

# CURRICULUM

## GUIDE

Science - Grade 5

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.

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

## UNITS

### Content students will be learning

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

#### Unit 1 - Mixtures (7 days)

- Explain that a mixture combines two or more materials, but the materials keep their individual properties.
- Explain how the mass of the parts of an object is equal to the mass of the whole object.
- Investigate how different methods can be used to separate a solution.
- Describe how some mixtures of solid matter can be separated by different processes.

- » What methods can be used to separate mixtures and solutions?
- » What characteristics distinguish a mixture from a solution?
- » How does evaporation assist in observing a solution?

#### Unit 2 - Saturation (7 days)

- Explain a simple solution.
- Understand that the mass of individual substances is equal to the mass of the solution.
- Recognize that a solution can have properties different from the substances used to create it.
- Understand how solutions can be made of different materials.

- » How can a simple solution be separated?
- » Why is the mass of a solution equal to its parts?
- » What are the properties of a saturated solution?

#### Unit 3 - Concentration (6 days)

- Understand that solutions have properties such as concentration.
- Explain how a concentrated solution can be changed.
- Investigate how two solutions made from the same substances can be different.

- » What are some properties of a solution?
- » How can a substance change a solution?
- » How can the concentration of a solution be changed?

#### Unit 4 - Chemical Changes (11 days)

- Describe a chemical reaction.
- Understand that a precipitate occurs in some chemical reactions.
- Distinguish the properties of a product from those of the original substances.
- Understand that not all chemicals react when mixed.

- » What are some properties of a chemical reaction?
- » What are some processes used to separate substances after a chemical reaction?



Providence  
Schools

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