Teacher: Mr. Edwards

Date: August 26-30, 2024

Subject: Science

Period: 1-5,7

COS Standard: Understanding and applying the scientific method to solve problems and answer questions.

Outcome(s)/Objective(s)/I can statement:

- I can identify and explain the steps of the scientific method.

- I can apply the scientific method to conduct an experiment.

- I can analyze data and draw conclusions from my experiment.

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 Monday

Essential Question:

What is the scientific method, and why is it important?

Daily Objective(s)/I Can Statement:

- I can list and explain the steps of the scientific method.

Preview (Before):

Warm-up/Hook:

- KWL Chart: What do you know about the scientific method? What do you want to know?

Instruction (During):

- I Do: Teacher explains the steps of the scientific method using a diagram.

- We Do: Class discusses each step in detail, providing examples.

- Y’all Do: Students create a flowchart of the scientific method in pairs.

- You Do: Individually, students write a brief description of each step.

Small Groups:

- Pairs work together to complete their flowcharts.

After/Homework:

- Review the flowchart and complete any unfinished descriptions.

Assessment (Formative):

- Class work, Collaborative work, Project (Flowchart)

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 Tuesday

Essential Question:

How do we formulate a testable hypothesis?

Daily Objective(s)/I Can Statement:

- I can create a testable hypothesis based on an observation.

Preview (Before):

Warm-up/Hook:

- Word Splash: Key terms related to forming a hypothesis.

Instruction (During):

- I Do: Teacher models how to turn an observation into a testable hypothesis.

- We Do: Students and teacher together brainstorm observations and form hypotheses.

- Y’all Do: In small groups, students observe their environment and write hypotheses.

- You Do: Individually, students choose one hypothesis to share with the class.

Small Groups:

- Groups discuss their observations and hypotheses.

After/Homework:

- Students finalize their chosen hypothesis and write a brief explanation of why it is testable.

Assessment (Formative):

- Class work, Collaborative work, Project (Hypotheses)

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 Wednesday

Essential Question:

What is an experiment, and how can we test a hypothesis?

Daily Objective(s)/I Can Statement:

- I can design a simple experiment to test a hypothesis.

Preview (Before):

Warm-up/Hook:

- Anticipation Guide: Predict the outcome of a hypothetical experiment.

Instruction (During):

- I Do: Teacher demonstrates how to design an experiment, including identifying variables and controls.

- We Do: Class designs an experiment together.

- Y’all Do: In small groups, students design their own simple experiments based on the hypotheses they developed on Tuesday.

- You Do: Each student writes a detailed plan for their experiment.

Small Groups:

- Groups collaborate to refine their experimental designs.

After/Homework:

- Finish writing the experiment plan, including materials and procedures.

Assessment (Formative):

- Class work, Collaborative work, Project (Experiment Design)

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 Thursday

Essential Question:

How do we analyze data and draw conclusions?

Daily Objective(s)/I Can Statement:

- I can analyze data from an experiment and draw a conclusion.

Preview (Before):

Warm-up/Hook:

- Think-Pair-Share: What are possible results of your experiment?

Instruction (During):

- I Do: Teacher models how to collect and analyze data from an experiment.

- We Do: Class analyzes sample data together.

- Y’all Do: Groups perform their experiments and record data.

- You Do: Each student analyzes the data collected and writes a conclusion.

Small Groups:

- Groups conduct experiments and collaborate on data analysis.

After/Homework:

- Complete the data analysis and conclusion write-up.

Assessment (Formative):

- Class work, Collaborative work, Project (Data Analysis and Conclusion)

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 Friday

Essential Question:

How do we communicate the results of our scientific investigations?

Daily Objective(s)/I Can Statement:

- I can present the results and conclusions of my experiment.

Preview (Before):

Warm-up/Hook:

- First Word: Summarize your experiment in one word.

Instruction (During):

- I Do: Teacher explains how to create a simple lab report or presentation.

- We Do: Class reviews the components of a good report/presentation.

- Y’all Do: Students prepare a brief presentation or written report on their experiment.

- You Do: Each student presents their findings to the class.

Small Groups:

- Groups help each other refine their presentations/reports.

After/Homework:

- Review peer presentations and provide feedback.

Assessment (Formative):

- Class work, Collaborative work, Project (Presentation/Report)

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Proficiency Scale:

- Score 4.0: Exceeds expectations, fully understands and applies all aspects of the scientific method independently.

- Score 3.0: Meets expectations, can apply the scientific method with minimal assistance.

- Score 2.0: Approaching expectations, needs some guidance to apply the scientific method.

- Score 1.0: Below expectations, struggles to understand or apply the scientific method even with assistance.

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This Week’s Vocabulary:

- Scientific method, Hypothesis, Experiment, Variables, Data, Conclusion, Observation

Assessment (Summative):

- Lab Write-Up

Summarizing:

- 3-2-1: Three things you learned, two questions you still have, one thing you found interesting.