2021-2022 Scope and Sequence
Science – Kindergarten

Cycle 1	27 Days Aug. 23 - Oct. 1, 2021	The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.

Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Unit 1: In this unit, students identify what scientists do and learn how to safely conduct investigations, including how to stay safe when using science materials. Students will also set up interactive science notebooks for use throughout the year.	**2** *Enrichment Opportunities Aug. 2-13* *Teachers Report to Work Aug. 16* *Teacher Service Days Aug. 16-17, Aug. 19-20* *Teacher Prep Day (no students) Aug. 18* **Part 1: Suggested Pacing:** Aug. 23 **Part 2: Suggested Pacing:** Aug. 24	**Part 1: What Scientists Do** (1 lesson) Ⓟ **SCI.K.3C** Explore that scientists investigate different things in the natural world and use tools to help in their investigations. **Part 2: Safety and Tools** (1 lesson) Ⓟ **SCI.K.1A*** Identify, discuss, and demonstrate safe and healthy practices as outlined in Texas Education Agency-approved safety standards during classroom and outdoor investigations, including wearing safety goggles or chemical splash goggles, as appropriate, washing hands, and using materials appropriately. Ⓟ **SCI.K.4A** Collect information using tools, including computing devices, hand lenses, primary balances, cups, bowls, magnets, collecting nets, and **notebooks**; timing devices; non-standard measuring items; weather instruments such as demonstration thermometers; and materials to support observations of habitats of organisms such as terrariums and aquariums.
Unit 2: **Motion, Location, and Position** In this unit, students explore ways that objects change and interact with other objects due to movement.	**4** 45-minute lessons **Part 1 Suggested Pacing:** Aug. 25-26	**Part 1: Location and Position** (2 lessons) **SCI.K.6D** Observe and describe the ways that objects can move such as in a straight line, zigzag, up and down, back and forth, round and round, and fast and slow. **SCI.K.6C** Observe and describe the location of an object in relation to another such as above, below, behind, in front of, and beside. Ⓟ **SCI.K.2B*** Plan and conduct simple descriptive investigations. Ⓟ **SCI.K.2E*** Communicate observations about simple descriptive investigations.

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Science – Kindergarten

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Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Unit 2: **Motion, Location, and Position** In this unit, students explore ways that objects change and interact with other objects due to movement.	**Part 2** **Suggested Pacing:** Aug. 27-30	**Part 2: Magnets** (2 lessons) **SCI.K.6B** Explore interactions between magnets and various materials. **SCI.K.6C** Observe and describe the location of an object in relation to another such as above, below, behind, in front of, and beside. (PS) **SCI.K.2B*** Plan and conduct simple descriptive investigations. (PS) **SCI.K.2E*** Communicate observations about simple descriptive investigations. (PS) **SCI.K.4A** Collect information using tools, including computing devices, hand lenses, primary balances, cups, bowls, **magnets**, collecting nets, and notebooks; timing devices; non-standard measuring items; weather instruments such as demonstration thermometers; and materials to support observations of habitats of organisms such as terrariums and aquariums.
Unit 3: **The Five Senses** In this unit, students use their senses to observe and sort materials to identify properties, patterns and to answer questions about the natural world.	**5** 45-minute lessons **Suggested Pacing:** Aug. 31 – Sept. 7 *Labor Day Sept. 6*	**Unit 3: The Five Senses** (5 lessons) (PS) **SCI.K.4B*** Use the senses as a tool of observation to identify properties and patterns of organisms, objects, and events in the environment. (PS) **SCI.K.2A** Ask questions about organisms, objects, and events observed in the natural world. (PS) **SCI.K.2E*** Communicate observations about simple descriptive investigations.
Unit 4: **Properties of Objects** In this unit, students gather information about properties of objects by observing them and recording their observations.	**7** 45-minute lessons **Part 1** **Suggested Pacing:** Sept. 8-9 **Part 2** **Suggested Pacing:** Sept. 10-13	**Part 1: Objects Have Size** (2 lessons) **SCI.K.5A*** Observe and record properties of objects, including **bigger or smaller**, heavier or lighter, shape, color, and texture. (PS) **SCI.K.2C** Collect data and make observations using simple tools. (PS) **SCI.K.2E*** Communicate observations about simple descriptive investigations. **Part 2: Objects are Heavy or Light** (2 lessons) **SCI.K.5A*** Observe and record properties of objects, including bigger or smaller, **heavier or lighter**, shape, color, and texture. (PS) **SCI.K.2D** Record and organize data and observations using pictures, numbers, and words. (PS) **SCI.K.2E*** Communicate observations about simple descriptive investigations (PS) **SCI.K.4A** Collect information using tools, including computing devices, hand lenses, **primary balances**, cups, bowls, magnets, collecting nets, and notebooks; timing devices; non-standard measuring items; weather instruments such as demonstration thermometers; and materials to support observations of habitats of organisms such as terrariums and aquariums.

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Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Unit 4: Properties of Objects In this unit, students gather information about properties of objects by observing them and recording their observations.	**Part 3** **Suggested Pacing:** Sept. 14 **Part 4** **Suggested Pacing:** Sept. 15 *Fall Holiday* *Sept. 16* *Teacher Service Day (no students)* *Sept. 17* **Part 5** **Suggested Pacing:** Sept. 20 **Extend** **Review** **Assess** **Reteach** 4 days Sept. 21-24	**Part 3: Objects Have Shape** (1 lesson) **SCI.K.5A*** Observe and record properties of objects, including bigger or smaller, heavier or lighter, **shape**, color, and texture. Ⓟ Ⓢ **SCI.K.2D** Record and organize data and observations using pictures, numbers, and words. Ⓟ Ⓢ **SCI.K.2E*** Communicate observations about simple descriptive investigations. **Part 4: Objects Have Color** (1 lesson) **SCI.K.5A*** Observe and record properties of objects, including bigger or smaller, heavier or lighter, shape, **color**, and texture. Ⓟ Ⓢ **SCI.K.2D** Record and organize data and observations using pictures, numbers, and words. Ⓟ Ⓢ **SCI.K.2E*** Communicate observations about simple descriptive investigations. **Part 5: Objects Have Texture** (1 lesson) **SCI.K.5A*** Observe and record properties of objects, including bigger or smaller, heavier or lighter, shape, color, and **texture**. Ⓟ Ⓢ **SCI.K.2D** Record and organize data and observations using pictures, numbers, and words. Ⓟ Ⓢ **SCI.K.2E*** Communicate observations about simple descriptive investigations.
Cycle 1 Cumulative Project Students will use the content learned during this cycle to engage in Project-Based Learning.	**5** 45-minute lessons **Suggested Pacing:** Sept. 27 – Oct. 1	**Cycle 1 Cumulative Project: Think Like a Scientist**

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Cycle 2	29 Days Oct. 5 - Nov. 12, 2021	The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.

Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Unit 5: Exploring Energy In this unit, students conduct simple investigations and use their senses to explore thermal, light, and sound energy.	**18** 45-minute lessons *Teacher Service Day (no students) Oct. 4* **Part 1 Suggested Pacing:** Oct. 5-12 **Part 2 Suggested Pacing:** Oct. 13-20 **Part 3 Suggested Pacing:** Oct. 21-28 **Extend Review Assess Reteach** 6 days Oct. 29 – Nov. 5	**Part 1: Thermal Energy** (6 lessons) **SCI.K.6A*** Use the senses to explore different forms of energy such as light, **thermal**, and sound. **SCI.K.5B** Observe, record, and discuss how materials can be changed by heating or cooling. (PS) **SCI.K.2E*** Communicate observations about simple descriptive investigations. (PS) **SCI.K.4B*** Use the senses as a tool of observation to identify properties and patterns of organisms, objects, and events in the environment. **Part 2: Light Energy** (6 lessons) **SCI.K.6A*** Use the senses to explore different forms of energy such as **light**, thermal, and sound. (PS) **SCI.K.4B*** Use the senses as a tool of observation to identify properties and patterns of organisms, objects, and events in the environment. **Part 3: Sound Energy** (6 lessons) **SCI.K.6A*** Use the senses to explore different forms of energy such as light, thermal, and **sound**. (PS) **SCI.K.2B*** Plan and conduct simple descriptive investigations. (PS) **SCI.K.4B*** Use the senses as a tool of observation to identify properties and patterns of organisms, objects, and events in the environment.
Cycle 2 Cumulative Project Students will use the content learned during this cycle to engage in Project-Based Learning.	**5** 45-minute lessons **Suggested Pacing:** Nov. 8-12	**Cycle 2 Cumulative Project: Energy All Around Me**

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Cycle 3	30 Days Nov. 15, 2021 - Jan. 14, 2022	The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.
Unit	**Number of Lessons**	**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:**
Unit 6: Patterns of Change In this unit, students observe, identify, and explore patterns of change in nature.	**19** 45-minute lessons **Part 1** **Suggested Pacing:** Nov. 15-29 *Thanksgiving Break* *Nov. 22-26* **Suggested Pacing:** Nov. 30 – Dec. 7 **Part 3** **Suggested Pacing:** Dec. 8-16 **Extend** **Review** **Assess** **Reteach** 6 days Dec. 17; Jan. 3-7 *Enrichment Opportunities* *Dec. 20-21* *Winter Break* *Dec. 20-31*	**Part 1: Day and Night** (6 lessons) **SCI.K.8B** Identify events that have repeating patterns, including seasons of the year and **day and night.** **SCI.K.8C** Observe, describe, and illustrate objects in the sky such as the clouds, Moon, and stars, including the Sun. Ⓟ **SCI.K.2A** Ask questions about organisms, objects, and events observed in the natural world. Ⓟ **SCI.K.3B*** Make predictions based on observable patterns in nature. **Part 2: Weather** (6 lessons) **SCI.K.8A*** Observe and describe weather changes from day to day and over seasons. Ⓟ **SCI.K.3C** Explore that scientists investigate different things in the natural world and use tools to help in their investigations. **Part 3: Changes in Seasons** (7 lessons) **SCI.K.8A*** Observe and describe weather changes from day to day and over seasons. **SCI.K.8B** Identify events that have repeating patterns, including **seasons of the year** and day and night. Ⓟ **SCI.K.4B*** Use the senses as a tool of observation to identify properties and patterns of organisms, objects, and events in the environment.
Cycle 3 Cumulative Project Students will use the content learned during this cycle to engage in Project-Based Learning.	**5** 45-minute lessons **Suggested Pacing:** Jan. 10-14	**Cycle 3 Cumulative Project: Ready for the Weather**

Cycle 3	30 Days Nov. 15, 2021 - Jan. 14, 2022	The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.
Unit	**Number of Lessons**	**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:**
	MLK Jr. Day Jan. 17 *Teacher Prep Day (no students) Jan. 18*	

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Cycle 4	27 Days Jan. 19 - Feb. 25, 2022	The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.

Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Unit 7: Earth Materials	**9** 45-minute lessons **Part 1 Suggested Pacing:** Jan. 19-25	**Part 1: Properties of Rocks** (5 lessons) **SCI.K.7A** Observe, describe, and sort rocks by size, shape, color, and texture. (PS) **SCI.K.1A*** Identify, discuss, and demonstrate safe and healthy practices as outlined in Texas Education Agency-approved safety standards during classroom and outdoor investigations, including wearing safety goggles or chemical splash goggles, as appropriate, washing hands, and using materials appropriately. (PS) **SCI.K.3C** Explore that scientists investigate different things in the natural world and use tools to help in their investigations.
	Part 2 Suggested Pacing: Jan. 26-31	**Part 2: Properties of Water** (4 lessons) **SCI.K.7B** Observe and describe physical properties of natural sources of water, including color and clarity. (PS)
Unit 8: Natural Resources and Conservation In this unit, students explore how natural resources are used every day and how those resources may be preserved and managed wisely.	**9** 45-minute lessons **Part 1 Suggested Pacing:** Feb. 1-4	**Part 1: Usefulness of Resources** (4 lessons) **SCI.K.7C*** Give examples of ways rocks, soil, and water are useful. (PS) **SCI.K.2B*** Plan and conduct simple descriptive investigations.
	Part 2 Suggested Pacing: Feb. 7-11 **Extend Review Assess Reteach** 5 days Feb. 14-18 *Teacher Service Day / Presidents' Day (no students) Feb. 21*	**Part 2: Conservation of Resources** (5 lessons) (PS) **SCI.K.1B** Demonstrate how to use, conserve, and dispose of natural resources and materials such as conserving water and reusing or recycling paper, plastic, and metal. (PS) **SCI.K.3A** Identify and explain a problem such as the impact of littering and propose a solution. (PS) **SCI.K.2E*** Communicate observations about simple descriptive investigations.

Cycle 4	27 Days Jan. 19 - Feb. 25, 2022	The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.
Unit	**Number of Lessons**	**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:**
Cycle 4 Cumulative Project Students will use the content learned during this cycle to engage in Project-Based Learning.	**4** 45-minute lessons **Suggested Pacing:** Feb. 22-25	**Cycle 4 Cumulative Project: How We Use Rocks**

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Cycle 5	33 Days Feb. 28 - Apr. 22, 2022	The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.

Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Unit 9: Living Organisms and Nonliving Objects In this unit, students investigate the basic needs of organisms and distinguish living organisms from nonliving objects.	**5** 45-minute lessons **Suggested Pacing:** Feb. 28 – Mar. 4	**Unit 9: Living Organisms and Nonliving Objects** (5 lessons) **SCI.K.9A** Differentiate between living and nonliving things based upon whether they have basic needs and produce offspring.
Unit 10: Plants are Living Organisms	**10** 45-minute lessons **Part 1** **Suggested Pacing:** Mar. 7-9 **Part 2** **Suggested Pacing:** Mar. 10-21 *Enrichment Opportunities* *Mar. 14-16* *Spring Break* *Mar. 14-18* **Part 3** **Suggested Pacing:** Mar. 22-25 *Chávez-Huerta Day* *Mar. 28*	**Part 1: Plant Needs** (3 lessons) **SCI.K.9B*** Examine evidence that living organisms have basic needs such as food, water, and shelter for animals and **air, water, nutrients, sunlight, and space for plants**. (PS) **SCI.K.1A*** Identify, discuss, and demonstrate safe and healthy practices as outlined in Texas Education Agency-approved safety standards during classroom and outdoor investigations, including wearing safety goggles or chemical splash goggles, as appropriate, washing hands, and using materials appropriately. (PS) **SCI.K.2E*** Communicate observations about simple descriptive investigations. **Part 2: Plant Parts** (3 lessons) **SCI.K.10B** Identify basic parts of **plants** and animals. **SCI.K.10A*** Sort **plants** and animals into groups based on physical characteristics such as color, size, body covering, or leaf shape. **Part 3: Plant Life Cycle** (4 lessons) **SCI.K.10C** Identify ways that young plants resemble the parent plant. **SCI.K.10D** Observe changes that are part of a simple life cycle of a plant: seed, seedling, plant, flower, and fruit. (PS) **SCI.K.2B*** Plan and conduct simple descriptive investigations.

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Cycle 5	33 Days Feb. 28 - Apr. 22, 2022	The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.
Unit	**Number of Lessons**	**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:**
Unit 11: Animals are Living Organisms In this unit, students observe animals and identify their basic needs and physical features.	**8** 45-minute lessons **Part 1** **Suggested Pacing:** Mar. 29 – Apr. 1 **Part 2** **Suggested Pacing:** Apr. 4-7 **Extend** **Review** **Assess** **Reteach** 5 days Apr. 8-14 *Spring Holiday* *Apr. 15*	**Part 1: Animal Needs** (4 lessons) **SCI.K.9B*** Examine evidence that living organisms have basic needs such as **food, water, and shelter for animals** and air, water, nutrients, sunlight, and space for plants. Ⓟ **SCI.K.3C** Explore that scientists investigate different things in the natural world and use tools to help in their investigations. **Part 2: Animal Features** (4 lessons) **SCI.K.10B** Identify basic parts of plants and **animals**. **SCI.K.10A*** Sort plants and **animals** into groups based on physical characteristics such as color, size, body covering, or leaf shape. Ⓟ **SCI.K.4B*** Use the senses as a tool of observation to identify properties and patterns of organisms, objects, and events in the environment.
Cycle 5 Cumulative Project Students will use the content learned during this cycle to engage in Project-Based Learning.	**5** 45-minute lessons **Suggested Pacing:** Apr. 18-22	**Cycle 5 Cumulative Project: How to Care for a Pet**

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Cycle 6	31 Days Apr. 25 - June 7, 2022	The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.
Unit	**Number of Lessons**	**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:**
Unit 12: Physical Characteristics of Plants and Animals In this unit, students sort organisms based on their physical characteristics.	**12** 45-minute lessons **Suggested Pacing:** Apr. 25 – May 10	**Unit 12: Physical Characteristics of Plants and Animals** (12 lessons) **SCI.K.10A*** Sort plants and animals into groups based on physical characteristics such as color, size, body covering, or leaf shape. (PS) **SCI.K.3B*** Make predictions based on observable patterns in nature.
Unit 13: Descriptive Investigations In this unit, students plan and conduct simple descriptive investigations.	**8** 45-minute lessons **Suggested Pacing:** May 11-20 **Extend** **Review** **Assess** **Reteach** 6 days May 23-31 *Memorial Day* *May 30*	**Unit 13: Descriptive Investigations** (8 lessons) (PS) **SCI.K.2B*** Plan and conduct simple descriptive investigations. (PS) **SCI.K.2E*** Communicate observations about simple descriptive investigations. (PS) **SCI.K.1A*** Identify, discuss, and demonstrate safe and healthy practices as outlined in the TEA-approved safety standards during classroom and outdoor investigations, including wearing safety goggles, washing hands, and using materials appropriately.
Cycle 6 Cumulative Project Students will use the content learned during this cycle to engage in Project-Based Learning.	**5** 45-minute lessons **Suggested Pacing:** June 1-7 *Teacher Prep Day* *(no students)* *June 8*	**Cycle 6 Cumulative Project: Plants and Animals in the zoo**