Unit 4: 2nd Grade T&G

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Department of Curriculum and Instruction

Belleville Public Schools

Curriculum Guide

Unit 4: T&G Curriculum

Second Grade

Belleville Board of Education

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Unit Overview

PHILOSOPHY

The philosophy of the Talented & Gifted Program for Belleville Public Schools is to recognize the unique talents and cababilities of all students. Students who demonstrate exceptional abilities require a challenging and a differentiated curriculum. We recognize that students learn in different ways and possess different experiences and levels of understanding. Students deserve an educational environment that is challenging, stimulating, individualized, and learner driven. The curriculum has been designed to maximize students' creative, culutural, and cognitive needs. The cornerstone belief of the Talented and Gifted Program is that children learn best when they are actively engaged in the quest for knowledge.

PURPOSE

The purpose of the Belleville School District Talented & Gifted Program:

- Provides students with experiences to increase their cognitive and affective abilities through frequent applications of creative thinking, problem solving, critical thinking, exploration, discovery, and experimentation.
- Provide a three-part model of learning activities:
  Tier 1: Whole Group Instruction in the classroom setting during a typical school day involving cross curricular involvement. (K-5)
  Tier 2: To further enhance the talents and abilities of students via the use of small group instruction in guided reading and math groupings.

- The three characteristics used for identifying students are above average ability, task commitment, and creativity.
- Discover, encourage, and provide educational opportunities and activities to every student in his/her personal learning style, to include visual-spatial, musical, naturalist, bodily kinesthetic, interpersonal, intrapersonal, linguistic, verb-linguistic, and logical-mathematical.
- To develop and encourage students to apply higher level thinking processes to become producers of information as well as consumers of information.
- The program will enhance student's level of understanding concepts, ideas, and issues in the areas of knowledge, comprehension, application, analysis, synthesis, and evaluation.
- Intellectual architecture fueled by teacher designed lessons that build upon identified students' strengths, interests, and talents.
- This program is designed to be student driven, in which the teacher acts as an facilitator, guide, or resource for personal or small group inquiries and investigations.
- The three characteristics used for identifying students are above average ability, task commitment, and creativity.
  Students are identified based on unique talents, abilities, and interests to form a talent pool.

At the K-2 levels, enrichment is intended for all students. It will be availible to encourage students and give them additional opportunities to achieve their highest potential.

The activities in this unit reflect ELA, math, science and technology endeavors which support differentiated instruction that addresses grade level needs as well as high capability needs.

New Jersey Student Learning Standards (NJSLS)

CCSS.Math.Content.2.OA.A.1	Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
CCSS.Math.Content.2.OA.B.2	Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.
CCSS.ELA-Literacy.RL.2.9	Compare and contrast two or more versions of the same story (e.g., Cinderella stories) by different authors or from different cultures.
CCSS.ELA-Literacy.RI.2.1	Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.
CCSS.Math.Content.2.NBT.B.8	Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.
CCSS.Math.Content.2.NBT.B.9	Explain why addition and subtraction strategies work, using place value and the properties of operations.
CCSS.ELA-Literacy.RI.2.6	Identify the main purpose of a text, including what the author wants to answer, explain, or describe.
CCSS.Math.Content.2.MD.B.5	Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.

CCSS.Math.Content.2.MD.B.6	Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2,..., and represent whole-number sums and differences within 100 on a number line diagram.
CCSS.ELA-Literacy.W.2.5	With guidance and support from adults and peers, focus on a topic and strengthen writing as needed by revising and editing.
CCSS.ELA-Literacy.SL.2.1.a	Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
CCSS.ELA-Literacy.SL.2.1.b	Build on others' talk in conversations by linking their comments to the remarks of others.

Exit Skills

By the end of Unit 4, students should be able to know:

- Identify the cause and effect of a relationship
- Use prior knowledge to make inferences.
- The meaning of addition and subtraction
- Multiple interpretations of addition and subtraction
- That some problems take more than one step to solve
- To use objects and drawing to represent problems
- Use addition and subtraction within 100 to solve word problems that involve one and two steps.
- Solve world problems involving dollar bills, quarters, dimes, nickels, and pennies using symbols appropriately.

Enduring Understanding

- Objects, drawings, and equations can be used to solve problems.
- Estimation is a way to get an approximate answer.
- Proficiency with basic facts aids estimation and computation of larger and smaller numbers.
- Different coins have different values, not related to the size of the coin.
- Comparing and contrasting shows similarities and differences.
- Making connections can assist in making predictions.
- Animals need to adapt to their environment in order to survive.

Essential Questions

- How does finding similarities and differences help you learn about something new?
- How do we make predictions?
- How do living things adapt to their environments?

- How can we express ourselves clearly to others?
- What strategies can be used to find sums and differences?
- How do mathematical operations relate to each other?
- What are strategies for making a reasonable estimation?

Learning Objectives

In this unit, students will be able to:

- predict and make a hypothesis as to what is going to happen to the MMs if they are submerged into water.
- come up with strategy to melt ice with the materials availible to them.
- classify shoes into multiple categories.
- sort and identify the different states of matter.

Interdisciplinary Connections

The T&G Curriculum areas of divergent thinking, convergent thinking, visual/spatial perceptions, interpretive thinking, and problem solving are integrated with Language Arts, Math, Science, and other content areas.

SCI.K-2.5.2.2.A.b	Matter exists in several different states; the most commonly encountered are solids, liquids, and gases. Liquids take the shape of the part of the container they occupy. Solids retain their shape regardless of the container they occupy.

Alignment to 21st Century Skills & Technology

Key SUBJECTS AND 21st CENTURY THEMES

Mastery of key subjects and 21st century themes is essential for all students in the 21stcentury.

Key subjects include:

- English, reading or language arts
- Arts
- Mathematics
- Science

21st Century/Interdisciplinary Themes

- Financial, Economic, Business and Entrepreneurial Literacy

- Global Awareness
- Health Literacy

21st Century Skills

- Communication and Collaboration
- Creativity and Innovation
- Critical thinking and Problem Solving
- ICT (Information, Communications and Technology) Literacy
- Media Literacy

Technology Infusion

- SMARTboard
- Computers
- iPads/Tablets
- Powerpoint presentations
- Videos
- MS Office 365



Differentiation

Special Education

- printed copy of board work/notes provided
- additional time for skill mastery
- assistive technology
- behavior management plan
- Center-Based Instruction
- check work frequently for understanding
- computer or electronic device utilizes
- have student repeat directions to check for understanding
- highlighted text visual presentation
- preferential seating
- preview of content, concepts, and vocabulary
- reduced/shortened reading assignments
- Reduced/shortened written assignments
- secure attention before giving instruction/directions
- shortened assignments
- student working with an assigned partner
- teacher initiated weekly assignment sheet

ELL

- teaching key aspects of a topic. Eliminate nonessential information
- using videos, illustrations, pictures, and drawings to explain or clarif
- allowing products (projects, timelines, demonstrations, models, drawings, dioramas, poster boards, charts, graphs, slide shows, videos, etc.) to demonstrate student's learning;
- allowing students to correct errors (looking for understanding)
- decreasing the amount of workpresented or required
- having peers take notes or providing a copy of the teacher's notes
- tutoring by peers
- using computer word processing spell check and grammar check features

Intervention Strategies

- allowing students to correct errors (looking for understanding)
- teaching key aspects of a topic. Eliminate nonessential information
- allowing products (projects, timelines, demonstrations, models, drawings, dioramas, poster boards, charts, graphs, slide shows, videos, etc.) to demonstrate student's learning
- allowing students to select from given choices

- collaborating (general education teacher and specialist) to modify vocabulary, omit or modify items to reflect objectives for the student, eliminate sections of the test, and determine how the grade will be determined prior to giving the test.
- decreasing the amount of workpresented or required
- having peers take notes or providing a copy of the teacher's notes
- marking students' correct and acceptable work, not the mistakes
- reducing or omitting lengthy outside reading assignments
- tutoring by peers
- using authentic assessments with real-life problem-solving
- using videos, illustrations, pictures, and drawings to explain or clarify

Evidence of Student Learning-CFU's

- Anticipation Guide
- Compare & Contrast
- Define
- Describe
- Evaluate
- Exit Tickets
- Explaining
- Fist- to-Five or Thumb-Ometer
- Illustration
- Journals
- KWL Chart
- Outline
- Question Stems
- Red Light, Green Light
- Self- assessments
- Think, Pair, Share
- Think, Write, Pair, Share

Primary Resources

- Envision Mathematics
- Scott Foresman Series
- Reading A-Z
- Decodable readers
- Being A Writer
- Leveled Readers
- Running Record (DRA)
- Sadlier Resources

- Recipes for Reading (Orton Gillingham)

Ancillary Resources

www.discoveryeducation.com

www.readinga-z.com

www.watchknowlearn.com

www.mobymax.com

www.readtheory.com

www.starfall.com

www.brainpopjr.com

Sample Lesson

1. M&M Science Activity https://www.youtube.com/watch?v=YZfSlP_gm-g
Students will predict and make a hypothesis as to what is going to happen to the MMs if they are submerged into water.

Students can draw a picture (before and after) as well. Once they observe the MMs in the water for several minutes, they can check to see if their hypothesis was correct.

T&G Question: What causes the letters to separate from the candies?

2. **Melting Ice Experiment**

http://creeksidelearning.com/science-math-reading-all-in-one/

3. **Shoe Classification (PDF)**

4. **States of Mater Sort (PDF)**