

# **MStM Science Curriculum Lesson Plan Template**

**Grade Level:** 1<sup>st</sup> Grade

**Teacher:** Schad/Devore

## **Science Standard/Benchmark:**

**Standard 1** Students can understand and apply skills used in scientific inquiry.

**Benchmark A** understand and apply the processes and skills of scientific inquiry.

**Grade Level Objective:** 1.A.1.1: Ask questions about objects, organisms, and events in the environment.

## **Instructional Strategies:**

During a unit study on animals, students will be given a group of pictures, containing different animals. For example, wild animals, household pets, zoo animals, exotic animals, etc. Students will question the similarities and differences. They will compare and contrast each animal and classify them into groups. During the activity, students will use their questioning and inferring skills to classify them.

## **Assessment:**

Class discussion  
Teacher Observation

## **Instructional Timeline**

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## **Science Standard/Benchmark:**

**Standard 1** Students can understand and apply skills used in scientific inquiry.

**Benchmark A** understand and apply the processes and skills of scientific inquiry.

**Grade Level Objective:** 1.A.1.2: Plan and conduct simple investigations

## **Instructional Strategies:**

During a unit on the 5 senses, students will experience the sense of taste. The teacher will have each student close their eyes. The teacher will have the student taste a specific item such as a fruit, potato, candy, etc. The student will use their inferring skills to make a prediction about each food sample. After the predictions are made, a whole group discussion will take place to talk about the predictions and the teacher will reveal the food sample.

## **Assessment:**

Class discussion

## **Instructional Timeline:**

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**Science Standard/Benchmark:**

**Standard 1** Students can understand and apply skills used in scientific inquiry.

**Benchmark A** understand and apply the processes and skills of scientific inquiry.

**Grade Level Objective:** 1.A.1.3: Use tools to gather data and extend the senses.

**Instructional Strategies:**

**Assessment:**

**Instructional Timeline:**

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## **Science Standard/Benchmark:**

**Standard 1** Students can understand and apply skills used in scientific inquiry.

**Benchmark A** understand and apply the processes and skills of scientific inquiry.

**Grade Level Objective:** 1.A.1.4: Use mathematics in scientific inquiry

## **Instructional Strategies:**

During a unit of study on weather, students will keep a weather journal. The teacher will model how to read a weather thermometer. Each day, the student will record the daily temperature and the weather conditions. After a week of collecting weather data, students will have a whole group discussion on the weather measurements. The discussion will also include a compare/contrast activity to tie in mathematics. For example, if it was 70 degrees on Tuesday, and 73 degrees on Wednesday, how much warmer was it on Wednesday?

## **Assessment:**

Class Discussion  
Weather Journal completion

## **Instructional Timeline:**

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## **Science Standard/Benchmark:**

**Standard 1** Students can understand and apply skills used in scientific inquiry.

**Benchmark A** understand and apply the processes and skills of scientific inquiry.

**Grade Level Objective:** 1.A.1.5: Communicate investigations and explanations orally, in writing or through drawings. (MCGF) (HN)

## **Instructional Strategies:**

During a unit study on famous inventors, students will complete a poster or written report on a past or present invention. Students will be put into pairs for this activity. Before the students do research, the whole group will brainstorm a list of inventions that students are curious about. From that list, each group of students will choose an item to research and complete the project.

## **Assessment:**

Rubric

## **Instructional Timeline:**

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## **Science Standard/Benchmark:**

**Standard 1** Students can understand and apply skills used in scientific inquiry.

**Benchmark A** understand and apply the processes and skills of scientific inquiry.

**Grade Level Objective:** 1.A.1.6: Follow appropriate safety procedures when conducting investigations.

## **Instructional Strategies:**

Together, as a whole group, the students will brainstorm a list of safety procedures required for use during science experiments. The students will then create a class-wide poster displaying those rules. Each time a science experiment or investigation is held, the students will be reminded of those rules.

## **Assessment:**

Class poster  
Class Discussion

## **Instructional Timeline:**

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## **Science Standard/Benchmark:**

**Standard 1** Students can understand and apply skills used in scientific inquiry.

**Benchmark B** analyze and interpret scientific information.

**Grade Level Objective:** 1.B.1.1: Use data to construct reasonable explanations.

## **Instructional Strategies:**

During a unit study on famous inventors, students will explain to their classmates, the process in which they used to come up with their own inventions. In an oral presentation, students will tell about their inventions that they created. Classmates will ask questions and inquire about their curiosities, as they listen to the presentations.

## **Assessment:**

Teacher Observation  
Class Discussion  
Invention Fair

## **Instructional Timeline:**

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**Grade Level:** 1<sup>st</sup> Grade

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**Science Standard/Benchmark:**

**Standard 2 Students can understand concepts and relationships in life science.**

**Benchmark A** understand structures of living things.

**Grade Level Objective:** 2.A.1.1: Apply and understand the characteristics of living things and how living things are both similar to and different from each other and from non-living things.

**Instructional Strategies:**

At the beginning of the animal unit of study, during a whole group discussion, we will discuss living things. We will discuss and list the characteristics of a living thing. The group will compare and contrast a living thing to a non-living thing using a venn diagram. The student will give examples of both and have classmates place them into the proper category.

**Assessment:**

Class discussion  
Venn diagram

**Instructional Timeline:**

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**Science Standard/Benchmark:**

**Standard 2 Students can understand concepts and relationships in life science.**

**Benchmark A** understand structures of living things.

**Grade Level Objective:** 2.A.1.2: Apply and understand fundamental human body parts and their functions.

**Instructional Strategies:**

During a unit study on the human body, students will create a life size model of themselves and each of the human body parts. Before beginning the unit, the students will help each other trace their own bodies and cut them out. As each system of the body is studied, the students will add a diagram of that body part to their own model. When the life size model is complete, a class discussion will take place to review each part by its name.

**Assessment:**

Teacher Observation  
Class discussion  
Completion of life size model

**Instructional Timeline:**

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**Science Standard/Benchmark:**

**Standard 2 Students can understand concepts and relationships in life science.**

**Benchmark A** understand structures of living things.

**Grade Level Objective:** 2.A.1.3 Apply and understand good health habits.

**Instructional Strategies:**

During a unit of study on health and hygiene, students will learn the proper technique for hand washing. Before teaching the proper way to wash, the teacher will rub a germ cream on the student's hands. The teacher will then use a black light to show students how many germs they carry on their hands, and where those germs like to hide. The teacher will model the proper technique for hand washing. After all students have completed their own hand washing practice, the teacher will re-apply the germ cream. The teacher, again, will use the black light to show students their progress after learning the proper technique.

**Assessment:**

Teacher Observation

**Instructional Timeline:**

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**Science Standard/Benchmark:**

**Standard 2 Students can understand concepts and relationships in life science.**

**Benchmark B** understand life cycles.

**Grade Level Objective:** 2.B.1.1 Apply and understand life cycles of plants and animals.

**Instructional Strategies:**

During a unit on plants, students will review the plant life cycle. The students will then plant a small flower seed. Students will keep a science journal, during the growth of their plant. In the science journal, the students will make predictions and explain the daily care for the plant. The students will record growth and progress of their plant over a period of time. As the plant progresses, class discussions will take place to compare each plant's growth and predictions.

**Assessment:**

Teacher Observation  
Journal Completion

**Instructional Timeline:**

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**Science Standard/Benchmark:**

**Standard 2 Students can understand concepts and relationships in life science.**

**Benchmark C** understand environmental interaction and adaptation.

**Grade Level Objective:** 2.C.1.1 Apply and understand the basic needs of plants and animals and how they interact with each other and their physical environment.

**Instructional Strategies:**

The teacher will read the book, The Tiny Seed, by Eric Carle. The teacher will draw a model of a flower/plant on the board. The students will label its parts and talk about its sequence of growth. The students will then complete the cloze worksheet activity, “The Tiny Seed”, pg. 7 with a partner.

**Assessment:**

“The Tiny Seed” worksheet

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**Science Standard/Benchmark:**

**Standard 2 Students can understand concepts and relationships in life science.**

**Benchmark C** understand environmental interaction and adaptation.

**Grade Level Objective:** 2.C.1.2 Apply and understand ways to help take care of the environment.

**Instructional Strategies:**

During a unit study on the earth and the environment, use the read aloud, A Better Way than to Throw Away. Before reading, talk to kids about how many times they have thrown trash on the ground, or not recycled their trash. Ask them how many times they have left the light on for a long period of time? After reading the selection, as a whole group, brainstorm and make a class list of all of the ways kids can help improve the environment. After the class list is complete and the students are aware of how they can help the environment, assign them the task of writing a pledge or a letter to mother earth. Students will create a letter/pledge for the planet. Students will name at least 3 ways they can help the environment in written form.

**Assessment:**

Class discussion

Class list

Letter to mother earth

**Instructional Timeline:**

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**Grade Level:** 1<sup>st</sup> Grade

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**Science Standard/Benchmark:**

**Standard 3 Students can understand concepts and relationships in Earth/Space sciences.**

**Benchmark A** understand ideas about Earth's composition and structure

**Grade Level Objective:** 3.A.1.1 Apply and understand properties of earth materials.

**Instructional Strategies:**

Do a read aloud on the phases of rocks: igneous, sedimentary, and metamorphic.

**Igneous** Use a melted, hot crayon to represent. Explain that when a rock gets really hot, it melts. It turns into a liquid found deep inside the earth. When it cools, it forms an igneous rock. Melting the crayon will represent molten rock.

**Sedimentary** Talk about sizes of rocks. Explain that rocks can sometimes look like a "sandwich" of rocks. Make a peanut butter and jelly sandwich. You may add other things like marshmallows, m&ms to represent layers. Put sandwich into a baggie and press sandwich using a heavy book. Explain to students that these layers represent the layers in a sedimentary rock. Students love to try this sandwich when they are done.

**Metamorphic** Use salt water taffy to represent a metamorphic rock. Explain that when heat is added, the rock will change. Students will take the taffy and rub it between their hands. This will demonstrate that change.

***Assessment:***

***Instructional Timeline:***

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**Science Standard/Benchmark:**

**Standard 3 Students can understand concepts and relationships in Earth/Space sciences.**

**Benchmark B** understand changes in and around Earth.

**Grade Level Objective:** 3.B.1.1 Apply and understand observable information about daily and seasonal weather conditions.

**Instructional Strategies:**

Ask the following guiding questions: Ask students how we would know what it was like without going outside? How do we know how to dress in the morning? We listen to the radio, tv, or check the internet to find out the temperature. Ask students how do we measure temperature? Show them 3 thermometers. Have 3 cups of water (hot, cold & room temp). Allow them to experiment and investigate with the water and the thermometers. Be sure to discuss important safety rules when handling the thermometers and water cups. Do worksheet #16 "How Hot Is It?"

**Assessment:**

***Instructional Timeline:***

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**Science Standard/Benchmark:**

**Standard 3 Students can understand concepts and relationships in Earth/Space sciences.**

**Benchmark C** understands concepts relating to the universe.

**Grade Level Objective:** 3.C.1.1 Apply and understand events and around us that have repeating patterns including the seasons of the year, day, and night.

**Instructional Strategies:**

Read the story The Reasons for the Seasons aloud. After the read aloud, complete a graphic organizer listing the characteristics of each season. When finished, use picture cards, demonstrating each season, for a classification activity (cooperative groups, relay race, games, etc).

**Assessment:**

Complete the book titled, My Season Book as an assessment activity.

**Instructional Timeline:**

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**Science Standard/Benchmark:**

**Standard 4 Students can understand concepts and relationships in physical science.**

**Benchmark A** understand and apply the concept and energy.

**Grade Level Objective:** 4.A.1.1 Understand and apply the positions and motions of objects.

**Instructional Strategies:**

**Assessment:**

**Instructional Timeline:**

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**Grade Level:** 1<sup>st</sup> Grade

**Teacher:** Schad/Devore

**Science Standard/Benchmark:**

**Standard 4 Students can understand concepts and relationships in physical science.**

**Benchmark B** understand and identify properties and changes of matter.

**Grade Level Objective:** 4.B.1.1 Understand and apply observable and measurable properties of objects.

**Instructional Strategies:**

Do Bag It! Activity. Investigate the three states of matter with a large group presentation. On bulletin board paper, draw a chart like the one below.

<b>Matter</b>	<b>Solid</b>	<b>Liquid</b>	<b>Gas</b>
Does it take up space?			
Does it have weight?			
Is it visible?			
Can it change shape easily?			

List the questions, but do not list the three states of matter. Gather three resealable quart-size plastic bags. Blow air into the first bag and quickly seal it. Seal a colorful block in the second bag and seal tinted water in the third bag. Show students the three bags and ask them to identify the type of matter represented in each one. Write each answer in a different column of the chart. Next use the bags to help students discover the answer to each question on the chart. When all the answers are recorded, lead your students to the following conclusions: All matter takes up space and has weight. Solids and (most) liquids are visible, but most gases are not. Liquids and gases change shapes easily, but solids do not. Then display the chart for future reference.

***Assessment:***

***Instructional Timeline:***

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**Science Standard/Benchmark:**

**Standard 4 Students can understand concepts and relationships in physical science.**

**Benchmark B** understand and identify properties and changes of matter.

**Grade Level Objective:** 4.B.1.2 Understand and apply characteristics of liquids and solids

**Instructional Strategies:** The teacher will display the following items in front of the class: pitcher of fruit juice, bottles of water, balloons, and blocks. The teacher will ask the student what the items have in common. The teacher will read the book *What is the World Made of?* (to pg. 7) The teacher will re ask the students what the items have in common. The teacher will introduce what a *molecule* is to students. Explain how the molecules look differently within a solid, liquid, or gas. The students will create their own representation using the information they have learned and the worksheet *Molecules in Matter*. The teacher will assess, informally, the students understanding of an atom and matter.

**Assessment:**

***Instructional Timeline:***