Course Syllabus

Description:
The Elementary Science K-5 courses will spark curiosity in students and build a solid foundation in concepts across many types of sciences including Earth Science, Life Science, and Physical Science. Students will engage in science and engineering practices by asking questions, defining problems, developing and using models, planning and conducting investigations, analyzing and interpreting data, using mathematics and informational technology, constructing explanations, designing solutions, engaging in scientific arguments using evidence, and communicating results. A framework of active student learning supports and allows students to engage, explore, explain, elaborate, and evaluate throughout all courses. This dynamic format will help students build their own understanding from experiences and new ideas in order to facilitate a better understanding of the world around them.

Estimated Completion Time: 36 weeks

Major Topics and Concepts:
Module 01: Properties Of Objects

- 01.00 Module One Pretest
- 01.01 Shape, Color, Size, And Texture
- 01.02 Measuring Temperature
- 01.03 Measuring Weight
- 01.04 Floating Or Sinking
- 01.05 Push And Pull
- 01.06 Daily Temperatures
- 01.07 Module One Review And Reflection
- 01.08 Module One Assessment

Module 02: States Of Objects And Materials

- 02.00 Module Two Pretest
- 02.01 Solids, Liquids, And Gases
- 02.02 Solids And Shape
- 02.03 Liquids With Shape
- 02.04 Trapping Gas
- 02.05 States Of Water
- 02.06 Disappearing Water
- 02.07 Changing States
- 02.08 Module Two Review And Discussion-Based Assessment
- 02.09 Module Two Assessment

Module 03: Volume

- 03.00 Module Three Pretest
- 03.01 Volume Of A Substance
- 03.02 Measuring Volume
- 03.03 Comparing Volumes
- 03.04 Module Three Review And Reflection
- 03.05 Module Three Assessment

Module 04: Changes In Materials

- 04.00 Module Four Pretest
- 04.01 Changes In Materials
- 04.02 Investigate Change
- 04.03 Different materials, same changes?
- 04.04 Module Four Review And Discussion-Based Assessment
- 04.05 Module Four Assessment

Module 05: Weather Patterns

- 05.00 Module Five Pretest
- 05.01 What’s up with the weather?
- 05.02 Measuring Weather
- 05.03 Patterns in Nature

- 05.04 Daily Weather
- 05.05 Season To Season
- 05.06 Find The Pattern
- 05.07 Hot or cold?
- 05.08 Investigating The Weather
- 05.09 Module Five Review And Reflection
- 05.10 Module Five Assessment

Module 06: Wind/Severe Weather

- 06.00 Module Six Pretest
- 06.01 Air is all around us!
- 06.02 An air investigation!
- 06.03 The Moving Air
- 06.04 Strong And Light Wind
- 06.05 The Power Of The Wind
- 06.06 The Effects Of Wind
- 06.07 What is severe weather?
- 06.08 Beware Of Severe Weather
- 06.09 Don’t be scared, prepare!
- 06.10 Module Six Review And Discussion-Based Assessment
- 06.11 Module Six Assessment

Module 07: Rocks/Soil

- 07.00 Module Seven Pretest
- 07.01 What’s that on the ground?
- 07.02 Exploring Rocks
- 07.03 Let’s compare rocks!
- 07.04 Sizing Up Rocks
- 07.05 Different Rocks, Different Looks
- 07.06 Exploring Soil
- 07.07 What makes soil?
- 07.08 How is soil formed?

- 07.09 Soil Here, Soil There
- 07.10 A Rainbow Of Soil
- 07.11 Investigating Soil
- 07.12 Can it grow plants?
- 07.13 The Mystery Soil
- 07.14 Module Seven Review And Discussion-Based Assessment
- 07.15 Module Seven Assessment

Module 08: Sun's Energy

- 08.00 Module Eight Pretest
- 08.01 Sunlight And Heat
- 08.02 Warmth And Sunlight
- 08.03 Heating Earth
- 08.04 Sunlight Around The World
- 08.05 Module Eight Review And Reflection
- 08.06 Module Eight Assessment

Module 09: Forms Of Energy

- 09.00 Module Nine Pretest
- 09.01 Electrifying Electricity
- 09.02 Earth’s Natural Power
- 09.03 There’s an energy for that!
- 09.04 Module Nine Review And Discussion-Based Assessment
- 09.05 Module Nine Assessment

Module 10: Forces And Changes In Motion

- 10.00 Module Ten Pretest
- 10.01 Welcome to Fizzworks Factory!
- 10.02 Need A Push
- 10.03 A push or pull?
- 10.04 Force And Speed
- 10.05 Big And Small Forces
- 10.06 The Effects Of Force

- 10.07 The Power Of Force
- 10.08 Magnificent Magnets
- 10.09 Do we have a problem?
- 10.10 The Solution
- 10.11 Module Ten Review And Discussion-Based Assessment
- 10.12 Module Ten Assessment

Module 11: Human Body

- 11.00 Module Eleven Pretest
- 11.01 Exploring The Human Body
- 11.02 Journey Inside The Body
- 11.03 The Brain
- 11.04 The Heart
- 11.05 The Lungs
- 11.06 The Stomach
- 11.07 Mighty Muscles
- 11.08 All About The Skeleton
- 11.09 My body can do what?
- 11.10 Module Eleven Review And Discussion-Based Assessment
- 11.11 Module Eleven Assessment

Module 12: Basic Needs

- 12.00 Module Twelve Pretest
- 12.01 Basic World, Basic Needs
- 12.02 Comparing Basic Needs
- 12.03 Welcome To My Habitat
- 12.04 Living With The Land
- 12.05 The Habitats Of Earth
- 12.06 Sunlight With A Side Of Water
- 12.07 Module Twelve Review And Reflection
- 12.08 Module Twelve Assessment

Module 13: Life Cycles

- 13.00 Module Thirteen Pretest
- 13.01 Seed To Bean
- 13.02 Life Cycle Of Plants
- 13.03 Egg To Butterfly
- 13.04 Life Cycle Of Animals
- 13.05 Let’s spread some seeds!
- 13.06 Module Thirteen Review And Discussion-Based Assessment
- 13.07 Module Thirteen Assessment

Course Assessment and Participation Requirements:

To achieve success, students are expected to submit work in each course weekly. Students can learn at their own pace; however, “any pace” still means that students must make progress in the course every week. To measure learning, students complete self-checks, practice lessons, multiple choice questions, projects, discussion-based assessments, and discussions. Students are expected to maintain regular contact with teachers; the minimum requirement is monthly. When teachers, students, and parents work together, students are successful.

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