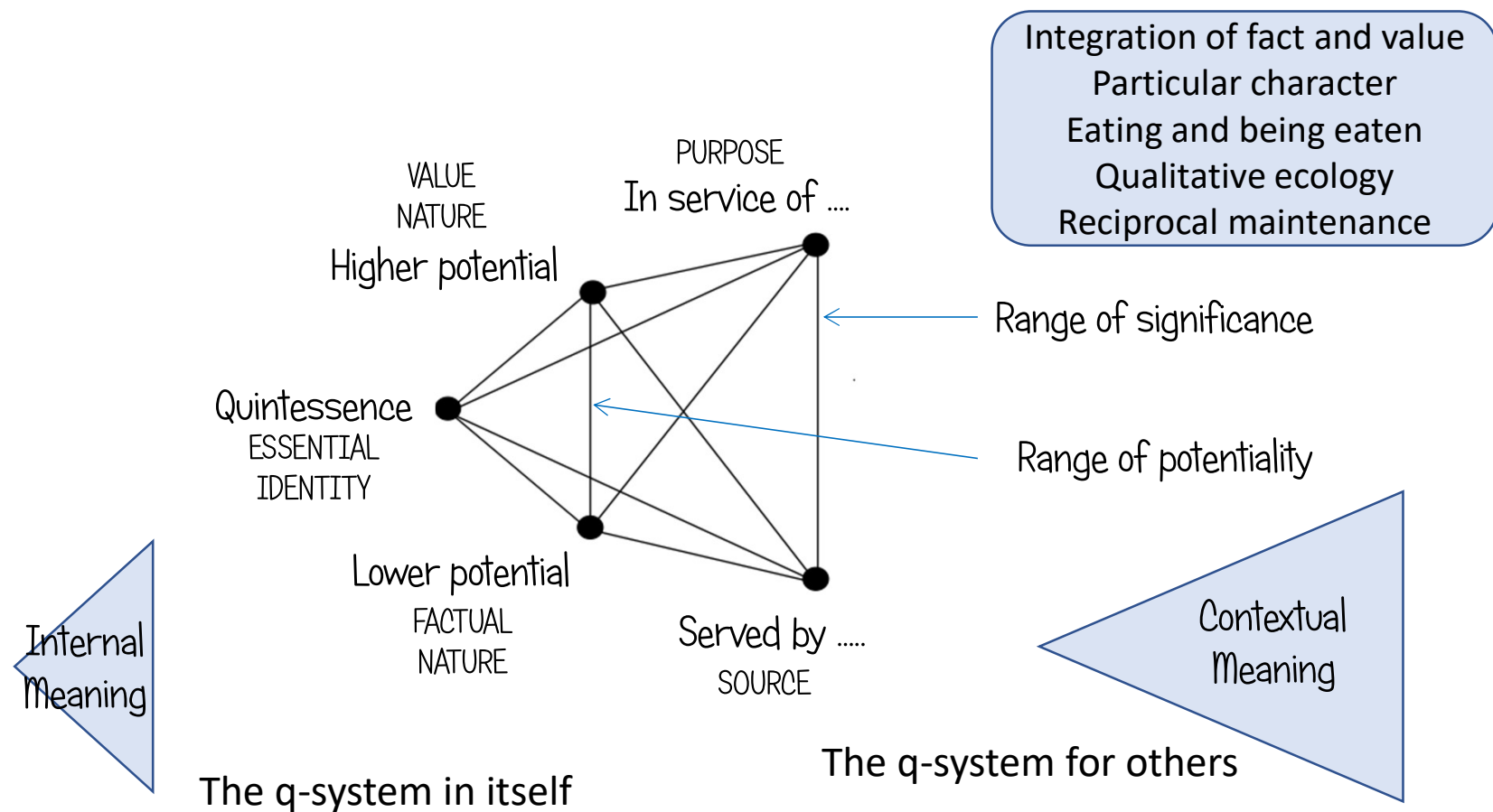


Section 4

The Five-term system (Pentad) in Terrestrial Ecology



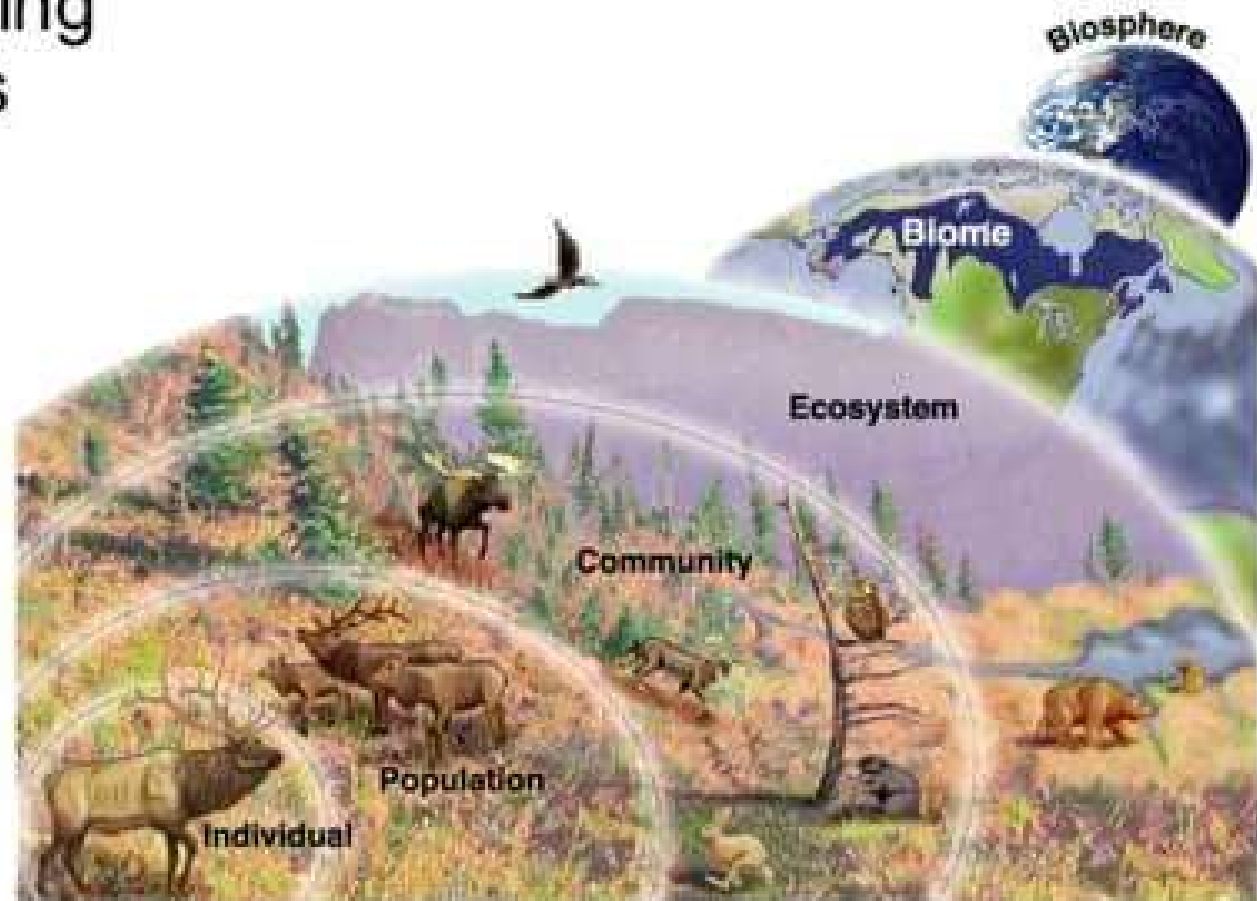
PENTAD – Significance in Relationship



Levels of Organization

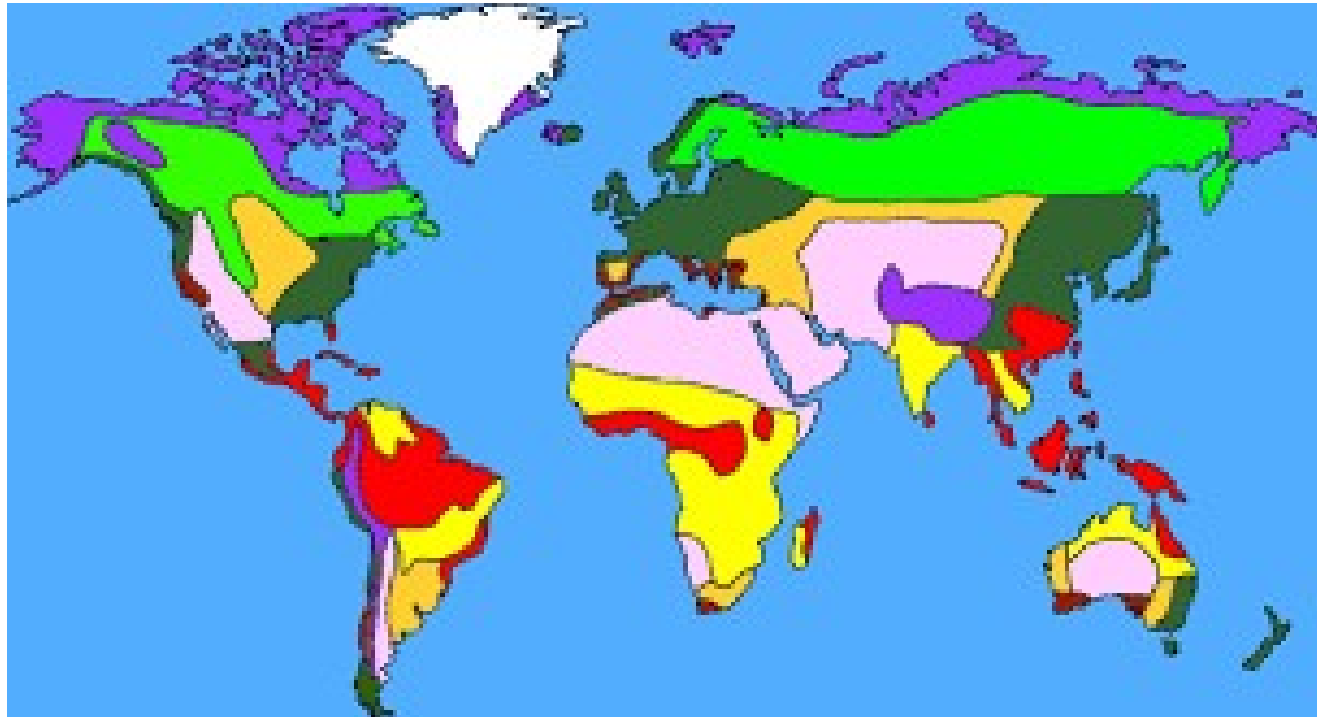
Ecologists study organisms ranging from the various levels of organization:

- **Species**
- **Population**
- **Community**
- **Ecosystem**
- **Biome**
- **Biosphere**

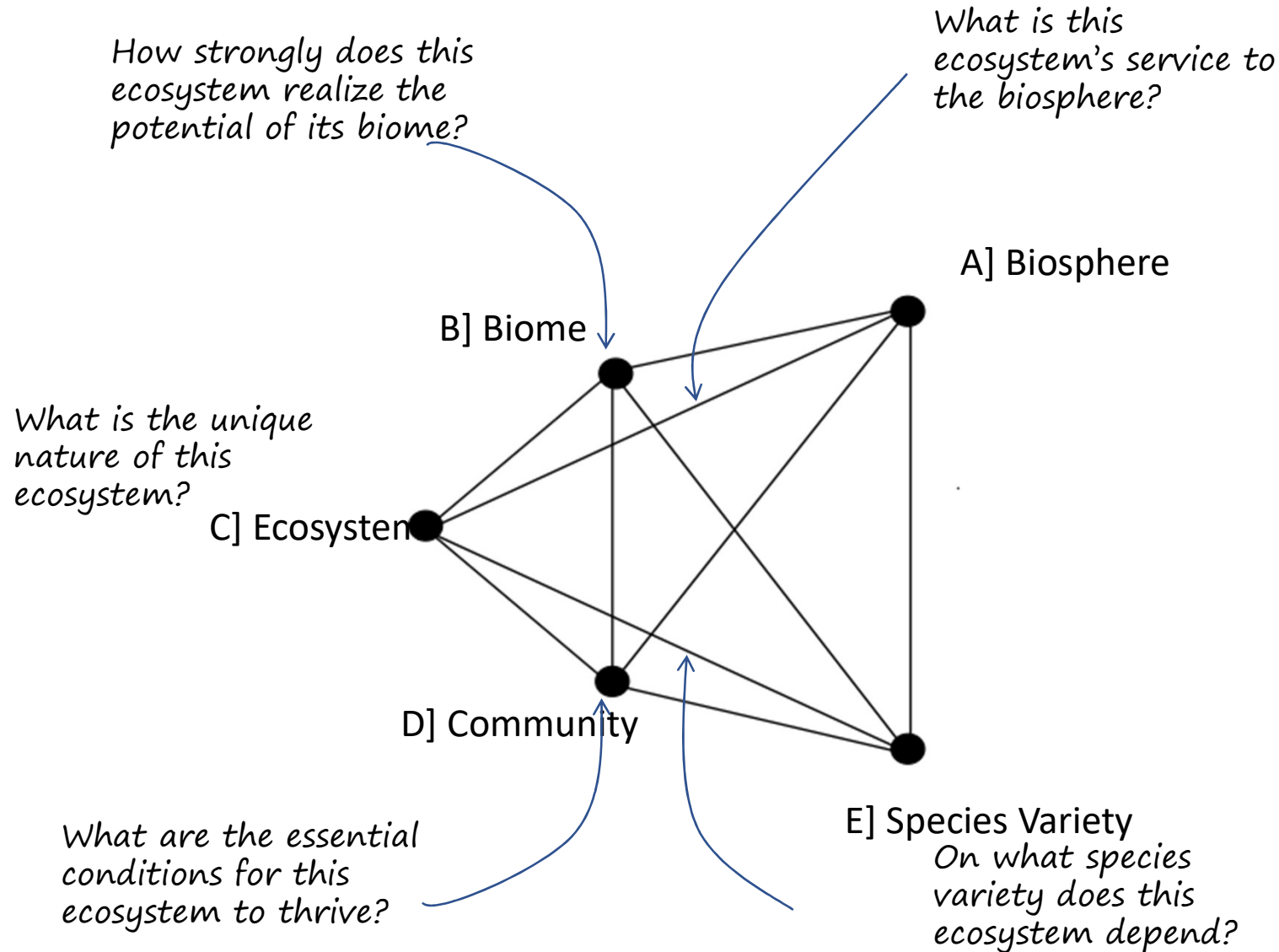


The Main Biomes of Planet Earth

There are five major types of biomes: **aquatic**, **grassland**, **forest**, **desert**, and **tundra**, though some of these biomes can be further divided into more specific categories, such as freshwater, marine, savanna, tropical rainforest, temperate rainforest, and taiga.



Linkage Questions



Some Working Definitions

A] Biosphere

- the global ecological system integrating all living beings and their relationships, including their interaction with the elements of the lithosphere, cryosphere, hydrosphere, and atmosphere.

B] Characteristic Biome

- a grouping of terrestrial ecosystems on a given continent that is similar in vegetation structure, physiognomy, features of the environment

C] Specific Ecosystem

- biotic and abiotic components linked together through nutrient cycles and energy flows. Energy enters the system through photosynthesis and is incorporated into plant tissue. By feeding on plants and on one another, animals play an important role in the movement of matter and energy through the system. They also influence the quantity of plant and microbial biomass present.

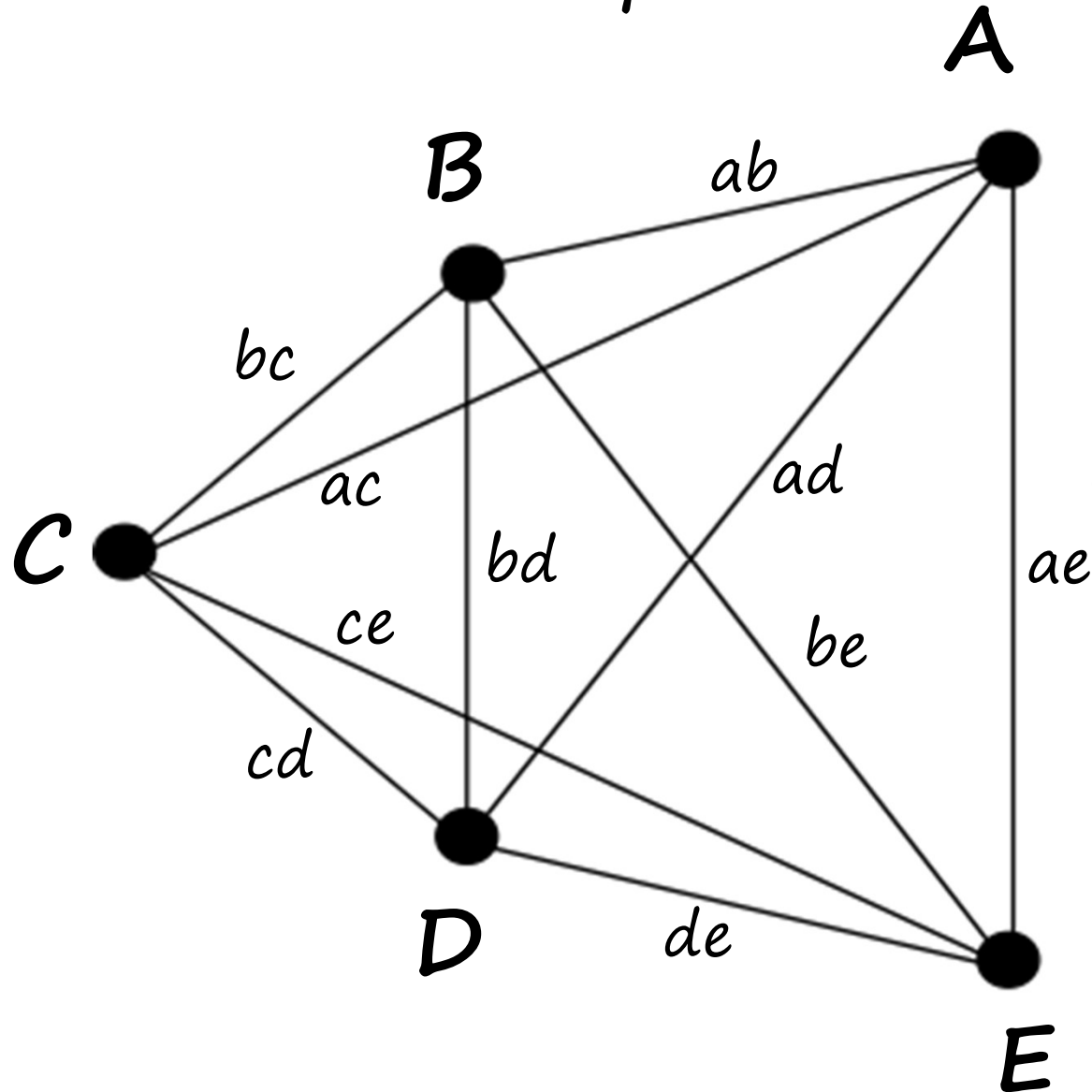
D] Thriving Community

- Group of populations of several different species occupying the same geographical area at the same time; groups of organisms in a specific place and time.

E] Resident Biodiversity

- The variety of plant and animal life in the world or in a particular habitat, a high level of which is usually considered to be important and desirable

The 10 Relationships of the Pentad



The 10 Pentadic Links

LINK	CONNECTION	SIGNIFICANCE	LINK	CONNECTION	SIGNIFICNCE
ac	Biosphere System + specific ecosystem,		bd	Characteristic Biome + Healthy Community	
ce	Specific ecosystem + resident biodiversity		ab	Biosphere System +Characteristic Biome	
ae	Biosphere System + Resident Biodiversity		ad	Biosphere System + Healthy Community	
bc	Characteristic Biome + Specific Ecosystem		de	Healthy Community + Resident Biodiversity	
cd	Specific Ecosystem + Healthy Community		be	Characteristic Biome + Resident Biodiversity	

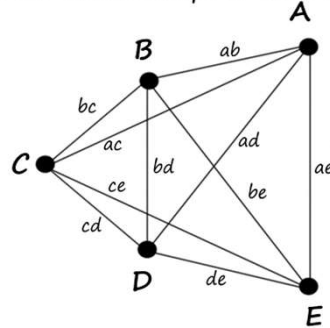
Your Group Task

1. At least one member should be able to share these images (pdf transmitted)

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cd	Specific Ecosystem + Healthy Community		be	Characteristic Biome + Resident Biodiversity	

2. Discuss and choose a biome [B] and an example ecosystem [C] and list a few of the key species you would typically find
3. Think about and discuss the basic triangle A/C/E and speculate what the key relationships ac / ce / ae are *and their implications*
4. Fill in any other links which occur to you as you discuss the implications of the qualsystem.
5. Identify who will be the spokesperson for what you discover