



## Sensory Village (Math/Science)

### Math:

**Pre-K:** Child begins to use language to describe location of objects.

**Kinder:** (K.13) Underlying processes and mathematical tools. The student applies Kindergarten mathematics to solve problems connected to everyday experiences and activities in and outside of school. The student is expected to:

- (A) Identify mathematics in everyday situations;
- (B) Solve problems with guidance that incorporates the processes of understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness;
- (C) Select or develop an appropriate problem-solving strategy including drawing a picture, looking for a pattern, systematic guessing and checking, or acting it out in order to solve a problem; and
- (D) Use tools such as real objects, manipulatives, and technology to solve problems.

**1<sup>st</sup>:** (1.11) Underlying processes and mathematical tools. The student applies Grade 1 mathematics to solve problems connected to everyday experiences and activities in and outside of school. The student is expected to:

- (A) identify mathematics in everyday situations;
- (B) use a problem-solving model, with guidance as needed, that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness;
- (C) select or develop an appropriate problem-solving strategy including drawing a picture, looking for a pattern, systematic guessing and checking, or acting it out in order to solve a problem; and
- (D) use tools such as real objects, manipulatives, and technology to solve problems.

**2<sup>nd</sup>:** (2.12) Underlying processes and mathematical tools. The student applies Grade 2 mathematics to solve problems connected to everyday experiences and activities in and outside of school. The student is expected to:

- (A) identify the mathematics in everyday situations;
- (B) use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness;
- (C) select or develop an appropriate problem-solving strategy including drawing a picture, looking for a pattern, systematic guessing and checking, or acting it out in order to solve a problem; and
- (D) use tools such as real objects, manipulatives, and technology to solve problems.

**3<sup>rd</sup>:** (3.15) Underlying processes and mathematical tools. The student applies Grade 3 mathematics to solve problems connected to everyday experiences and activities in and outside of school. The student is expected to:

- (A) Identify the mathematics in everyday situations;
- (B) Use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness;
- (C) Select or develop an appropriate problem-solving strategy, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem; and
- (D) Use tools such as real objects, manipulatives, and technology to solve problems.

**4<sup>th</sup>:** (4.14) Underlying processes and mathematical tools. The student applies Grade 4 mathematics to solve problems connected to everyday experiences and activities in and outside of school. The student is expected to:

- (A) identify the mathematics in everyday situations;
- (B) solve problems that incorporate understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness; and
- (C) select or develop an appropriate problem-solving plan or

strategy, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem.

**TAKS-Alt Essence Statement: Uses mathematics to solve everyday problems.**

**5<sup>th</sup>:** (5.15) Underlying processes and mathematical tools. The student communicates about Grade 5 mathematics using informal language. The student is expected to:

(B) relate informal language to mathematical language and symbols.

**TAKS-Alt Essence Statement: Communicates using informal mathematical language.**

**6<sup>th</sup>:** (6.11) Underlying processes and mathematical tools. The student applies Grade 6 mathematics to solve problems connected to everyday experiences, investigations in other disciplines, and activities in and outside of school. The student is expected to:

(A) identify and apply mathematics to everyday experiences, to activities in and outside of school, with other disciplines, and with other mathematical topics;

(B) use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness; and

(C) select or develop an appropriate problem-solving strategy from a variety of different types, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem.

**TAKS-Alt Essence Statement: Uses mathematics to solve everyday problems.**

**7<sup>th</sup>:** (7.13) Underlying processes and mathematical tools. The student applies Grade 7 mathematics to solve problems connected to everyday experiences, investigations in other disciplines, and activities in and outside of school. The student is expected to:

- (A) identify and apply mathematics to everyday experiences, to activities in and outside of school, with other disciplines, and with other mathematical topics;
- (B) use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness; and
- (C) select or develop an appropriate problem-solving strategy from a variety of different types, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem.

**TAKS-Alt Essence Statement: Uses mathematics to solve everyday problems.**

**8<sup>th</sup>:** (8.14) Underlying processes and mathematical tools. The student applies Grade 8 mathematics to solve problems connected to everyday experiences, investigations in other disciplines, and activities in and outside of school. The student is expected to:

- (A) identify and apply mathematics to everyday experiences, to activities in and outside of school, with other disciplines, and with other mathematical topics;
- (B) use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness; and
- (C) select or develop an appropriate problem-solving strategy from a variety of different types, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem.

**TAKS-Alt Essence Statement: Uses mathematics to solve everyday problems.**

**9<sup>th</sup>:** (8.14) Underlying processes and mathematical tools. The student applies Grade 8 mathematics to solve problems connected to everyday experiences, investigations in other disciplines, and activities in and outside of school. The student is expected to:

- (A) identify and apply mathematics to everyday experiences, to activities in and outside of school, with other disciplines, and with other mathematical topics;
- (B) use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness;
- (C) select or develop an appropriate problem-solving strategy from a variety of different types, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem; and
- (D) select tools such as real objects, manipulatives, paper/pencil, and technology or techniques such as mental math, estimation, and number sense to solve problems.

**TAKS-Alt Essence Statement: Uses mathematics to solve everyday problems.**

**10<sup>th</sup>:** (8.14) Underlying processes and mathematical tools. The student applies Grade 8 mathematics to solve problems connected to everyday experiences, investigations in other disciplines, and activities in and outside of school. The student is expected to:

- (A) identify and apply mathematics to everyday experiences, to activities in and outside of school, with other disciplines, and with other mathematical topics;
- (B) use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness; and
- (C) select or develop an appropriate problem-solving strategy from a variety of different types, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem.

**TAKS-Alt Essence Statement: Uses mathematics to solve everyday problems.**

**11<sup>th</sup>:** (8.14) Underlying processes and mathematical tools. The student applies Grade 8 mathematics to solve problems connected to everyday experiences, investigations in other disciplines, and activities in and

outside of school. The student is expected to:

(A) identify and apply mathematics to everyday experiences, to activities in and outside of school, with other disciplines, and with other mathematical topics;

(B) use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness; and

(C) select or develop an appropriate problem-solving strategy from a variety of different types, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem.

**TAKS-Alt Essence Statement: Uses mathematics to solve everyday problems.**

### **MATH**

**Objective:** While in Morgan’s Wonderland Market Center in the Sensory Village, the student will be able to develop a “healthy meal shopping” plan.

**Engagement:** Before visiting the Sensory Village, review the food groups and what constitutes a healthy meal plan. Brainstorm the different sections of the grocery store and make a list on the board of possible sections in which these items would be found.

Utilizing grocery store ads, have students cut out pictures of foods that will make up a healthy meal and glue them on a plate. Check for understanding by having the students compare their meal to the food pyramid guidelines.

Tell students that when they get to the Market at Morgan’s Wonderland, they will implement a “healthy meal shopping” plan.

*Accommodations: Provide individual cards of food items and have students sort food items by category and/or use the cards to glue on their healthy meal plate.*

**Exploration & Explanation:** Once at the Village Market, allow the students to explore the grocery items. Monitor their activity while they locate the items to complete their “healthy meal shopping” plan.

Note to teachers: You will need to develop a plan for your students to follow in the Market.

Suggestions for “healthy meal shopping” plan:

- Objective-purchase items that make up a healthy meal based on the food pyramid.
- Buy 3 pounds of fruits and vegetables. (Students will use the scale in the Market to weigh their produce.) List the produce you gathered and how many of each item you selected. List which meal each produce item would be served.
- Buy 1 pound of grains. How many and what types of grain would you purchase? List which meal each grain item would be served.
- How many and what types of meat would you purchase? How many pieces of meat would you buy? List which meal each meat item would be served.
- List any oils you would purchase.
- List any “extras” you would purchase and provide justification.
- What dairy items would you need to complete your “healthy meal shopping” plan?
- Add higher level questions to engage students in critical thinking of this process.

*Accommodations: Allow students to verbally tell you about their “healthy meal shopping” plan. Provide simplified/modified questions on the student’s plan. Allow students to work with a partner.*

Note: Food items in the market are not labeled with prices, so students would not be able to follow a budget to buy food items for a healthy meal.

**Elaboration:** Once back in the classroom, have students share their plans with a small group. Have them elaborate on their plans by reflecting on what they would

do differently if they followed this plan at a real grocery store. Have students share what they have learned about developing and carrying out a “healthy meal shopping” plan.

*Accommodation: Allow students to use needed communication device in order to actively participate in discussion. Simplify questions as needed to check for student’s understanding.*

**Evaluation:** The student will have mastered the objective if they were able to complete their “healthy meal shopping” plan and explain their results.

**Science:**

**Pre-K:** VI.A.2. Child investigates and describes position and motion of objects.

**Kinder:** (2) Scientific processes. The student develops abilities necessary to do scientific inquiry in the field and the classroom. The student is expected to:

- (C) gather information using simple equipment and tools to extend the senses;
- (D) construct reasonable explanations using information.

**1<sup>st</sup>:** (1.2) Scientific processes. The student develops abilities necessary to do scientific inquiry in the field and the classroom. The student is expected to:

- (C) gather information using simple equipment and tools to extend the senses;
- (D) construct reasonable explanations and draw conclusions.

**2<sup>nd</sup>:** (2.2) Scientific processes. The student develops abilities necessary to do scientific inquiry in the field and the classroom. The student is expected to:

- (D) gather information using simple equipment and tools to extend the senses;
- (E) construct reasonable explanations and draw conclusions using information and prior knowledge; and

**3<sup>rd</sup>:** (3.2) **Scientific processes.** The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:

(C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence;

(D) communicate valid conclusions; and

**4<sup>th</sup>:** (4.6) **Science concepts.** The student knows that change can create recognizable patterns. The student is expected to:

(A) identify patterns of change such as in weather, metamorphosis, and objects in the sky.

**TAKS-Alt Essence Statement: Identifies patterns of change in the natural world.**

**5<sup>th</sup>:** (4.6) **Science concepts.** The student knows that change can create recognizable patterns. The student is expected to:

(A) identify patterns of change such as in weather, metamorphosis, and objects in the sky.

**TAKS-Alt Essence Statement: Identifies patterns of change in the natural world.**

**6<sup>th</sup>:** (6.2, 7.2, 8.2) **Scientific processes.** The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:

(C) organize, analyze, evaluate, make inferences, and predict trends from direct and indirect evidence (7.2, 8.2) and

(D) communicate valid conclusions.

**TAKS-Alt Essence Statement: Uses scientific inquiry methods.**

**7<sup>th</sup> :** (6.2, 7.2, 8.2) **Scientific processes.** The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:

(C) organize, analyze, evaluate, make inferences, and predict

trends from direct and indirect evidence (7.2, 8.2) and  
(D) communicate valid conclusions.

**TAKS-Alt Essence Statement: Uses scientific inquiry methods.**

**8<sup>th</sup>** : (6.2, 7.2, 8.2) **Scientific processes.** The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:

(C) organize, analyze, evaluate, make inferences, and predict trends from direct and indirect evidence (7.2, 8.2) and  
(D) communicate valid conclusions.

**TAKS-Alt Essence Statement: Uses scientific inquiry methods.**

**9<sup>th</sup>**: Biology (2) and Integrated Physics and Chemistry (2) Scientific processes. The student uses scientific methods during field and laboratory investigations. The student is expected to:

(C) organize, analyze, evaluate, make inferences, and predict trends from data; and  
(D) communicate valid conclusions.

**TAKS-Alt Essence Statements: Uses scientific inquiry methods.**

**10<sup>th</sup>**: Biology (2) and Integrated Physics and Chemistry (2) Scientific processes. The student uses scientific methods during field and laboratory investigations. The student is expected to:

(C) organize, analyze, evaluate, make inferences, and predict trends from data; and  
(D) communicate valid conclusions.

**TAKS-Alt Essence Statements: Uses scientific inquiry methods.**

**11<sup>th</sup>**: Biology (2) and Integrated Physics and Chemistry (2) Scientific processes. The student uses scientific methods during field and

laboratory investigations. The student is expected to:

- (C) organize, analyze, evaluate, make inferences, and predict trends from data; and
- (D) communicate valid conclusions.

**TAKS-Alt Essence Statements: Uses scientific inquiry methods.**

## **SCIENCE**

**Objective:** While in Morgan’s Wonderland TV Station in Sensory Village, the students will observe weather scenes presented on the TV monitor. Students will identify the weather type (rain, hail, sun, warm, cold, etc.) and then describe the weather using detailed sentences including what conclusions can be drawn for the listening audience (bring umbrella, wear sunglasses, etc.).

**Engagement:** Prior to visiting Morgan’s Wonderland TV Weather Station, brainstorm with students all the different types of weather. Using a graphic organizer, categorize the different types of weather by seasons. Discuss weather related vocabulary. Ask students, “What would you do outside if it was \_\_\_\_ (raining, thundering, a tornado, sunny, etc.)? What would you wear if it was \_\_\_\_\_?”

Discuss the job responsibilities of a meteorologist. Show a video clip of a weather broadcast from a local television station as an introduction to their on-site activity. Engage students in questions to get them thinking about how a meteorologist does his job.

*Accommodations: Provide pictures of different types of weather and have students categorize the type of weather by season. Also have corresponding pictures of people dressed for each type of weather. Discuss with students which picture would match with the weather and why.*

**Exploration:** Start off by having your students watch Gordon Hartman’s introduction on the screen outside of the Weather TV Station. Gordon will explain

what a “green” screen is and how a meteorologist uses it in the TV studio. Once in the weather station at Sensory Village, have students explore the camera equipment and “green” screen. Remind them of the video clip that was watched in the classroom and discuss with students the similarities and differences they can see now that they are on a “TV” set. Let students choose a partner to perform weather report with, encouraging them to use weather related terms.

*Accommodation: Have students explore the weather center. Using the same pictures that were used in the engagement activity, have students match the pictures from the classroom to the pictures that are displayed around and within the Weather TV Station.*

**Explanation:** In groups of two have students take turns being the “on camera” meteorologist. While they are on camera, students need to describe the weather scene and advise people of what to do in this weather situation.

*Accommodation: To decrease the visual stimuli, students could simply verbalize the weather situation on the TV monitor and communicate what people need to do and wear for the depicted weather. Students could use the pictures from the engagement activity to match the weather and clothing picture with the weather displayed on the TV monitor.*

**Elaboration:** When back in class, have students draw a picture of a weather scene. Have students write a detailed explanation about their weather scene, providing guidance on how people should be prepared and dressed. Have students give justification for their selections.

*Accommodation: Students can use computer software to develop their picture. Students can verbalize their weather scene and explanations orally or through the use of an augmentative communication device.*

**Evaluation:** The student will have mastered the objective if they were able to describe the weather scenes and draw conclusions to advise people of how to be prepared and dressed for varying weather conditions.

