

Unit 1**Essential Question: How do scientists gather and share information?****Major Understandings:**

- S1.1a** Formulate questions about natural phenomena
- S1.1b** Identify appropriate references to investigate a question
- S1.1c** Refine and clarify questions so they are subject to scientific investigation
- S1.2a** Independently formulate a hypothesis
- S1.3** Represent, present and defend their proposed explanations of everyday observations so that they can be understood and assessed by others
- S2.1b** Conduct an experiment designed by others
- S2.1c** Design and conduct an experiment to test a hypothesis
- S2.1d** Use appropriate tools and conventional techniques to solve problems about the natural world, including: measuring, observing, describing, classifying, sequencing
- S2.2b** Design scientific investigations
- S2.2c** Design a simple controlled experiment
- S2.2d** Identify independent variables, dependent variables, and constants in a simple controlled experiment
- S2.2e** Choose appropriate sample size and number of trials
- S2.3b** Conduct a scientific investigation
- S2.3c** Collect qualitative and quantitative data
- S3.1a** Organize results using appropriate graphs, diagrams, data tables, and other models to show relationships
- S3.1b** Generate and use scales, create legends and appropriately label axes
- S3.2a** Accurately describe the procedures used and the data gathered
- S3.2b** Identify sources of error and the limitations of data collected
- S3.2c** Evaluate the original hypothesis in light of the data
- S3.2d** Formulate and defend explanations and conclusions as they relate to scientific phenomena
- S3.2e** Form and defend a logical argument about cause and effect relationships in an investigation
- M1.1a** Identify independent and dependent variables
- M3.1a** Use appropriate scientific tools to solve problems about the natural world

Grade 5

Lesson 1 – Modern Rocket Stages

Objective(s):

- Promote scientific inquiry.
- Use a scientific method to plan and conduct a long-term investigation.
- Design an experiment to learn how scientists study the universe from Earth and from space.

S1.1a, S1.1b, S1.1c, S1.2a, S1.3, S2.1b, S2.1c, S2.1d, S2.2 b, S2.2c, S2.2d, S2.2e, S2.3b, S2.3c, S3.1a, S3.1b, S3.2a, S3.2b, S3.2c,S3.2d,S3.2e, M1.1a, M3.1a

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Science Background TE 1A Video Segment When Minutes Count TE	Unit 1 Experiment Experiment Lesson Plan Pgs. 1A-1B	Options for Inquiry: TE 1A	

Lesson 2 – What Tools Do Scientists Use?

Objective(s):

- Measure and observe objects.
- Explain how science tools are used.
- Describe how mass and weight are measured.

S1.1a, S1.1b, S1.1c, S1.2a, S1.3, S2.1d, S2.2 b, S2.2d, S2.2e, S2.3b, S2.3c, S3.1a, S3.1b , S3.2a, S3.2b, S3.2c, S3.2d, S3.2e, M1.1a , M3.1a

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE 2B, 4 Science Background TE 2 Video Segment 0500 When Minutes Count TE 4	Unit 1.1 Assess Prior Knowledge TE 4 Vocabulary TE 3 Investigate TE 5	Reaching All Learners • ESL/ESOL TE 3 Investigate Further TE 5 Daily Inquiry TE 4 Inquiry Skill Mini-Lesson TE 5	

Grade 5

Lesson 3 – What Tools Do Scientists Use?**Objective(s):**

- Measure and observe objects.
- Explain how science tools are used.
- Describe how mass and weight are measured.

S1.1a, S1.1b, S1.1c, S1.2a, S1.3, S2.1d, S2.2 b, S2.2d, S2.2e, S2.3b, S2.3c, S3.1a, S3.1b , S3.2a, S3.2b, S3.2c, S3.2d, S3.2e, M1.1a , M3.1a

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Science Background TE 7-11	Unit 1.1 Reading in Science TE 6-13 Insta-Lab TE 11	Reading Review TE 13 Quick Study TE Reading Support & Homework RS5-6	Curriculum Integration TE Reading – TE 6 Writing – TE 13 Math – TE 13 Health – TE 13

Lesson 4 – What Inquiry Skills Do Scientists Use?**Objective(s):**

- Observe the effects of changing a variable.
- Describe how inquiry skills organize the way in which people gather data.
- Explain the difference between an investigation and an experiment.

S1.1a, S1.1b, S1.1c, S1.2a, S1.3, S2.1d, S2.2 b, S2.2d, S2.2e, S2.3b, S2.3c, S3.1a, S3.1b, S3.2a, S3.2b, S3.2c, S3.2d, S3.2e, M1.1a, M3.1a

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE 2B Science Background TE 14 Video Segment 0501 When Minutes Count TE 14	Unit 1.2 Assess Prior Knowledge TE 14 Investigate TE 15	Investigate Further TE 15, LM 22 Daily Inquiry TE 14 Inquiry Skill Mini-Lesson TE 15, IS 2	

Grade 5

Lesson 5 – What Inquiry Skills Do Scientists Use?

Objective(s):

- Observe the effects of changing a variable.
- Describe how inquiry skills organize the way in which people gather data.
- Explain the difference between an investigation and an experiment.

S1.1a, S1.1b, S1.1c, S1.2a, S1.3, S2.1d, S2.2 b, S2.2d, S2.2e, S2.3b, S2.3c, S3.1a, S3.1b, S3.2a, S3.2b, S3.2c, S3.2d, S3.2e, M1.1a, M3.1a

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Science Background TE 17-20 Vocabulary: TE 16	Unit 1.2 Reading in Science TE 16-21 Insta-Lab TE 19	Reading Review TE 21 Quick Study TE Reading Support & Homework 7-8	Curriculum Integration TE 21 Writing- TE 21 Math- TE 21 Social Studies TE 21

Lesson 6 – What Is The Scientific Method?

Objective(s):

- Observe and measure variables in an experiment.
- Describe the steps of the scientific method.
- Explain how scientists use the scientific method.

S1.1a, S1.1b, S1.1c, S1.2a, S1.3, S2.1b, S2.1c, S2.1d, S2.2 b, S2.2c, S2.2d, S2.2e, S2.3b, S2.3c, S3.1a, S3.1b, S3.2a, S3.2b, S3.2c, S3.2d, S3.2e, M1.1a, M3.1a

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE 2B Science Background TE 22 Video Segment 0502 When Minutes Count TE 22	Unit 1.3 Assess Prior Knowledge TE 22 Vocabulary 24 Investigate TE 22	Investigate Further TE LM25 Daily Inquiry TE 22 Inquiry Skill Mini-Lesson TE 22	

Lesson 7 – What Is The Scientific Method?

Objective(s):

- Observe and measure variables in an experiment.
- Describe the steps of the scientific method.
- Explain how scientists use the scientific method.

S1.1a, S1.1b, S1.1c, S1.2a, S1.3, S2.1b, S2.1c, S2.1d, S2.2 b, S2.2c, S2.2d, S2.2e, S2.3b, S2.3c, S3.1a, S3.1b, S3.2a, S3.2b, S3.2c, S3.2d, S3.2e, M1.1a, M3.1a

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE 2B Science Background TE 26	Unit Reading in Science TE 24-27 Insta-Lab TE 26	Reading Review TE 27 Quick Study TE Reading Support & Homework RS9-10	Curriculum Integration TE Writing – TE 27 Math – TE 27 Social Studies – TE 27