Dominican International School





SUBJECT: SCIENCE

GRADE LEVEL: Kindergarten SCHOOL YEAR: 2024-2025

TEACHER: Donna Wolfe EMAIL: http://dwolfe@dishs.tp.edu.tw

COURSE DESCRIPTION:

The curriculum for Kindergarten Science fulfills children's natural cravings for understanding the world around them. It builds basic science skills, such as observation, measurement, comparison, and classification.

We begin our learning journey by introducing topics that are at their level, such as animals, plants, and day and night, in conjunction with our SLOs and DIS's Vision and Mission, which ensure children learn in a fun and practical manner.

Kindergarten Science includes studies of the weather, plants, animals, and nature, providing children with stimulation on topics they are eager to learn about. 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 what plants, animals, and humans need to survive.
- Construct explanations about the patterns of where plants and animals live and their needs.
- Argue from evidence to explain how plants, animals, and 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 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 objects 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:

<u>Academic Dishonesty</u> 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 Al.
- 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
Week 1 Aug 12 th to 16 th 4 Days of Class 12~ First Day / Orientation Day 15~ Opening Mass & Assumption of Our Lady 8:00 15~ Induction of Class, Student Council Officers and DYM	 Students' and Parents' Orientation Welcome to K2 Environmental Language Classroom Commands and Routines
Week 2 Aug 19 th to 23 rd	Unit 1 Living Things Module Plants and Animals Module Opener Big Idea: How animals live and grow in different places? Lesson 1: Living and Non Living (week 1) Interactive Presentation: Page Keeley Science Probe: Living and Non Living Discover Phenomenon: How can you tell the difference between living and nonliving things? Video: Cat Nap Inquiry Activity: Sort Things (Living and Nonliving Sort) Read Aloud: Growing UP
Week 3 Aug 26st to 30th 26~Fire drill? 26~Middle and High School Catholic Bridge Program (after assembly) 28~St. Dominic de Guzman Feast Day Celebration	Lesson 1: Living and Non Living (Week 2) Video: Living and Nonliving Close Reading: Discover the Difference Inquiry Activity: Gummy Worms and Earth Worms / Observe Your World Explain the Phenomenon: How can you tell the difference between living and nonliving things?
Week 4 Sep 2 nd to 6 th 2~House Ceremony	Lesson 2: Plant and Animal Survival (week 1) Interactive Presentation: Page Keeley Science Probe: Plant and Animal Needs Discover Phenomenon: What is in the animal's cheeks? Video: Hungry Chipmunk Inquiry Activity: Plant needs
Week 5 Sep 9 th to 13 th 9~ Mass & Birthday Mother Mary& VIP Induction	Lesson 2: Plant and Animal Survival (week 2) 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: What is in the animal's cheeks?
Week 6 Sep 16 th to 20 th 1 Day of Class 17~Moon Festival 18-20~ Teacher's Conference	Lesson 2: Plant and Animal Survival: Project
Week 7 Sep 23 rd to 27 th 24-26~Pre-Exam Days	Lesson 3: Places Plants live (week 1) Interactive Presentation: Page Keeley Science Probe: Places Plants Grow Discover Phenomenon: How can cactus plants live where it is so dry?

	Video: Cactus Plant Inquiry Activity: Cactus Plants in Water
Week 8 Sep 30 th to Oct 4 th	Lesson 3: Places Plants live (week 2) Video: Where Do Plants Grow? Inquiry Activity: Where Plants grow? / Which Plants Survive? Go Further: Land Plants and Water Plants Explain the Phenomenon: How can cactus plants live where it is so dry?
Week 9 Oct 7 th to 11 th 1 Day of Class 7~Launching - Rosary Month and Bullying Prevention Day 8-9 ~Q1 Exams 10~Double Ten 11~Record Day	Lesson 3: Places Plants live: Project

$\underline{2^{nd}\ QUARTER-TENTATIVE\ COURSE\ CONTENT}$

(NB: Depending on time and interest, the teacher may delete and/or add other selections.)	
Week / Date	Topic / Projects / Assessments
Week 1 (10) Oct 14th th to 18 th 14~ Second Quarter Begins	Lesson 4: Places Animals Live (week 1) Interactive Presentation: Page Keeley Science Probe: Places Where Animals live Discover Phenomenon: How can otters live in the water? Video: An Otter Inquiry Activity: Animal Walk Read Aloud: Iggy Iguana
Week 2 (11) Oct 21 st to 25 th 25 – Book Fair 25- Masquerade Night	Lesson 4: Places Animals Live (week 2) 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: How can otters live in the water? Unit 1 Review and Assessment
Week 3 (12) Oct 28 th to Nov 1 st 1-All Saint's Day Mass	Module: Changes to the Environment (Unit 2: Our Changing World) Module Opener Big Idea: How do living things cause changes to their environment? Lesson 1: Plants Change Their Environment (week 1) Interactive Presentation: Page Keeley Science Probe: Plants and the Environment Discover Phenomenon: What is happening to the sidewalk? Video: Where a Tree Grows? Inquiry Activity: Plants Make Changes
Week 4 (13) Nov 4 th to Nov 8th	Lesson 1: Plants Change Their Environment (week 2) Plants and Environment

Dec 16th to Jan 3rd	Christmas Break
Week 9 (18) Dec 9 th to 13 th 3 Days of Class 12-13 Q2 Exams	 Unit 1 and Module: Changes to the Environment (Unit 2: Our Changing World) Exam Review 2nd Quarter Exam
Week 8 (17) Dec 2 nd to Dec 6 th 6~Half Day Foundation Day Celebrations	Lesson 3: People Change Their Environment (week 2) 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: How did the buildings get there? Module: Changes to the Environment (Unit 2: Our Changing World) Assessment
Week 7 16) Nov 25 th to 29 th 25-Gr.12 Q2 Exam 26-28~Pre-Exam Day	Lesson 3: People Change Their Environment (week 1) Interactive Presentation: Page Keeley Science Probe: People and the Environment Discover the Phenomenon: How did buildings get there? Video: Neighborhoods Inquiry Activity: People Make Changes
Week 6 (15) Nov 18 th to 22 nd 22-Gr.12 Q2 Exam 22 - YSC Contest	Lesson 2: Animal Change Their Environment (week 2) Video: Animals Changing Environments Workbook Activity: Animal Homes / Animals Change Their Environment Explain the Phenomenon: What could live here?
Week 5 (14) Nov 11 th to 15 th	Lesson 2: Animal Change Their Environment (week 1) Interactive Presentation: Page Keeley Science Probe: Animals and the Environment Discover the Phenomenon: What could live here? Video: Making a Home Inquiry Activity: Ant Habitat Workbook Activity: Busy Beavers Build Dams
	Inquiry Activity: How the Environment Can Change / Plants Help Soil Explain the Phenomenon: What is happening to the sidewalk?

<u>3rd QUARTER – TENTATIVE COURSE CONTENT</u>

(NB: Depending on time and interest, the teacher may delete and/or add other selections.)	
Week / Date	Topic / Projects / Assessments
Week 1 (19) Jan 6 th to 10 th 4 Days of Class 6~Record Day 7~Third Quarter Begins 10 ~ New Year Mass	Module: Protect Earth (Unit 2: Our Changing World) Module Opener Big Idea: How can people help protect land, air, and water? Lesson 1: Natural Resources (week 1) Interactive Presentation: Page Keeley Science Probe: Natural Resources

	Discover the Phenomenon: What is happening to the water?
	Video: Above the Hoover Dam Inquiry Activity: Wash Dishes
	Science Read Aloud: Farm to Table
Week 2 (20) Jan 13 th to 17 th	Lesson 1: Natural Resources (week 2) 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: What is Happening to the Water?
Week 3 (21) Jan 20 th to 24 th	Lesson 2: Reduce, Reuse, Recycle (week 1) Interactive Presentation: Page Keeley Science Probe: People and the Environment Discover the Phenomenon: Why are there so many plastic bottles? Video: We Recycle Inquiry Activity: Sort recyclables Science Read Aloud: A Big Difference Workbook Activity: Second Chances
Jan 27 th to Jan 31 st	Chinese New Year
Week 4 (22) Feb 3 rd to 7 th	Lesson 2: Reduce, Reuse, Recycle (Day 2) Video: Recycling Plant Workbook Activity: What Next? Close Reading: Bottle Cap Art Inquiry Activity: Make Paper STEM Connection? What does a Microbial Ecologist Do? Explain the Phenomenon: Why are there so many plastic bottles? Module: Protect Earth (Unit 2: Our Changing World) Review and Assessment
Week 5 (23) Feb 10 th to 14 th 1-14~Catholic Week	Module: Weather (Unit 3: Weather and the Sun) Module Opener Big Idea: What is the weather like today? What do I need to know about weather to stay safe? Lesson 1: Describe Weather (week 1) 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
Week 6 (24) Feb 17 th to 21 st	Lesson 1: Describe Weather (week 2) Video: Measure and Describe Weather Workbook Activity: Your Weather Inquiry Activity: Measure Weather/ Make a Windsock/ Rain Gauge/ Measure Rain Explain the Phenomenon: What is happening in the woods?
Week 7 (25) Feb 24 th to 28 th 4 Days of Class 24~Lenten Mass?	Lesson 2: Weather Patterns (Day 1) Interactive Presentation: Page Keeley Science Probe: Weather Patterns Discover the Phenomenon: When do rainbows appear?

25-27 ~ Pre-Exam Days Video: Rainbow 24-27~IOWA Assessments Inquiry Activity: Temperature 28 ~ Memorial Day Holiday Workbook Activity: Seasons **Lesson 2: Weather Patterns (Day 2)** 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: When do rainbow appear? **Lesson 3: Forecast Weather (Day 1)** Interactive Presentation: Page Keeley Science Probe: Forecast Discover Phenomenon: What do the thermometer symbols mean? Video: Thermometer Inquiry Activity: Tomorrow's Weather Science Read Aloud: Storm Warning Week 8 (26) March 3rd to 7th **Lesson 3: Forecast Weather (Day 2)** 5~ Ash Wednesday Video: Predict Weather Workbook Activity: Predict Weather Inquiry Activity: Forecast Weather STEM Career Connection Explain the Phenomenon: What do the thermometer symbols mean? **Lesson 4: Severe Weather (Day 1)** Science Probe: Severe Weather Discover the Phenomenon: What made these? Video: Hail Inquiry Activity: Make Lightning Workbook Activity: Severe Weather and You Week 9 (27) **Lesson 4: Severe Weather (Day 2)** March 10th to 14th Video: Prepare for Severe Weather 4 Days of Class Primary Source: After the Storm 14 – **Q3** Exams Inquiry Activity: Rain, Rain, Go Away Day/ Drought/ Make Thunder/ Prepare for Severe Weather Explain the Phenomenon: What made these? Module: Weather (Unit 3: Weather and the Sun) Review and Assessment

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
Week 1 (28) March 17 th 21 st 4 Days of Class	Module: The Sun and Earth's Surface (Unit 3: Weather and the Sun) Module Opener Big Idea: What does the Sun do?

17 – Q3 Exams 18~ Fourth Quarter Begins 18~ Fire Drill? 19~ Feast of St. Joseph **Lesson 1: Sunlight on Earth's Surface (Day 1)**

Interactive Presentation: Page Keeley Science Probe: *Warm Sand* 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

Lesson 1: Sunlight on Earth's Surface (Day 2)

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: *How will the sunlight change the water?*

Lesson 2: Protection from the Sun (Day 1)

Interactive Presentation: Page Keeley Science Probe: Sunlight and Shade

Discover the Phenomenon: Why are the girls inside the tent?

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

Week 2 (29) March 24th to 28th **Lesson 2: Protection from the Sun (Day 2)**

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: Why are the girls inside the tent?

Module: The Sun and Earth's Surface (Unit 3: Weather and the Sun)

Review and Assessment

Module: Forces and Motion (Unit 4: Make Things Move)

Module Opener

Big Idea: How do objects move?

Lesson 1: Pushes and Pulls (Day 1)

Interactive Presentation: Page Keeley Science Probe: Push or Pull?

Discover the Phenomenon: Who is moving the wagon?

Video: Move the Wagon

Inquiry Activity: Move the Blocks Science Read Aloud: Queen of the Hill

Lesson 1: Pushes and Pulls (Day 2)

Workbook Activity: Kinds of Force Science Read Aloud: Pushes and Pulls

Video: Pushing and Pulling

Week 3 (30)
March 31st to April 4th

4 Days of Class
4~Tomb Sweeping

	Inquiry Activity: Move a Car/ Monkey Business Close Reading: Motion and Force Explain the Phenomenon: Who is moving the wagon?
Week 4 (31) Apr 7 th to 11 th	Lesson 2: Direction and Speed (Day1) Interactive Presentation: Page Keeley Science Probe: Changing Direction Discover the Phenomenon: How do you win this game? Video: Tug of War Inquiry Activity: Tug-of-War/ Kickball Lesson 2: Direction and Speed (Day2) 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: How do you win this game?
April 14 th to April 18 th	Easter Break
Week 5 (32) Apr 21st to 25th 23~Easter Mass 21-25 ~ AP Mock Exams 26~Spring Fair	Lesson 3: When Objects Collide (Day 1) Interactive Presentation: Page Keeley Science Probe: Toy Car Crash Discover the Phenomenon: What will happen when the hopper hits the floor? Video: Hop! Inquiry Activity: Marbles Collide Workbook Activity: Move the Skateboard Science Read Aloud: Carlo's Skateboard Lesson 3: When Objects Collide (Day 2) Workbook Activity: Collisions Video: When Objects Collide Inquiry Activity: Bottle Bowling STEM Connection: What Does a Mechanical Engineer Do? Explain the Phenomenon: What will happen when the hopper hits the floor? Unit 4 Review and Assessment
Week 6 (33) Apr 28 th to May 2 nd 4/29-5/1~ Pre-Exam Days 1-2~ Final Exams (K, 5, 8, 12 only)	Module: Protect Earth (Unit 2: Our Changing World) and Unit 4 Quarter Exam Review
Week 7 (34) May 5 th to 9 th 5-9~ Final Exams (K, 5, 8, 12 only) 5-9~ AP Exams	Final Exam/ 4 th Quarter Exam
Week 8 (35) May 12 th to 16 th 4 Days of Class 14-15~ Q4 Exam 16~ Record Day 12-16~ AP Exams Week 9 (36) May 19 th to 23 rd 19-23~ Student Clearance 19~ Baccalaureate Mass 23~Gr. 6 - 7 Recognition and Gr. 8 Graduation	GRADUATION REHEARSALS

Week 10 (37)
May 26th to 30th
4 Days of Class
26~House Culminating Activity
27~Gr. 9-11 Recognition and Gr. 12
Graduation
281 Class Party 28! Class Party 29- ~ Students Last Day 30~ Teachers/Staff Meeting

KINDERGARTEN GRADUATION