ALWAYS, SOMETIMES, OR NEVER TRUE? (TEACHER ANSWER KEY!)

Read each statement and decide if it's always, sometimes, or never true.

Always, Sometimes, or Never True?	Justify Your Answer
1. The amount of energy there is in the world changes. ☐ Always ☐ Sometimes ☐ Never	Energy cannot be created or destroyed, meaning that the total amount of energy in the universe has always been and will always be constant.
2. An energy transformation is the change of energy from one form to another. ☐ Always ☐ Sometimes ☐ Never	In an energy transformation, energy changes form. A ball sitting at the top of a hill has gravitational potential energy, but when a force pushes it down the hill, that potential energy transforms into kinetic energy.
3. Heat is a byproduct of energy changing from one form to another. ☐ Always ☐ Sometimes ☐ Never	When energy is converted, some of it is lost as heat. No energy conversion is 100 percent efficient, and heat is a common byproduct of energy **transformation**. Some of the original energy is transformed into a non-useful form by friction, **air resistance**, or another process, and it is released into the environment as heat.
4. If you place a spoon in a pot of boiling water, the end not touching the water gets very hot. ☐ Always ☐ Sometimes ☐ Never	Conduction is when thermal energy is transferred between molecules in contact with one another. The spoon must be a metal spoon because it is an excellent conductor of heat and heat travels easily through it. Materials such as wood and plastic, are poor conductors and heat does not travel through them easily.

https://education.nationalgeographic.org/resource/energy-transfers-and-transformations/