| Unit: Multimedia Layout and Design | Concept: Gathering Information |
|---|---|

**Standard**
- 3.5.9-12.J Synthesize data and analyze trends to make decisions about technological products, systems, or processes.

**Key Learning**
- (LTTG) Students will be able to apply investigation, imagination, innovative thinking, and physical skills to accomplish goals.

**Unit Essential Question**
- How can I apply investigation, imagination, innovative thinking, and physical skills to accomplish goals?

**Essential Question**
- How do costs, benefits, and tradeoffs factor into decisions made about technology and engineering?

**Key Vocabulary**
- Data, Information, Synthesis, Analysis, Trend, Product, System, Process, Benefit, and Tradeoff

**Learning Experience**
- Students who demonstrate understanding can synthesize data and analyze trends to make decisions about technological products, systems, or processes.
- Clarifying Statement: Deductive thinking and synthesis techniques can assist in this process. Students should consider historical events, global trends, and economic factors, and they should evaluate and consider how to manage the risks incurred by technological development.

**(Big Idea) Technology & Engineering Curriculum Framework Big Ideas**
- Decisions made about technology and engineering involve consideration of costs, benefits, and tradeoffs.

**(SEP) Science and Engineering Practices**
- Using Mathematics and Computational Thinking - Use mathematical models and/or computer simulations to predict the effects of a design solution on systems and/or the interactions between systems.

**(DCI) Disciplinary Core Ideas**
- ETS1.B: Developing Possible Solutions - When evaluating solutions, it is important to consider a range of constraints, including cost, safety, reliability, and aesthetics, and to consider social, cultural, and environmental impacts.

**(TEP) Technology and Engineering Practices**
- Critical Thinking - Uses evidence to better understand and solve problems in technology and engineering, including applying computational thinking.

**Terms**

- (ETS) Engineering, Technology, and Applications of Science – Standards applicable across the Science, Environmental Literacy & Sustainability, and Technology & Engineering content areas.
- (LTTG) PDE Technology & Engineering Long Term Transfer Goals
- (Learning Experience) A learning experience refers to any interaction, activity, or other experience in which students acquire new understanding, knowledge, behaviors, or skills.
- (Big Idea #) PDE Technology & Engineering Curriculum Framework Big Ideas
- (SEP) PDE Science and Engineering Practices
- (DCI) PDE Disciplinary Core Ideas
- (TEP) PDE Technology and Engineering Practices