# Three Questions at the Large Scale

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| **Question** | **Rules to Follow** | **Connecting Atoms to Evidence** |
| **The location question: Where are the available carbon atoms in our environment?**  What pools of materials are then in? | **Atoms are forever.**  Carbon atoms stay in pools unless a process moves them in or out. | The air has carbon atoms in CO2. Organic materials are made of molecules with carbon atoms   * Fuels * Living and dead plants and animals (including food) |
| **The carbon/movement question:** How/why do carbon pools change over time?  How are carbon atoms moving? | Carbon-transforming processes move carbon atoms among pools  **Carbon atoms cycle** within environmental systems | Evidence of carbon movement or carbon-transforming processes:   * Organisms eating, breathing, dying * Decay * Combustion * If a carbon pool size changes that means carbon atoms moved. |
| **The energy question: What is happening to chemical energy?**  How does energy flow through environmental systems? | Carbon-transforming processes change energy from:   * Sunlight to * Chemical energy to * Work or motion energy and eventually to * Heat radiated into space   **Energy flows** through environmental systems | We can observe indicators of different forms of energy   * Organic materials with chemical energy * Light * Heat energy * Work or motion energy |