



## Level One - Waste Reduction and Recycling

### High School, NGSS Codes Sheet



This sheet is designed to accompany the standards alignment document. The connections between the **Next Generation Science Standards (NGSS)** and **King County Level One Best Practices Guide** uses the matrices created by the National Science Teachers Association (NSTA) available at <http://ngss.nsta.org/ngss-tools.aspx>.

#### Science & Engineering Practices

1. Asking questions (for science) and defining problems (for engineering)
2. Developing and using models
3. Planning and carrying out investigations
4. Analyzing and interpreting data
5. Using mathematics and computational thinking
6. Constructing explanations (for science) and designing solutions (for engineering)
7. Engaging in argument from evidence
8. Obtaining, evaluating, and communicating information

#### Disciplinary Core Ideas

##### *Life Sciences*

- LS1: From molecules to organisms: Structures and processes
- LS2: Ecosystems: Interactions, energy, dynamics
- LS3: Heredity: Inheritance and variation of traits
- LS4: Biological evolution: Unity and diversity

##### *Physical Sciences*

- PS1: Matter and its interactions
- PS2: Motion and stability: Forces and interactions
- PS3: Energy
- PS4: Waves and their applications in technologies for information transfer

##### *Earth and Space Sciences*

- ESS1: Earth's place in the universe
- ESS2: Earth's systems
- ESS3: Earth and human activity

##### *Engineering, Technology, and Applications of Science*

- ETS1: Engineering design
- ETS2: Links among engineering, technology, science, and society

### Crosscutting Concepts

- Patterns
- Cause and effect: Mechanism and explanation
- Scale, proportion, and quantity
- Systems and system models
- Energy and matter: Flows, cycles, and conservation
- Structure and function
- Stability and change

### **Assess and Monitor section of Best Practices Guide**

- Practice 1, grades 9-12, bullet 8.
- Practice 3, grades 9-12, bullet 6.
- Practice 5, grades 9-12, bullet 6.

- ETS1.A-2: Defining and Delimiting an Engineering Problem.
- ETS1.B-1: Developing Possible Solutions.
- ETS1.C-1: Optimizing the Design Solution.

- Concept 2, grades 9-12, bullet 2.
- Concept 7, grades 9-12, bullet 3.

### **Education and Outreach section of Best Practices Guide**

- Practice 8, grades 9-12, bullet 5.
- Practice 7, grades 9-12, bullet 5.
- Practice 1, grades 9-12, bullet 1.
- Practice 3, grades 9-12, bullet 3.
- Practice 4, grades 9-12, bullet 6.
- Practice 6, grades 9-12, bullet 3.
- Practice 8, grades 9-12, bullet 1.

- ESS3.C-1: Human Impacts on Earth Systems.
- ESS3.D-1: Global Climate Change.
- LS2.C-2: Ecosystem Dynamics, Functioning, and Resilience.
- ESS2.D-3: Weather and Climate.
- LS4.D-2: Biodiversity and Humans.
- ESS3.A-1: Natural Resources.
- ESS3.C-2: Human Impacts on Earth Systems.

- Concept 4, grades 9-12, bullet 2.

## **Waste Reduction and Recycling section of Best Practices Guide**

- Practice 6, grades 9-12, bullet 5.

- ETS1.B-1: Developing Possible Solutions.
- ETS1.B-2: Developing Possible Solutions.

- Concept 2, grades 9-12, bullet 3.
- Concept 2, grades 9-12, bullet 4.
- Concept 4, grades 9-12, bullet 3.
- Concept 5, grades 9-12, bullet 1.