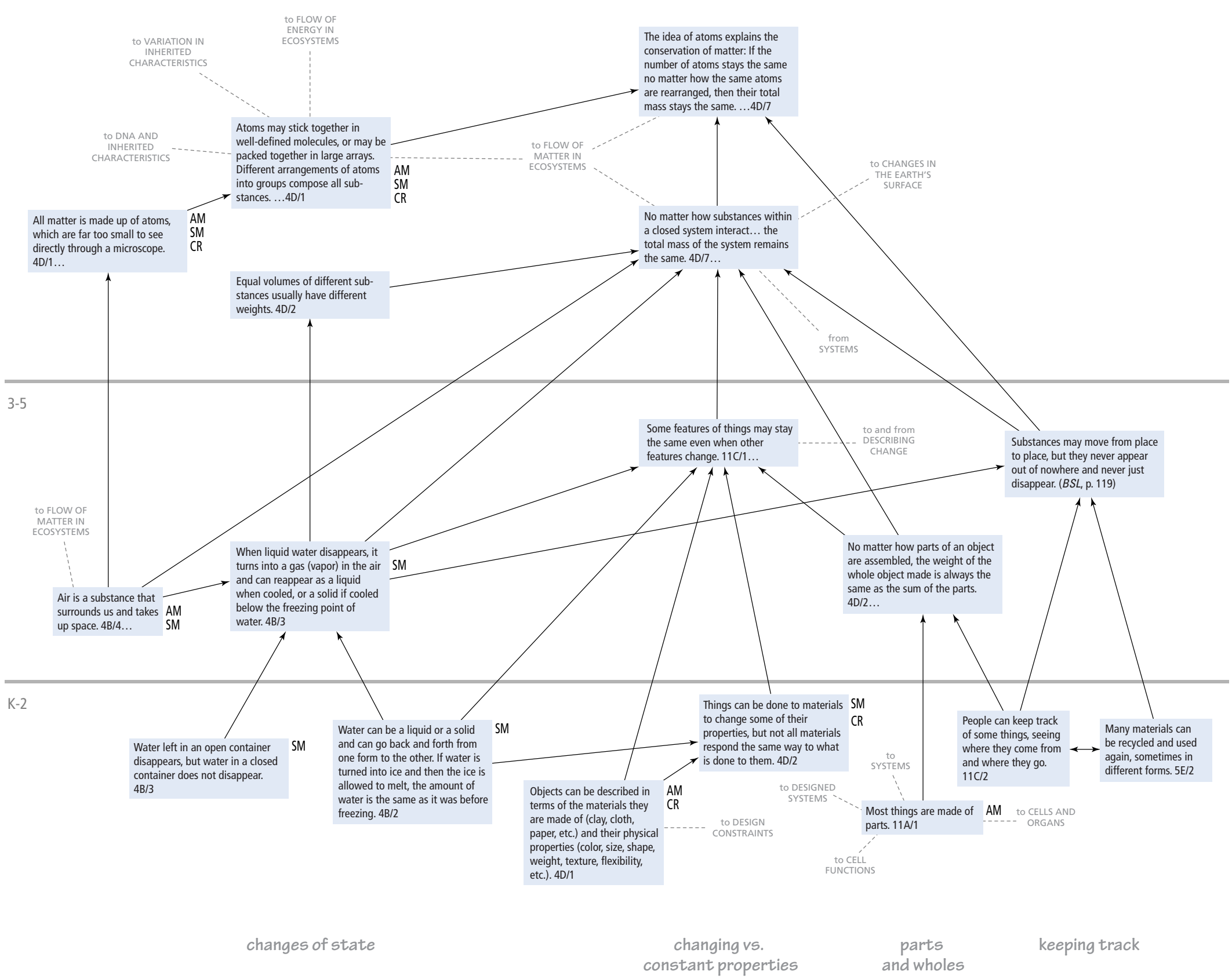
9-12
6-8
3-5
K-2
to FLOW OF ENERGY IN ECOSYSTEMS
to VARIATION IN INHERITED CHARACTERISTICS
to DNA AND INHERITED CHARACTERISTICS
Atoms may stick together in well-defined molecules, or may be packed together in large arrays. Different arrangements of atoms into groups compose all substances. …4D/1
AM SM CR
The idea of atoms explains the conservation of matter: If the number of atoms stays the same no matter how the same atoms are rearranged, then their total mass stays the same. …4D/7
to FLOW OF MATTER IN ECOSYSTEMS
to CHANGES IN THE EARTH'S SURFACE
All matter is made up of atoms, which are far too small to see directly through a microscope. 4D/1…
AM SM CR
No matter how substances within a closed system interact… the total mass of the system remains the same. 4D/7…
Equal volumes of different substances usually have different weights. 4D/2
from SYSTEMS
Some features of things may stay the same even when other features change. 11C/1…
to and from DESCRIBING CHANGE
Substances may move from place to place, but they never appear out of nowhere and never just disappear. (BSL, p. 119)
to FLOW OF MATTER IN ECOSYSTEMS
When liquid water disappears, it turns into a gas (vapor) in the air and can reappear as a liquid when cooled, or a solid if cooled below the freezing point of water. 4B/3
SM
No matter how parts of an object are assembled, the weight of the whole object made is always the same as the sum of the parts. 4D/2…
Air is a substance that surrounds us and takes up space. 4B/4…
AM SM
Water left in an open container disappears, but water in a closed container does not disappear. 4B/3
SM
Water can be a liquid or a solid and can go back and forth from one form to the other. If water is turned into ice and then the ice is allowed to melt, the amount of water is the same as it was before freezing. 4B/2
SM
Things can be done to materials to change some of their properties, but not all materials respond the same way to what is done to them. 4D/2
SM CR
People can keep track of some things, seeing where they come from and where they go. 11C/2
Many materials can be recycled and used again, sometimes in different forms. 5E/2
Objects can be described in terms of the materials they are made of (clay, cloth, paper, etc.) and their physical properties (color, size, shape, weight, texture, flexibility, etc.). 4D/1
AM CR
to DESIGN CONSTRAINTS
to SYSTEMS
to DESIGNED SYSTEMS
Most things are made of parts. 11A/1
AM
to CELLS AND ORGANS
to CELL FUNCTIONS
changes of state
changing vs. constant properties
parts and wholes
keeping track