

NORTH BRANFORD PUBLIC SCHOOLS

Essential Curriculum

Science

Grade 1

Weather

Content

In this unit, students' observations and activities expand their awareness of weather, its features, and its effects on their daily lives. Their experiences introduce them to the following concepts, skills and attitudes.

Concepts

Upon completion of Grade 1, students will know that:

- Weather changes from day to day and week to week.
- Features of weather include cloud cover, precipitation, wind and temperature
- Tools used to measure different features of weather include wind scales, thermometers, and rain gauges.
- Meteorologists are scientists who study, observe, and record information about the weather and who use that information to forecast the weather.
- Weather affects the decisions people make about the clothing they will wear and about their outside activities.

Skills

Upon completion of Grade 1, students will be able to:

- Observe the weather by using their senses.
- Discuss and record information about weather features.
- Use simple tools to estimate wind speed and measure temperature and rainfall.
- Observe differences in types of clouds.
- Conduct experiments and draw conclusions about appropriate clothing for different types of weather.
- Organize weather data on graphs and long-term data collection charts.
- Interpret and summarize long-term weather data.

Attitudes

Upon completion of Grade 1, students will:

- Increase their awareness of weather.
- Appreciate how weather affects daily life.
- Recognize that measurements and long-term records are useful and help us learn more about weather.

Comparing and Measuring

Content

In this unit, students' observations and activities expand their awareness of comparing and measuring. From their experiences, they are introduced to the following concepts, skills, and attitudes.

Concepts

Upon completion of Grade 1, students will know that:

- Comparing involves observing similarities and difference.
- One way to make comparisons is by matching.
- Using beginning and ending points and placing units end to end are important factors when measuring.
- Nonstandard units of measure produce varying results.
- Standard units of measure produce more consistent results than nonstandard units and make it possible to share information.
- Different units and tools can be used to measure objects.
- Long tools make it easier to measure long objects.
- A common starting line is required to make fair comparisons

Skills

Upon completion of Grade 1, students will be able to:

- Observe similarities and differences among objects.
- Describe similarities and differences among objects.
- Place objects in serial order on the basis of height or length.
- Communicate observations, ideas, and questions through discussion, drawing, and writing.
- Organize information on representational graphs and charts.
- Make predictions about the relative lengths and sizes of objects.
- Use standard and nonstandard units of measure.
- Use groups of tens to quantify large numbers of units.
- Measure using beginning and ending points.
- Interpret results of measurements.

Attitudes

Upon completion of Grade 1, students will:

- Develop and awareness of self and others by comparing height, length of arms and legs, and body cutouts.
- Develop and appreciate the usefulness of measuring in our daily lives.
- Become comfortable using a variety of measuring tools and units of measure.
- Recognize the importance of developing strategies for counting large numbers.
- Appreciate the importance of organizing information on graphs and charts.

Solids and Liquids

Content

In this unit, students expand their awareness of the properties of solids and liquids.

Concepts

Upon completion of Grade 1, students will know that:

- Solids and liquids can be described by their properties.
- Some properties of solids are: color, shape, ability to roll or stack, hardness, magnetic attraction, and whether they float or sink.
- Some properties of liquids are: color, tendency to flow, degree of viscosity or fluidity, whether they are miscible with water, and whether they float or sink in water.
- Tests can be preformed to investigate properties of solids and liquids that cannot otherwise be observed.

Skills

Upon completion of Grade 1, students will be able to:

- Observe and describe the properties of solids and liquids.
- Conduct tests to investigate the properties of solids and liquids.
- Sort solids into groups on the basis of their properties.
- Compare similarities and differences among solids.
- Compare similarities and differences among liquids.
- Apply tests to investigate new solids and liquids.
- Communicate ideas, observation, and experiences through writing, drawing, and discussion.

Attitudes

Upon completion of Grade 1, students will:

- Accept that there is more than one way to describe solids and liquids.
- Recognize the importance of organizing information and results on charts.
- Develop an interest in investigating the physical world.

Animal Habitats

Content

In this unit, students' observations and activities expand their awareness of animal characteristics and how

habitats influence their survival. These experiences introduce them to the following concepts, skills, and attitudes.

Concepts

Upon completion of Grade 1, students will know that:

- All animals have basic needs such as food, water, shelter, and the need for sunlight and live plants to survive.
- Animals depend on other animals and their environment for their basic needs.
- Animals interact and possibly adapt with their environment differently.
- Different animals have different roles within their environment.
- Changes in environment directly affect their habitats.
- Animal characteristics are determined by how and where they live.
- Different animals have external features that help them survive.
- All animals have a life cycle.

Skills

Upon completion of Grade 1, students will be able to:

- Discuss and record information about animals and habitats.
- Observe animals and habitats through media resources and technology.
- Organize animals based on their habitats and characteristics.
- Interpret and summarize how the habitats affect animals.
- Conduct experiments to compare animal characteristics to determine how they aid in survival.

Attitudes

Upon completion of Grade 1, students will:

- Increase awareness of animals and habitats.
- Appreciate the differences in animals and habitats.
- Recognize how mankind plays a role in environmental changes which directly affect animals and habitats.