

# CURRICULUM

## GUIDE

Science - Grade 1

Providence  
Schools

### **Background**

Providence Schools teachers and administrators worked collaboratively with consultants from the Charles A. Dana Center at the University of Texas at Austin to develop the mathematics and science curriculum frameworks. The curriculum frameworks encompass two critical questions:

- Content Standards that establish clearly defined expectations for all students, helping to answer the question, ***What do students have to learn?***
- Performance Standards that determine performance expectations for content standards, helping to answer the question, ***How well do the students have to learn it?***

The curriculum framework provides a work plan that directs the instruction delivered in every classroom in every school in the district. Instruction—the way the curriculum is presented to students—will focus on the needs of students.

### **Purpose and Use of Curriculum Guides**

Curriculum Guides for the curriculum for each grade and subject outline the approximate number of days that each unit in the curriculum will be taught; describe the content to be learned; and list the essential questions that students should be able to answer by the end of the unit.

Parents should become familiar with the Curriculum Guides. You should know when your child is being taught different topics. You should also know the essential questions that your child should be able to answer by the end of each unit.

It is important that you understand that you do not have to be familiar with the content that your child is learning in order to help them with their studies. There are basic questions that you can ask to determine if your child understands the content.

***Ask your child what she is learning in each subject***  
*Does she understand the topic? Is the unit exciting or boring? What specifically does she like or dislike about the topic? Does she understand how the topic relates to the real world?*

You know your child better than anyone. You will be able to tell if she or he is benefiting from the instruction and understanding the content of the material by the way they answer you. Speak to your child's teacher if you suspect there is a problem.

### ***Ask your child about his assignments***

*What is the required work? Has he finished the work on time? Is he having difficulty? If he is having difficulty, why?*

Encourage your child to talk to her teachers if she is having difficulty understanding a concept or completing an assignment. If your child continues to experience difficulty, speak to the teacher yourself so that the two of you can work together to support your child.

Even if you do not understand the content that your child is learning, the fact that you are showing interest in his or her school work and believe that it is important that he or she does well sends a powerful message.



**Providence  
Schools**

797 Westminster Street  
Providence, RI 02903  
[www.providenceschools.org](http://www.providenceschools.org)

**Sharon Contreras**  
Chief Academic Officer  
Providence Public School Department

## UNIT A

### Content students will be learning

### Essential questions students should be able to answer by end of unit

#### Unit A.1 - From Seed to Plant: A Life Cycle (6 days)

- Distinguish between living organisms and nonliving objects.
- Identify that plants need water, air, food, and light to grow.
- Observe and describe the external features of plants.
- Identify the specific functions of the physical structures of plants.
- Observe and record the stages in the life cycle of plants.

- » How do we distinguish between living organisms and nonliving objects?
- » What structures of plants can be observed?
- » How do the structures of plants function in growth and survival?
- » How do living organisms change over time?

#### Unit A.2 - The Purpose of Seeds (8 days)

- Distinguish between living organisms and nonliving objects.
- Observe and record the structures of living organisms.
- Identify the functions of the physical structures of living organisms.
- Identify that plants need water, air, food, and light to grow.

- » How do we distinguish between living organisms and nonliving objects?
- » How do living organisms react to change?
- » What role do seeds play in the growth and survival of plants?

#### Unit A.3 - Parts of a Plant (8 days)

- Distinguish between living organisms and nonliving objects.
- Observe and describe the structures of plants.
- Identify the specific functions of the physical structures of plants.
- Identify that plants need water, air, food and light to grow.

- » How do we distinguish between living and nonliving things?
- » How do plants reproduce?

#### Unit A.4 - The Purpose of Roots (7 days)

- Distinguish between living organisms and nonliving objects.
- Observe and describe the structures of plants.
- Identify the specific functions of the physical structures of plants.
- Identify that plants need water, air, food and light to grow.

- » How do we distinguish between living and nonliving things?
- » What structures do most plants have in common?
- » What structures enable plants to reproduce?
- » How do living organisms change over time?

## UNIT B

### Content students will be learning

### Essential questions students should be able to answer by end of unit

#### Unit B.1 - Properties of Rocks (5 days)

- Describe, compare, and sort rocks using physical properties.
- Record observations and use attributes to sort and classify rocks.

- » What are rocks?
- » In what ways can rocks be sorted and grouped?

#### Unit B.2 - Basic Earth Materials (6 days)

- Investigate properties of many types of rocks and other earth materials.
- Describe, compare, and sort rocks and other earth materials using physical properties.
- Use attributes to describe how rocks and other earth materials are grouped.

- » In what ways can earth materials be sorted?
- » What are some common properties of earth materials?

#### Unit B.3 - Using Natural Resources (7 days)

- Identify and compare earth materials using physical properties.
- Understand that the properties of different earth materials make each suitable for specific uses.
- Determine which earth materials are best for different uses.

- » In what ways do people use earth materials?
- » How do people decide which earth materials are best for different uses?

#### Unit B.4 - Properties of Soil (7 days)

- Describe and compare soils using physical properties.
- Record observations about physical properties of soils.
- Sort and classify the components of different soil samples.
- Understand that the properties of different soils make each suitable for specific uses.

- » What is soil?
- » What physical properties can be used to describe soil samples?
- » How can we separate a sample of soil into its components?