# Unit 3: 2nd Grade T&G

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## Title Section

## Department of Curriculum and Instruction

**Belleville Public Schools**

Curriculum Guide

# Unit 3: 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 | Represent and solve problems involving addition and subtraction. |
| CCSS.ELA-Literacy.RL.2.2 | Recount stories, including fables and folktales from diverse cultures, and determine their central message, lesson, or moral. |
| CCSS.Math.Content.2.OA.C.4 | Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends. |
| 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.Math.Content.2.NBT.A.2 | Count within 1000; skip-count by 5s, 10s, and 100s. |
| CCSS.Math.Content.2.NBT.B.5 | Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. |
| CCSS.Math.Content.2.MD.A.1 | Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. |
| CCSS.Math.Content.2.MD.A.2 | Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen. |
| CCSS.Math.Content.2.MD.A.3 | Estimate lengths using units of inches, feet, centimeters, and meters. |
| CCSS.Math.Content.2.MD.A.4 | Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit. |
| CCSS.ELA-Literacy.W.2.1 | Write opinion pieces in which they introduce the topic or book they are writing about, state an opinion, supply reasons that support the opinion, use linking words (e.g., because, and, also) to connect opinion and reasons, and provide a concluding statement or section. |
| CCSS.ELA-Literacy.W.2.3 | Write narratives in which they recount a well-elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, use temporal words to signal event order, and provide a sense of closure. |
| 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.2.3 | Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue. |

## Exit Skills

By the end of Unit 3, students should be able to:

- Summarize using main ideas.
- Identify the cause and effect of a relationship.
- Visualize the story.
- Identify the approximate length of an inch, foot, centimeter, and meter.
- Select an appropriate tool to measure an object.
- Describe how the measurements of one object differ when using two different tools.

## Enduring Understanding

- Standard units provide a common language for communicating measurement accurately.
- Data can be organized in meaningful ways so that it can be interpreted and analyzed.
- There is a difference between non-standard and standard measurement.
- Measurement tools vary in the size of the unit on them; this variation will affect the choice of tools.
- Every action has a reaction.
- Checking for understanding before, during, and after reading is important for comprehension.
- Tasks are easier when a group works together.

## Essential Questions

- How does a reader make effective and educational predictions?
- How do we make sense of confusing texts?
- Why should people work together?
- How can we express ourselves clearly to others?
- Why is it important to use standard units of measure?
- How and why do we organize information?
- How and why do we measure objects?

## Learning Objectives

In this unit, students will be able to:

- use the scientific method to solve Sam the worm's dilemma
- work together in groups to create as many Lego replicas as possible.
- make credible predictions about what will happen to coins when vinegar is added.
- make observations that seedlings change over a period of time.
- make educated guesses about straw wrapper expansion.
- follow the steps of the Engineering Design Process to create the tallest straw tower.

## 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.B.a | Some properties of matter can change as a result of processes such as heating and cooling. Not all materials respond the same way to these processes. |

## 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

- Civic Literacy
- 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
- Information 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
- 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
- multi-sensory presentation
- preferential seating
- preview of content, concepts, and vocabulary
- Reduced/shortened written assignments
- secure attention before giving instruction/directions
- 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 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
- 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
- modifying tests to reflect selected objectives

- 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

- Define
- Describe
- Evaluate
- Exit Tickets
- Explaining
- Fist- to-Five or Thumb-Ometer
- Illustration
- Journals
- KWL Chart
- Outline
- Question Stems
- Quickwrite
- Quizzes
- Red Light, Green Light
- Self- assessments
- Study Guide
- Think, Pair, Share
- Think, Write, Pair, Share
- Unit tests

## Primary Resources

- Envision Mathematics
- Scott Foresman Series
- Reading A-Z
- Decodable readers
- Being A Writer
- Leveled Readers
- Recipes for Reading (Orton Gillingham)
- Running Record (DRA)
- Sadlier Resouces

## Ancillary Resources

www.discoveryeducation.com

www.readinga-z.com

www.watchknowlearn.com

www.mobymax.com

www.readtheory.org

www.starfall.com

www.brainpopjr.com

## Sample Lesson

1. **Save Sam the Worm (PDF)-** A team building activity that enforces students to work together and to communicate with one another while solving a problem.

2. **Assembly Line Lego Robots-** Teachers will create 1 basic lego creation. Students will then work together in groups to create as many replicas as possible. Students will learn that creating an assembly line speeds up the process.

3. **Colorful Coins**
   Students will predict what will happen to coins when vinegar is added for 24 hours. Students will observe and record their results. https://www.youtube.com/watch?v=g9-luctcgPk&index=36&list=PLC02CFDE5690E4010

4. **Wrapper**

**Worm**https://www.youtube.com/watch?v=mFI0RHvZUUA&index=54&list=PLC02CFDE5690E4010
Students will observe what happens when a straw wrapper (crinkled…watch video) has drops of water added to it. Students will record observations. T&G Question: 'Why does the wrapper expand when water is added?

5. **Straw Towers**
   Students will follow the steps of the Engineering Design Process in this challenge. They will also have to creatively use a limited supply of two things since they only get a dozen of each! The towers will be precarious structures and they will also have to work with balancing and counterbalancing to make the towers stand.
   How tall can they build?
   Can you make one stand more than 100 cm tall?
   How easily do they tumble?