Next Generation Science Standards for Doing the Rot Thing… Anaerobic Digester

Science & Engineering Practices | Disciplinary Core Idea | Crosscutting Concept

4th	5th	6th
4-PS3 Energy **4-PS3-2. Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.** **PS3.D: Energy in Chemical Processes and Everyday Life** The expression "produce energy"…(4-PS3-4) _____ **Asking Questions and Defining Problems** Asking questions and defining problems… (4-PS3-3) **Energy and Matter** Energy can be transferred… (4-PS3-1),(4- PS3-2),(4-PS3-3),(4-PS3-4) **- Connections to Engineering, Technology…** (4-PS3-4) **–** **Connections to Nature of Science** **Science is a Human Endeavor** Science affects everyday life. (4-PS3-4) **4-ESS3 Earth and Human Activity** **4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and that their uses affect the environment.** **ESS3.A: Natural Resources** Energy and fuels that humans use are derived from natural sources… (4-ESS3-1) _____ **3–5-ETS1 Engineering Design** **Asking Questions and Defining Problems** Asking questions and defining problems… **Influence of Engineering, Technology, and Science on Society and the Natural World** People's needs and wants change over time… (3–5-ETS1-1) Engineers improve existing technologies…(3–5-ETS-2)	**5-LS2 Ecosystems: Interactions, Energy, and Dynamics** **LS2.A: Interdependent Relationships in Ecosystems** The food of almost any kind of animal can be traced back to plants…5-LS2-1) **LS2.B: Cycles of Matter and Energy Transfer in Ecosystems** Matter cycles between the air and soil… (5-LS2-1) _____ **5-ESS3 Earth and Human Activity** **ESS3.C: Human Impacts on Earth Systems** Human activities in agriculture, industry…(5-ESS3-1) _____ **3–5-ETS1 Engineering Design** **Asking Questions and Defining Problems** Asking questions and defining problems… **Influence of Engineering, Technology, and Science on Society and the Natural World** People's needs and wants change over time… (3–5-ETS1-1) Engineers improve existing technologies…(3–5-ETS-2)	**MS-PS1 Matter and Its Interactions** **MS-PS1-3. Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.** **Interdependence of Science, Engineering, and Technology** Engineering advances have led to important discoveries… (MS-PS1-3) _____ **MS-ESS3 Earth and Human Activity** **ESS3.A: Natural Resources** Humans depend on Earth's land (MS-ESS3-1) **ESS3.C: Human Impacts on Earth Systems** Human activities have significantly altered the biosphere… (MS-ESS3-3) Typically as human populations and per-capita consumption of natural resources… (MS- ESS3-3),(MS-ESS3-4) **ESS3.D: Global Climate Change** Human activities, such as the release of greenhouse gases…(MS-ESS3–5) _____ **MS-ETS1 Engineering Design** **Asking Questions and Defining Problems** Asking questions and defining problems… **Influence of Science, Engineering, and Technology on Society and the Natural World** All human activity draws on natural resources…(MS-ETS1-1) The uses of technologies…(MS-ETS1-1)