

Midland Park Public Schools  
Midland Park, New Jersey 07432

Science – Grade 1

- I. Course Prerequisites:  
Enrollment in Science Grade 1 presumes mastery in Science Kindergarten course objectives.
- II. Course Description:  
The Science Grade 1 course is a study in Life Science, Physical Science, and Earth Science units with an emphasis on process skills. Each Unit will expose students to a variety of content in the domains of science as they relate to the New Jersey Core Curriculum Standards.
- III. Course Performance Objectives:  
Upon successful completion of the requirements for this course, the student will demonstrate proficiency in the knowledge and skills objectives listed below. New Jersey Core Curriculum Content Standards are also included. The numbers of the Core Curriculum Content Standards are listed at the end of this course curriculum.
- A. Knowledge  
The student will:
1. Demonstrate an understanding of seasons, weather, and how things change around them.
  2. Learn that matter is everything in the universe that has mass and takes up space (solids, liquids, gases).
  3. Learn that magnets have poles, attract or repel one another, and attract objects made from steel or iron.
  4. Learn that animals change as they grow and develop.
  5. Learn that there is a diversity of plant life on Earth.
  6. Develop an understanding of the Earth and its relationship to the Sun.
  7. Learn the importance of caring for our environment.
- B. Skills  
The student will be able to:
1. Observe and document daily weather conditions and discuss how the weather influences activities for the day.

2. Identify and categorize the basic needs of living organisms as they relate to the environment.
3. Sort and describe objects based on the materials of which they are made and their physical properties.
4. Identify common objects as solids, liquids, or gases.
5. Investigate and model the various ways that inanimate objects can move.
6. Predict an object's relative speed, path, or how far it will travel using various forces and surfaces.
7. Distinguish a force that acts by direct contact with an object (e.g., by pushing or pulling) from a force that can act without direct contact (e.g., the attraction between a magnet and a steel paper clip).
8. Group living and nonliving things according to the characteristics that they share.
9. Describe the requirements for the care of plants and animals related to meeting their energy needs.
10. Compare how different animals obtain food and water.
11. Explain that most plants get water from soil through their roots and gather light through their leaves.
12. Describe the ways in which organisms interact with each other and their habitats in order to meet basic needs.
13. Identify the characteristics of a habitat that enable the habitat to support the growth of many different plants and animals.
14. Communicate ways that humans protect habitats and/or improve conditions for the growth of the plants and animals that live there, or ways that humans might harm habitats.
15. Record the observable characteristics of plants and animals to determine the similarities and differences between parents and their offspring.
16. Determine the characteristic changes that occur during the life cycle of plants and animals by examining a variety of species, and distinguish between growth and development.
17. Describe similarities and differences in observable traits between parents and offspring.
18. Describe how similar structures found in different organisms (e.g., eyes, ears, mouths) have similar functions and enable those organisms to survive in different environments.
19. Describe Earth materials using appropriate terms, such as hard, soft, dry, wet, heavy, and light.
20. Describe the relationship between the Sun and plant growth.

IV. Course Sequence:

Unit I (Earth Science)

Unit II (Physical Science)

Unit III (Life Science)

## V. Student Assessment:

1. Oral and written performance in class (checking for understanding).
2. Quizzes and tests.
3. Classroom projects related to themes – i.e. universe, Earth Day, Biomes, etc.
4. Class participation and homework.
5. Labs

## VI. Resources:

1. Books
2. DVDs
3. Websites
4. Study Guides/Graphic Organizers

### 2009 Science NJCCCS:

5.2.2.A.1 Sort and describe objects based on the materials of which they are made and their physical properties.

5.2.2.A.2 Identify common objects as solids, liquids, or gases.

5.2.2.C.1 Compare, citing evidence, the heating of different colored objects placed in full sunlight.

5.2.2.D.1 Predict and confirm the brightness of a light, the volume of sound, or the amount of heat when given the number of batteries, or the size of batteries.

5.2.2.E.1 Investigate and model the various ways that inanimate objects can move.

5.2.2.E.2 Predict an object's relative speed, path, or how far it will travel using various forces and surfaces.

5.2.2.E.3 Distinguish a force that acts by direct contact with an object (e.g., by pushing or pulling) from a force that can act without direct contact (e.g., the attraction between a magnet and a steel paper clip).

5.3.2.A.1 Group living and nonliving things according to the characteristics that they share.

5.3.2.B.1 Describe the requirements for the care of plants and animals related to meeting their energy needs.

5.3.2.B.2 Compare how different animals obtain food and water.

5.3.2.B.3 Explain that most plants get water from soil through their roots and gather light through their leaves.

5.3.2.C.1 Describe the ways in which organisms interact with each other and their habitats in order to meet basic needs.

5.3.2.C.2 Identify the characteristics of a habitat that enable the habitat to support the growth of many different plants and animals.

5.3.2.C.3 Communicate ways that humans protect habitats and/or improve conditions for the growth of the plants and animals that live there, or ways that humans might harm habitats.

5.3.2.D.1 Record the observable characteristics of plants and animals to determine the similarities and differences between parents and their offspring.

5.3.2.D.2 Determine the characteristic changes that occur during the life cycle of plants and animals by examining a variety of species, and distinguish between growth and development.

5.3.2.E.1 Describe similarities and differences in observable traits between parents and offspring.

5.3.2.E.2 Describe how similar structures found in different organisms (e.g., eyes, ears, mouths) have similar functions and enable those organisms to survive in different environments.

5.4.2.A.1 Determine a set of general rules describing when the Sun and Moon are visible based on actual sky observations.

5.4.2.C.1 Describe Earth materials using appropriate terms, such as hard, soft, dry, wet, heavy, and light.

5.4.2.E.1 Describe the relationship between the Sun and plant growth.

5.4.2.F.1 Observe and document daily weather conditions and discuss how the weather influences your activities for the day.

5.4.2.G.3 Identify and categorize the basic needs of living organisms as they relate to the environment.