



**SUBJECT: SCIENCE**

**GRADE LEVEL: Kindergarten**

**SCHOOL YEAR: 2023-2024**

**TEACHER: Donna Wolfe**

**EMAIL: [http://dwolfe@dishs.tp.edu.tw](mailto:dwolfe@dishs.tp.edu.tw)**

### **COURSE DESCRIPTION:**

The curriculum for Kindergarten Science fulfills children's natural cravings for things around them. It builds the basic science skills, like observation, measurement, comparison and classification for children. We begin our learning journey by introducing topics that are at their level, such as animals, Plants and days and night, in conjunction with our SLOs and DIS's VISION MISSION, which insure children learning in a fun and practical matter. Kindergarten Science studies of the weather, plants, animals, and nature which will provide children with stimulation on topics they are eager to learn. We teach children methods to investigate the world and make sense of their findings. We give children time to learn about their world and how it works. By using our kindergarten Science program, we foster children's development of science knowledge and lead them on a lifelong journey of inquiry.

### **COURSE OBJECTIVES:**

- Discover patterns that can be used to classify things as living and nonliving.
- Analyze data and construct explanations about patterns of what plants, animals and humans need to survive.
- Construct explanations about the patterns of where plants/animals live and their need.
- Argue from evidence to explain how plants/animals/people can change their environments to get what they need.
- Identify and engage in discussions about natural resources and how their uses affect the environment.
- Communicate solutions that will reduce the effect of humans on the land, water, air, and/or other living things in the local environment.
- Analyze and interpret data to describe and measure weather patterns.
- Analyze and interpret data to identify weather patterns over time.
- Obtain information and use patterns to make predictions about the weather.
- Ask questions and obtain and communicate information on ways to identify, prepare for, and respond to severe weather.
- Carry out investigations to explain the effect of sunlight on Earth's surface.
- Construct explanations and design solutions to reduce the warming effect of sunlight.
- Conduct investigations and observe the effects of different strengths of pushes and pulls on the motion of an object.
- Carry out investigations to discover what causes objects to change direction and speed.
- Analyze and interpret data to answer questions about what happens when object collide.

## **PRIMARY TEXTBOOK & OTHER RESOURCES:**

Hackett et al. (2020). *Inspire Science Unit 1-4*. Columbus, Ohio: McGraw-Hill Education

- Unit 1-4 Inspire Science Student Edition

## **REFERENCE/LINKS:**

- Our school website: <https://www.dishs.tp.edu.tw/>
- Publisher website: <https://www.mheducation.com/prek-12>

## **SUPPLEMENTARY RESOURCES:**

- Online videos and activities
- Science practical projects in the classroom or indoor.

## **ASSESSMENT:**

- **Observation/Anecdotal Records:** Teacher observes and records student participation and discussion using checklists or rating scales.
- **Performance:** Students can illustrate through artistic expression or retelling, an event or scene from one of the lessons discussed.
- **Questioning:** When sharing information teachers may question students on their understanding.
- **Work Samples or Portfolio:** Collect illustrations as work samples to include in student portfolios.
- **Unit Assessment:** Oral and Writing Exam each quarter.
- **Projects:** Students demonstrate an active participation in questions and answer when doing Science projects or experiment.
- **Seatwork and Homework:** Students submit the seatwork and homework in the allotted time.

**ADDITIONAL INFORMATION:** Please see Google Classroom for more information. Class code:

**Academic Dishonesty** means employing a method or technique or engaging in conduct in an academic endeavor that contravenes the standards of ethical integrity expected at DIS. Academic dishonesty includes but is not limited to, the following:

1. Purposely incorporating the ideas, words of sentences, paragraphs, or parts thereof without appropriate acknowledgment and representing the product as one's own work; and
1. Representing another's intellectual work such as photographs, paintings, drawings, sculpture, or research or the like as one's own, including failure to attribute content to an AI.
2. Employing a tutor, making use of Artificial Intelligence without acknowledgement, getting a parent to write a paper or do an assignment, paying for an essay to be written by someone else and presented as the student's own work.
3. Committing any act that a reasonable person would conclude, when informed of the evidence, to be a dishonest means of obtaining or attempting to obtain credit for academic work.

**Any act of academic dishonesty will result in an automatic zero on the entire assignment**

# 1st QUARTER – TENTATIVE COURSE CONTENT

(NB: Depending on time and interest, the teacher may delete and/or add other selections.)

Week / Date	Topic / Projects / Assessments
<b>Week 1</b> <b>Aug 10<sup>th</sup> to 11<sup>th</sup></b> <b>Only 2 School Days</b> <i>10 ~ First Day / Orientation Day</i>	<ul style="list-style-type: none"> <li>Students' and Parents' Orientation</li> <li>Welcome to K2</li> <li>Environmental Language</li> <li>Classroom Commands and Routines</li> </ul>
<b>Week 2</b> <b>Aug 14<sup>th</sup> to 18<sup>th</sup></b> <i>15 ~ Opening Mass</i>	<b>Unit 1 Living Things</b> <b>Module Plants and Animals</b> <u>Module Opener</u> Big Idea: How animals live and grow in different places? <b>Lesson 1: Living and Non Living (Day1)</b> Interactive Presentation: Page Keeley Science Probe: <i>Living and Non Living</i> Discover Phenomenon: <i>How can you tell the difference between living and nonliving things?</i> Video: Cat Nap Inquiry Activity: Sort Things (Living and Nonliving Sort) Read Aloud: Growing UP  <b>Lesson 1: Living and Non Living (Day 2)</b> Video: Living and Nonliving Close Reading: Discover the Difference Inquiry Activity: Gummy Worms and Earth Worms / Observe Your World Explain the Phenomenon: <i>How can you tell the difference between living and nonliving things?</i>
<b>Week 3</b> <b>Aug 21<sup>st</sup> to 25<sup>th</sup></b>	<b>Lesson 2: Plant and Animal Survival (Day 1)</b> Interactive Presentation: Page Keeley Science Probe: <i>Plant and Animal Needs</i> Discover Phenomenon: <i>What is in the animal's cheeks?</i> Video: Hungry Chipmunk Inquiry Activity: Plant needs  <b>Lesson 2: Plant and Animal Survival (Day 2)</b> Video: What Do Plants and Animals Need? Read Aloud: Plant and Animal Needs Close Reading: Baby Birds Inquiry Activity: Build a Bird Home Explain the Phenomenon: <i>What is in the animal's cheeks?</i>
<b>Week 4</b> <b>Aug 28<sup>th</sup> to Sep 1<sup>st</sup></b>	<b>Lesson 3: Places Plants live (Day 1)</b> Interactive Presentation: Page Keeley Science Probe: <i>Places Plants Grow</i> Discover Phenomenon: <i>How can cactus plants live where it is so dry?</i> Video: Cactus Plant Inquiry Activity: Cactus Plants in Water  <b>Lesson 3: Places Plants live (Day 2)</b> Video: Where Do Plants Grow? Inquiry Activity: Where Plants grow? / Which Plants Survive? Go Further: Land Plants and Water Plants Explain the Phenomenon: <i>How can cactus plants live where it is so dry?</i>

<p><b>Week 5</b>  <b>Sep 4<sup>th</sup> to 8<sup>th</sup></b>  <i>8 ~ Holy Mass &amp; VIP Induction</i></p>	<p><b>Lesson 4: Places Animals Live (Day 1)</b>  Interactive Presentation: Page Keeley Science Probe: <i>Places Where Animals live</i>  Discover Phenomenon: <i>How can otters live in the water?</i>  Video: An Otter  Inquiry Activity: Animal Walk  Read Aloud: Iggy Iguana</p> <p><b>Lesson 4: Places Animals Live (Day 2)</b>  Animal Habitats  Video: Where Do Animals Live?  Inquiry Activity: Where Animals Live / Things Human Need  Read Aloud: Animal and Plant Habitats  STEM Connections: What Does a Curator Do?  Explain the Phenomenon: <i>How can otters live in the water?</i></p> <p><b>Unit 1 Review and Assessment</b></p>
<p><b>Week 6</b>  <b>Sep 11<sup>th</sup> to 15<sup>th</sup></b>  <i>12-14 ~ Pre-Exam Days</i></p>	<p><b>Unit 2 Our Changing World</b>  <b><u>Module Opener</u></b>  Big Idea: How do living things cause changes to their environment?  <b>Lesson 1: Plants Change Their Environment (Day 1)</b>  Interactive Presentation: Page Keeley Science Probe: <i>Plants and the Environment</i>  Discover Phenomenon: <i>What is happening to the sidewalk?</i>  Video: Where a Tree Grows?  Inquiry Activity: Plants Make Changes</p> <p><b>Lesson 1: Plants Change Their Environment (Day 2)</b>  Plants and Environment  Inquiry Activity: How the Environment Can Change / Plants Help Soil  Explain the Phenomenon: <i>What is happening to the sidewalk?</i></p>
<p><b>Week 7</b>  <b>Sep 18<sup>th</sup> to 22<sup>nd</sup></b></p>	<p><b>Lesson 2: Animal Change Their Environment (Day 1)</b>  Interactive Presentation: Page Keeley Science Probe: <i>Animals and the Environment</i>  Discover the Phenomenon: <i>What could live here?</i>  Video: Making a Home  Inquiry Activity: Ant Habitat  Workbook Activity: Busy Beavers Build Dams</p>
<p><b>Week 8</b>  <b>Sep 25<sup>th</sup> to 29<sup>th</sup></b>  <b><u>No Classes</u></b>  <i>25-28 ~Teacher's Conference</i>  <i>29 – Moon Festival Holiday</i></p>	<p><b><u>No Classes</u></b></p>
<p><b>Week 9</b>  <b>Oct 2<sup>nd</sup> to 6<sup>th</sup></b>  <b><u>3 Days of Class</u></b>  <i>5-6 ~Q1 Exams</i></p>	<p><b>Lesson 2: Animal Change Their Environment (Day 2)</b>  Video: Animals Changing Environments  Workbook Activity: Animal Homes / Animals Change Their Environment  Explain the Phenomenon: <i>What could live here?</i></p>

## 2<sup>nd</sup> QUARTER – TENTATIVE COURSE CONTENT

(NB: Depending on time and interest, the teacher may delete and/or add other selections.)

Week / Date	Topic / Projects / Assessments
<b>Week 1 (10)</b> <b>Oct 9<sup>th</sup> to 13<sup>th</sup></b> <b>3 Days of Class</b> <i>9-10 – Double 10 Holiday</i>	<b>Lesson 3: People Change Their Environment (Day 1)</b> Interactive Presentation: Page Keeley Science Probe: <i>People and the Environment</i> Discover the Phenomenon: How did buildings get there? Video: Neighborhoods Inquiry Activity: People Make Changes  <b>Lesson 3: People Change Their Environment (Day 2)</b> Video: People Changing Environments Workbook Activity: Changes to the Environment Inquiry Activity: Change the Land / People Change Land Close Reading: Humans Change the Environment STEM Connection: Where Do Landscape Architect Work Explain the Phenomenon: <i>How did the buildings get there?</i>
<b>Week 2 (11)</b> <b>Oct 16<sup>th</sup> to 20<sup>th</sup></b>	<b>Module: Protect Earth</b> <u>Module Opener</u> Big Idea: How can people help protect land, air, and water? <b>Lesson 1: Natural Resources (Day 1)</b> Interactive Presentation: Page Keeley Science Probe: <i>Natural Resources</i> Discover the Phenomenon: <i>What is happening to the water?</i> Video: Above the Hoover Dam Inquiry Activity: Wash Dishes Science Read Aloud: Farm to Table  <b>Lesson 1: Natural Resources (Day 2)</b> Video Using Natural Resources Workbook Activity: Resources in your Classroom Video: Using Natural Resources Close Reading: Posters Inquiry Activity: Firewood from the Forest STEM Connection: What Does a Forester Do? Explain the Phenomenon: <i>What is Happening to the Water?</i>
<b>Week 3 (12)</b> <b>Oct 23<sup>rd</sup> to 27<sup>th</sup></b>	<b>Lesson 2: Reduce, Reuse, Recycle (Day 1)</b> Interactive Presentation: Page Keeley Science Probe: <i>People and the Environment</i> Discover the Phenomenon: <i>Why are there so many plastic bottles?</i> Video: We Recycle Inquiry Activity: Sort recyclables Science Read Aloud: A Big Difference Workbook Activity: Second Chances
<b>Week 4 (13)</b> <b>Oct 30<sup>th</sup> to Nov 3<sup>rd</sup></b> <i>1 - All Saint's Day Mass</i>	<b>Lesson 2: Reduce, Reuse, Recycle (Day 2)</b> Video: Recycling Plant Workbook Activity: What Next? Close Reading: Bottle Cap Art Inquiry Activity: Make Paper STEM Connection? What does a Microbial Ecologist Do?

	<p>Explain the Phenomenon: <i>Why are there so many plastic bottles?</i></p> <p><b>Unit 2 Review and Assessment</b></p>
<p><b>Week 5 (14)</b> Nov 6<sup>th</sup> to 10<sup>th</sup></p>	<p><b>Unit 3: Weather and the Sun</b>  <b>Module: Weather</b>  <u>Module Opener</u>            Big Idea: What is the weather like today? What do I need to know about weather to stay safe?  <b>Lesson 1: Describe Weather (Day 1)</b>            Interactive Presentation: Page Keeley Science Probe: Thermometer            Discover the Phenomenon: What is happening in the woods?            Video: In the Woods            Inquiry Activity: Record the Weather            Science Read Aloud: A Day's Worth of Weather</p>
<p><b>Week 6 (15)</b> Nov 13<sup>th</sup> to 17<sup>th</sup></p>	<p><b>Lesson 1: Describe Weather (Day 2)</b>            Video: Measure and Describe Weather            Workbook Activity: Your Weather            Inquiry Activity: Measure Weather/ Make a Windsock/ Rain Gauge/ Measure Rain            Explain the Phenomenon: <i>What is happening in the woods?</i></p>
<p><b>Week 7 (16)</b> Nov 20<sup>th</sup> to 24<sup>th</sup></p>	<p><b>Lesson 2: Weather Patterns (Day 1)</b>            Interactive Presentation: Page Keeley Science Probe: <i>Weather Patterns</i>            Discover the Phenomenon: <i>When do rainbows appear?</i>            Video: Rainbow            Inquiry Activity: Temperature            Workbook Activity: Seasons</p>
<p><b>Week 8 (17)</b> Nov 27<sup>th</sup> to Dec 1<sup>st</sup></p>	<p><b>Lesson 2: Weather Patterns (Day 2)</b>            Video: Patterns and Weather            Science Read Aloud: Weather and Seasons            Inquiry Activity: Compare Seasons/ Observe Clouds/ Patterns and Seasons            Close Reading: Weather and Seasons            Explain the Phenomenon: <i>When do rainbow appear?</i>  <b>Unit 1-2 Review and Assessment</b></p>
<p><b>Week 9 (18)</b> Dec 4<sup>th</sup> to 8<sup>th</sup> 8 - Foundation Day Celebrations</p>	<p><b>Quarter Exam Review</b></p>
<p><b>Week 10 (19)</b> Dec 11<sup>th</sup> to 15<sup>th</sup>  <b>3 Days of Class</b>  <i>14-15 ~ Q2 Exams</i></p>	<p><b>Quarter Exams</b></p>
<p><b>Dec 18<sup>th</sup> to Jan 1<sup>st</sup></b></p>	<p><b>Christmas Holiday</b></p>

### 3rd QUARTER – TENTATIVE COURSE CONTENT

(NB: Depending on time and interest, the teacher may delete and/or add other selections.)

Week / Date	Topic / Projects / Assessments
<b>Week 1 (20)</b> <b>Jan 3<sup>rd</sup> to 5<sup>th</sup></b> <u>3 Days of Class</u> <i>4 ~ New Year Mass</i>	<b>Lesson 3: Forecast Weather (Day 1)</b> Interactive Presentation: Page Keeley Science Probe: <i>Forecast</i> Discover Phenomenon: <i>What do the thermometer symbols mean?</i> Video: Thermometer Inquiry Activity: Tomorrow's Weather Science Read Aloud: Storm Warning
<b>Week 2 (21)</b> <b>Jan 8<sup>th</sup> to 12<sup>th</sup></b>	<b>Lesson 3: Forecast Weather (Day 2)</b> Video: Predict Weather Workbook Activity: Predict Weather Inquiry Activity: Forecast Weather STEM Career Connection Explain the Phenomenon: <i>What do the thermometer symbols mean?</i>
<b>Week 3 (22)</b> <b>Jan 15<sup>th</sup> to 19<sup>th</sup></b>	<b>Lesson 4: Severe Weather (Day 1)</b> Science Probe: Severe Weather Discover the Phenomenon: <i>What made these?</i> Video: Hail Inquiry Activity: Make Lightning Workbook Activity: Severe Weather and You
<b>Week 4 (23)</b> <b>Jan 22<sup>nd</sup> to 26<sup>th</sup></b>	<b>Lesson 4: Severe Weather (Day 2)</b> Video: Prepare for Severe Weather Primary Source: After the Storm Inquiry Activity: Rain, Rain, Go Away Day/ Drought/ Make Thunder/ Prepare for Severe Weather Explain the Phenomenon: <i>What made these?</i>
<b>Week 5 (24)</b> <b>Jan 29<sup>th</sup> to Feb 2<sup>nd</sup></b>	<b>Module: The Sun and Earth's Surface</b> <u>Module Opener</u> Big Idea: What does the Sun do? <b>Lesson 1: Sunlight on Earth's Surface (Day 1)</b> Interactive Presentation: Page Keeley Science Probe: <i>Warm Sand</i> Discover the Phenomenon: How will the sunlight change the water? Video: Misty Morning Inquiry Activity: Sunlight and Water Workbook Activity: Sunlight in the Desert Science Read Aloud: Tortoise is Hot Interactive: Sunlight
<b>Week 6 (25)</b> <b>Feb 5<sup>th</sup> to 9<sup>th</sup></b> <u>3 Days of Class</u> <i>8-9 ~ CNY</i>	<b>Lesson 1: Sunlight on Earth's Surface (Day 2)</b> Workbook Activity: The Sun Video: The Sun Warms Earth Science Read Aloud: Earth and the Sun Inquiry Activity: Surface and Sunlight/ Melt in the Sunlight Visual Kinesthetic Vocabulary Leveled Reader: Melting Snow Explain the Phenomenon: <i>How will the sunlight change the water?</i>



Feb 8 <sup>th</sup> to 16 <sup>th</sup>	CNY Holiday
<p><b>Week 7 (26)</b>  <b>Feb 19<sup>th</sup> to 23<sup>rd</sup></b>  <i>19 ~ Lenten Mass</i>  <i>21-23 ~ Pre-Exam Days</i></p>	<p><b>Lesson 2: Protection from the Sun (Day 1)</b>  Interactive Presentation: Page Keeley Science Probe: <i>Sunlight and Shade</i>  Discover the Phenomenon: <i>Why are the girls inside the tent?</i>  Video: In the Tent  Inquiry Activity: Temperatures Throughout the Day  Workbook Activity: Stay Out of the Sunlight  Science Read Aloud: A Day at the Beach</p>
<p><b>Week 8 (27)</b>  <b>Feb 26<sup>th</sup> to March 1<sup>st</sup></b>  <b>4 Days of Class</b>  <i>28 ~ 228 Memorial Day Holiday</i></p>	<p><b>Lesson 2: Protection from the Sun (Day 2)</b>  Workbook Activity: Shade  Video: Shade from the Sun  Go Further: Shade and the Sun During the Day  Science Read Aloud: Made in the Shade  Inquiry Activity: Temperature Throughout the Day/ Sunscreen and Protection  Close Reading: Be Sun Wise  STEM Connection: What Does a Civil Engineer Do?  Explain the Phenomenon: <i>Why are the girls inside the tent?</i>  <b>Unit 3 Review and Assessment</b></p>
<p><b>Week 9 (28)</b>  <b>March 4<sup>th</sup> to 8<sup>th</sup></b>  <b>4 Days of Class</b>  <i>8 ~ Q3 Exams</i></p>	<p><b>Unit 4: Make Things Move</b>  <b>Module: Forces and Motion</b>  <u>Module Opener</u>  Big Idea: How do objects move?  <b>Lesson 1: Pushes and Pulls (Day 1)</b>  Interactive Presentation: Page Keeley Science Probe: <i>Push or Pull?</i>  Discover the Phenomenon: <i>Who is moving the wagon?</i>  Video: Move the Wagon  Inquiry Activity: Move the Blocks  Science Read Aloud: Queen of the Hill</p>



## 4th QUARTER – TENTATIVE COURSE CONTENT

(NB: Depending on time and interest, the teacher may delete and/or add other selections.)

Week / Date	Topic / Projects / Assessments
<b>Week 1 (29)</b> <b>March 11<sup>th</sup> to 15<sup>th</sup></b> <b>4 Days of Class</b> <i>11 ~ Q3 Exams</i> <i>12 ~ Q4 Begins</i>	<b>Lesson 1: Pushes and Pulls (Day 2)</b> Workbook Activity: Kinds of Force Science Read Aloud: Pushes and Pulls Video: Pushing and Pulling Inquiry Activity: Move a Car/ Monkey Business Close Reading: Motion and Force Explain the Phenomenon: <i>Who is moving the wagon?</i>
<b>Week 2 (30)</b> <b>March 18<sup>th</sup> to 22<sup>nd</sup></b> <i>18-21 ~ Fire Drill</i>	<b>Lesson 2: Direction and Speed (Day1)</b> Interactive Presentation: Page Keeley Science Probe: <i>Changing Direction</i> Discover the Phenomenon: How do you win this game? Video: Tug of War Inquiry Activity: Tug-of-War/ Kickball
<b>March 25<sup>th</sup> to Apr 5<sup>th</sup></b>	<b>Easter Holiday</b>
<b>Week 3 (31)</b> <b>Apr 8<sup>th</sup> to 12<sup>th</sup></b> <i>10 ~ Easter Mass</i>	<b>Lesson 2: Direction and Speed (Day2)</b> Workbook Activity: Fast and Slow Science Read Aloud: Pushes and Pulls Video: Changes in Motion Inquiry Activity: Change Speed/ Move Heavy and Light Objects Explain the Phenomenon: <i>How do you win this game?</i>
<b>Week 4 (33)</b> <b>Apr 15<sup>th</sup> to 19<sup>th</sup></b>	<b>Lesson 3: When Objects Collide (Day 1)</b> Interactive Presentation: Page Keeley Science Probe: <i>Toy Car Crash</i> Discover the Phenomenon: <i>What will happen when the hopper hits the floor?</i> Video: Hop! Inquiry Activity: Marbles Collide Workbook Activity: Move the Skateboard Science Read Aloud: Carlo's Skateboard
<b>Week 5 (34)</b> <b>Apr 22<sup>th</sup> to 26<sup>th</sup></b> <i>22-26 ~ AP Mock Exams</i>	<b>Lesson 3: When Objects Collide (Day 2)</b> Workbook Activity: Collisions Video: When Objects Collide Inquiry Activity: Bottle Bowling STEM Connection: What Does a Mechanical Engineer Do? Explain the Phenomenon: <i>What will happen when the hopper hits the floor?</i> <b>Unit 4 Review and Assessment</b>
<b>Week 6 (35)</b> <b>Apr 29<sup>th</sup> to May 3<sup>rd</sup></b> <i>1-2 ~ Pre-Exam</i> <i>1-10~ Final Exams (K, 5, 8, 12 only)</i> <i>4/29 – 5/10 ~ AP Exams</i>	<b>Quarter Exam Review</b>
<b>Week 7 (36)</b> <b>May 6<sup>th</sup> to 10<sup>th</sup></b> <i>1-10~ Final Exams (K, 5, 8, 12 only)</i> <i>4/29 – 5/10 ~ AP Exams</i>	<b>Quarter/Final Exam</b>

<b>Week 8 (37)</b> <b>May 13<sup>th</sup> to 17<sup>th</sup></b> <b><u>2 Days of Class</u></b> <i>15-16 ~ Q4 Exams</i> <i>17 ~ Record Day</i>	<b>Graduation Rehearsals</b>
<b>Week 9 (38)</b> <b>May 20<sup>th</sup> to 24<sup>th</sup></b> <b><u>ACTIVITIES:</u></b> <i>Double check the school calendar and emails from the administration.</i>	
<b>Week 10 (39)</b> <b>May 27<sup>th</sup> to 31<sup>st</sup></b> <b><u>ACTIVITIES:</u></b> <i>Double check the school calendar and emails from the administration.</i>	<b>Kindergarten Graduation</b>