Indiana Matrix of Crosscutting Concepts

Grades 3, 4, 5

Adopted 2022

Patterns CC.1	1. **Similarities and differences in patterns can be used to sort, classify, communicate, and analyze simple rates of change for natural phenomena and designed products.** 35.CC.1.1 2. **Patterns of change can be used to make predictions.** 35.CC.1.2 3. **Patterns can be used as evidence to support an explanation.** 35.CC.1.3
Cause and Effect: Mechanism and Prediction CC.2	1. **Similarities and differences in patterns can be used to sort, classify, communicate, and analyze simple rates of change for natural phenomena and designed products.** 35.CC.2.1 2. **Patterns of change can be used to make predictions.** 35.CC.2.2 3. **Patterns can be used as evidence to support an explanation.** 35.CC.2.3
Scale, Proportion, and Quantity CC.3	1. **Natural objects and/or observable phenomena exist from the very small to the immensely large or from very short to very long time periods.** 35.CC.3.1 2. **Standard units are used to measure and describe physical quantities such as weight, time, temperature, and volume.** 35.CC.3.2
Systems and System Models CC.4	1. **A system is a group of related parts that make up a whole and can carry out functions its individual parts cannot.** 35.CC.4.1 2. **A system can be described in terms of its components and their interactions.** 35.CC.4.2
Energy and Matter: Flows, Cycles, and Conservation CC.5	1. **Matter is made of particles.** 35.CC.5.1 2. **Matter flows and cycles can be tracked in terms of the weight of the substances before and after a process occurs. The total weight of the substances does not change. This is what is meant by conservation of matter. Matter is transported into, out of, and within systems.** 35.CC.5.2 3. **Energy can be transferred in various ways and between objects.** 35.CC.5.3

Structure and Function CC.6	1. **Different materials have different substructures, which can sometimes be observed.** 35.CC.6.1
	2. **Substructures have shapes and parts that serve functions.** 35.CC.6.2
Stability and Chance CC.7	1. **Change is measured in terms of differences over time and may occur at different rates.** 35.CC.7.1
	2. **Some systems appear stable, but over long periods of time will eventually change.** 35.CC.7.2