## **Instructor & Tools Overview**

Instructor: Mr. Duvall

Integration: Google Classroom, Articulate, Canva, Screencastify, Al Tools

Standards: Next Generation Science Standards (NGSS)

Grade Level: 6th Grade

# Unit 1: States of Matter (Oct 23-27)

#### NGSS Standards:

- MS-PS1-4: Conduct an investigation to determine whether the mixing of two or more substances results in new substances.
- Science & Engineering Practices: Planning and carrying out investigations
- Crosscutting Concepts: Cause and effect

#### Weekly Activities:

- Mixtures vs. Solutions Notes (Canva/Google Slides) digital guided notes
- Oobleck Lab Screencastify reflection
- NB Check + Integrated Video (Articulate + AI recap quiz)
- S'mores Lab Digital lab journal via LMS
- Review Basketball Al-generated questions based on class performance

### Unit 2: Heat and Thermal Energy (Oct 30-Nov 21)

#### NGSS Standards:

- MS-PS3-3: Design a device that minimizes/maximizes thermal energy transfer.
- MS-PS3-4: Investigate relationships among energy transfer, temperature change, and matter.
- Crosscutting Concepts: Energy and matter; Systems and system models

### Weekly Activities:

- Week 1: Canva diagrams + Diffusion Phet Lab + Articulate Quiz
- Week 2: Popcorn Lab (Screencastify demo + Canva organizer), AI exit tickets
- Week 3: Thermal Energy Project (Canva storyboard, Articulate digital presentation)
- Week 4: Turkey Air Cannon (Video uploads + Al summary captioning)

### Unit 3: Waves and Sound (Nov 27-Dec 15)

#### NGSS Standards:

- MS-PS4-1: Describe how waves are reflected, absorbed, or transmitted.
- MS-PS4-2: Model wave behavior through different materials.
- Crosscutting Concepts: Patterns; Structure and function

#### Weekly Activities:

- Week 1: Wave vocab (Canva), Phet simulation via LMS
- Week 2: Sound modeling (Screencastify labs + Al audio analysis)
- Week 3: Ear modeling (Foldable + Canva diagrams + Al quizzes)

### **LMS & Tool Integration Summary**

Google Classroom: Weekly assignments, announcements, and notebook submissions

Articulate: Interactive digital lessons and assessments

Canva: Visual aids, infographics, and student creative projects

Screencastify: Lab walkthroughs, reflection videos, and project pitches Al Tools: Adaptive quizzes, feedback generation, and personalized content