## Keenville Parent Guide

Mathematics 2023-2024


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## Introduction

Keenville includes 17 games aligned to mathematics standards (15 games are assigned by the teacher and 2 games are free play [mini-game]). The Keenville mathematics games assess students' knowledge and mathematical reasoning skills.

## Mathematics Games

| Games | Grades | Skills Assessed |
| :--- | :---: | :---: |
| Cloud Hopper | 1 and 2 | Reading and Writing Numerals |
| Treat Factory | 1 and 2 | Interpreting Data with Charts and Graphs |
| Farmers Market | 1 and 2 | Identifying and Determining the Value of Money |
| Keenville Sheriff | 1 and 2 | Solving Word Problems |

Cloud Hopper


In Cloud Hopper, students use their numeracy skills to collect all the numbers floating above Keenville. This game focuses on building numeracy skills by encouraging students to identify numbers represented in multiple ways.

## Skills Assessed by Game Level

| Grade | Game Level 1 | Game Level 2 | Game Level 3 |
| :--- | :--- | :--- | :--- |
| Kindergarten | NA | Students performing in <br> kindergarten level 3 can <br> identify numerals up to <br> 20 with a number, set of <br> objects, base ten blocks <br> (pictures only), and <br> number lines. |  |
| Grade 1 | Students performing in <br> grade 1 level 1 can <br> identify numerals up to <br> 50 with a number, set of <br> objects, base ten blocks <br> (pictures olly), and <br> number lines. | Students performing in <br> grade 1 level 2 can <br> identify numerals up to <br> 100 with a number, set <br> of objects, base ten <br> blocks (pictures only), <br> and number lines. | Students performing in <br> grade 1 level 3 can <br> identify numerals up to <br> 120 with a number, set <br> of objects, base ten <br> blocks (pictures and <br> written form), and <br> number lines. |


|  | Students performing in <br> grade 2 level 1 can <br> identify numerals up to <br> 300 with numbers, set of <br> Grade 2 <br> (pjects, base ten blocks <br> form), and number lines. | Students performing in <br> grade 2 level 2 can <br> identify numerals up to <br> 600 with numbers, base <br> ten blocks (pictures and <br> written form), number <br> lines, number names, <br> and expanded form (with <br> non-zero digits). | Students performing in <br> grade 2 level 3 can <br> identify numerals up to <br> 1,000 with numbers, <br> base ten blocks <br> (pictures and written <br> form), numbers lines, <br> number names, and <br> expanded form. |
| :--- | :--- | :--- | :--- |
| Grade 3 | Students performing in <br> grade 3 level 1 can <br> identify numerals up to <br> 2,000 with numbers, <br> base ten blocks <br> (pictures and written <br> form), numbers lines, <br> number names, and <br> expanded form. | NA |  |

## Treat Factory



In Treat Factory, students help Chef Keen create charts and graphs based on the Keens' treat orders and then interpret the data assembled in the charts and graphs. This game focuses on creating and interpreting tally charts, picture graphs, and bar graphs.
Skills Assessed by Game Level

| Grade | Game Level 1 | Game Level 2 | Game Level 3 |
| :--- | :--- | :--- | :--- |
|  |  | NA | Students performing in <br> kindergarten level 3 can <br> observe, gather, and <br> organize data in a <br> frequency chart with two <br> Kindergarten |
|  |  | categories. Students can <br> interpret data on single- <br> scaled bar or pictographs <br> with two categories and up <br> to 10 total data points with <br> no more than 5 in a <br> category. Students interpret <br> and answer questions <br> about data in a single- <br> scaled bar or pictograph. |  |


| Grade 1 | Students performing in grade 1 level 1 can observe, gather, and organize data in a frequency chart with two categories. Students can interpret data on single-scaled bar or pictographs with two categories and up to 14 total data points with no more than 7 in a category. Students interpret and answer questions about data in a single-scaled bar or pictograph. | Students performing in grade 1 level 2 can observe, gather, and organize data in a frequency chart with three categories. Students can interpret data on single-scaled bar or pictographs with three categories and up to 15 total data points with no more than 5 in a category. Students interpret and answer questions about data in a single-scaled bar or pictograph. | Students performing in grade 1 level 3 can observe, gather, and organize data in a frequency chart with three categories. Students can interpret data on single-scaled bar or pictographs with three categories and up to 18 total data points with no more than 6 in a category. Students interpret and answer questions about data in a single-scaled bar or pictograph. |
| :---: | :---: | :---: | :---: |
| Grade 2 | Students performing in grade 2 level 1 can observe, gather, and organize data in a single-scaled bar or pictograph with three categories. Students can interpret data on single-scaled bar or pictographs with three categories and up to 30 total data points with no more than 10 in a category. Students interpret and answer questions about data in a single-scaled bar or pictograph. | Students performing in grade 2 level 2 can observe, gather, and organize data in a single-scaled bar or pictograph with three categories. Students can interpret data on single-scaled bar or pictographs with three categories and up to 45 total data points with no more than 15 in a category. Students interpret and answer questions about data in a single-scaled bar or pictograph. | Students performing in grade 2 level 3 can observe, gather, and organize data in a single-scaled bar or pictograph with four categories. Students can interpret data on single-scaled bar or pictographs with four categories and up to 60 total data points with no more than 15 in a category. Students interpret and answer questions about data in a single-scaled bar or pictograph. |


| Grade 3 | Students performing in <br> grade 3 level 1 can | Students performing in <br> grade 3 level 2 can <br> observe, gather, and <br> observe, gather, and <br> organize data in a multi- <br> organize data in a multi- <br> scaled bar or pictograph <br> scaled bar or pictograph | Students performing in <br> grade 3 level 3 can <br> observe, gather, and <br> organize data in a multi- <br> scaled bar or pictograph |
| :--- | :--- | :--- | :--- |
|  | with four categories. | with four categories. | with five categories. |
|  | Students can interpret | Students can interpret | Students can interpret |
| data on single-scaled | data on single-scaled |  |  |
| data on single-scaled |  |  |  |
|  | bar or pictographs with | bar or pictographs with | bar or pictographs with |
| four categories and up | four categories and up | five categories and up to |  |
| to 60 total data points | to 80 total data points | 100 total data points |  |
| with no more than 15 in | with no more than 20 in | with no more than 20 in |  |
|  | a category. Students | a category. Students | a category. Students |
| interpret and answer | interpret and answer | interpret and answer |  |
|  | questions about data in | questions about data in | questions about data in |
| a multi-scaled bar or | a multi-scaled bar or | a multi-scaled bar or |  |
| pictograph. | pictograph. |  |  |

## Farmers Market



In Farmers Market, students are challenged to shop for ingredients to purchase, and then help the Keens pay for the items with the correct amount of money. This game focuses on exchanging money and paying with the exact amount of money necessary.

## Skills Assessed by Game Level

| Grade | Game Level 1 | Game Level 2 | Game Level 3 |
| :--- | :--- | :--- | :--- |
| Kindergarten | NA | Ntudents performing in <br> kindergarten level 3 <br> can identify pennies, <br> nickels, and dimes and <br> know their name and <br> value. |  |
| Grade 1 | Students performing <br> grade 1 level 1 can <br> identify the value of all <br> coins and pay with the <br> correct number of <br> pennies, nickels, <br> dimes, or quarters <br> aligned to a given <br> value. | Students performing <br> grade 1 level 2 can <br> compare values of <br> pennies, nickels, <br> dimes, and quarters <br> equal in value and pay <br> with the correct value <br> of pennies, nickels, <br> dimes, or quarters or <br> combined coin value. | Students performing <br> grade 1 level 3 can <br> compare values of <br> pennies, nickels, dimes <br> and quarters less than <br> or greater than a given <br> amount and pay with <br> the correct value of <br> pennies, nickels, <br> dimes, and quarters. |


|  | Students performing in <br> grade 2 level 1 can find <br> the value of a group of <br> coins up to 50 cents <br> without given the <br> number of items to <br> purchase and can pay <br> with the correct value <br> of pennies, nickels, <br> dimes, or quarters or <br> combined coin value. | Students performing in <br> grade 2 level 2 can find <br> the value of a group of <br> bills up to 50 dollars <br> without given the <br> number of items to <br> purchase and can pay <br> with the correct value <br> of dollar bills or <br> combined dollar value. | Students performing in <br> grade 2 level 3 can find <br> the value of a group of <br> coins up to 100 cents <br> without given the <br> number of items to <br> purchase and can pay <br> with the correct value <br> of pennies, nickels, <br> dimes, or quarters or <br> combined coin value. <br> Students can find the <br> value of a group of bills <br> up to 100 dollars <br> without given the <br> number of items to <br> purchase and can pay <br> with the correct value <br> of dollar bills or <br> combined dollar value. |
| :--- | :--- | :--- | :--- |
| Grade 3 | Students performing in <br> grade 3 level 1 can find <br> the value of a group of <br> bills up to 1,000 dollars <br> without given the <br> number of items to <br> purchase and can pay <br> with the correct value <br> of dollar bills or <br> combined dollar value. |  | NA |

## Keenville Sheriff



In Keenville Sheriff, students use math strategies to help Sheriff Keen solve the Keens' problems. This game focuses on building numeracy skills by encouraging students to use various interactive strategies to solve word problems.

## Skills Assessed by Game Level

| Grade | Game Level 1 | Game Level 2 | Game Level 3 |
| :---: | :---: | :---: | :--- |
|  |  | Students performing in <br> kindergarten level 3 <br> can use a variety of <br> strategies to solve <br> real-life result unknown <br> addition and <br> subtraction problems <br> within 10 involving <br> single-digit whole <br> numbers. Students will <br> choose a tool, such as <br> counters, number line, <br> or 100s chart, to solve. |  |


|  | Students performing in <br> grade 1 level 1 can <br> use a variety of <br> strategies to solve <br> real-life result <br> unknown addition and <br> subtraction problems <br> within 20 involving <br> single-digit whole <br> numbers. Students will <br> choose a tool, such as <br> counters, number line, <br> or 100s chart, to solve. | Students performing in <br> grade 1 level 2 can <br> use a variety of <br> strategies to solve <br> real-life change <br> unknown addition and <br> subtraction problems <br> within 20 involving <br> single-digit whole <br> numbers. Students will <br> choose a tool, such as <br> counters, number line, <br> or 100s chart, to solve. | Students performing in <br> grade 1 level 3 can <br> use a variety of <br> strategies to solve <br> real-life start unknown <br> addition and <br> subtraction problems <br> within 20 involving <br> single-digit whole <br> numbers. Students will <br> choose a tool, such as <br> counters, number line, <br> or 100s chart, to solve. |
| :--- | :--- | :--- | :--- |
| Grade 2 | Students performing in <br> grade 2 level 1 can <br> use a variety of <br> strategies to solve <br> real-life one-step <br> addition and <br> subtraction word <br> problems within 100 <br> with no regrouping. <br> Students will choose a <br> tool, such as number <br> line, 100s chart, or <br> base ten blocks, to <br> solve. | Students performing in <br> grade 2 level 2 can <br> use a variety of <br> strategies to solve <br> real-life two-step <br> addition and <br> subtraction word <br> problems within 50 <br> with no regrouping. <br> Students will choose a <br> tool, such as number <br> line, 100s chart, or <br> base ten blocks, to <br> solve. | Students performing in <br> grade 2 level 3 can <br> use a variety of <br> strategies to solve <br> real-life two-step <br> addition and <br> subtraction word <br> problems within 100 <br> with regrouping. <br> Students will choose a <br> tool, such as number <br> line, 100s chart, or <br> base ten blocks, to |
| Solve. |  |  |  |

## High-Rise Builders

High-Rise Builder Keen is helping build a new skyscraper in Keenville, so that more Keens and Peachlings will have a place to live! The crew must load the beam equally before they move it to the skyscraper, but they have forgotten their math strategies! Can you help them load the beams and build the skyscraper?


In High-Rise Builders, students are challenged to use formal and informal strategies to add and subtract. Students will use their strategies to help Builder Keen and his crew load the beams and build a skyscraper.

## Skills Assessed by Game Level

| Grade | Game Level 1 | Game Level 2 | Game Level 3 |
| :--- | :--- | :--- | :--- |
| Kindergarten | NA | NA | Students performing in <br> kindergarten level 3 <br> can add and subtract <br> up to 10 using <br> equations. |
|  | Students performing in <br> grade 1 level 1 can use <br> formal and informal <br> properties and <br> strategies to add and <br> subtract within 20. | Students performing in <br> grade 1 level 2 can use <br> formal and informal <br> properties and <br> strategies to subtract a <br> 2-digit number and a 1- <br> digit number or a 2- <br> digit number and a <br> multiple of 10 within <br> 50. | Students performing in <br> grade 1 level 3 can use <br> formal and informal <br> properties and <br> strategies to add and <br> subtract a 2-digit <br> number and a 1-digit <br> number or a 2-digit <br> number and a multiple <br> of 10 within 100. |


|  | Students performing in <br> grade 2 level 1 can use <br> formal and informal <br> properties and <br> strategies to add two 2- <br> digit numbers or <br> subtract a two 2-digit <br> number with no <br> regrouping within 50. | Students performing in <br> grade 2 level 2 can use <br> formal and informal <br> properties and <br> strategies to add three <br> 2-digit numbers or <br> subtract a two 2-digit <br> number with <br> regrouping within 50. | Students performing in <br> grade 2 level 3 can use <br> formal and informal <br> properties and <br> strategies to add four <br> 2-digit numbers or <br> subtract a two 2-digit <br> number. |
| :--- | :--- | :--- | :--- |
| Grade 3 | Students performing in <br> grade 3 level 1 can use <br> formal and informal <br> properties and <br> strategies to add and <br> subtract up to 3-digit <br> numbers within 1,000 <br> with no regrouping. | Students performing in <br> grade 3 level 2 can use <br> formal and informal <br> properties and <br> strategies to add and <br> subtract up to 3-digit <br> numbers within 1,000 <br> with regrouping. |  |

Captain Peachbeard


In Captain Peachbeard, students are challenged to solve addition and subtraction equations to help Captain Peachbeard figure out all the secret numbers to open the treasure chests. This game focuses on building numeracy skills by encouraging students to use various interactive strategies to solve addition and subtraction problems.

## Skills Assessed by Game Level

| Grade | Game Level 1 | Game Level 2 | Game Level 3 |
| :---: | :---: | :---: | :--- |
| Kindergarten | NA | Students performing in <br> kindergarten level 3 <br> can use strategies to <br> add and subtract <br> within 10. Students will <br> choose a tool, such as <br> counters, number line, <br> or 100s chart, to solve <br> problems. |  |


| Grade 1 | Students performing in grade 1 level 1 can use strategies to add or subtract within 20. Students will choose a tool, such as counters, number line, or 100s chart, to solve problems. | Students performing in grade 1 level 2 can use a variety of strategies to solve real-life addition and subtraction problems with one- and two-digit whole numbers and adding and subtracting one-digit and two-digit numbers with multiples of 10 up to 50 . Students will choose a tool, such as number line, 100s chart, or base ten blocks, to solve. | Students performing in grade 1 level 3 can use a variety of strategies to solve real-life addition and subtraction problems with one- and two-digit whole numbers and adding and subtracting one-digit and two-digit numbers with a multiple of 10 up to 100. Students will choose a tool, such as number line, 100s chart, or base ten blocks, to solve. |
| :---: | :---: | :---: | :---: |
| Grade 2 | Students performing in grade 2 level 1 can use interactive tools and strategies to add two 2-digit numbers or subtract a two 2-digit numbers with no regrouping within 50 . Students will choose a tool, such as number line, 100s chart, or base ten blocks, to solve. | Students performing in grade 2 level 2 can use interactive tools and strategies to add three 2-digit numbers or subtract a two 2digit numbers with regrouping within 50. | Students performing in grade 2 level 3 can use interactive tools and strategies to add four 2-digit numbers or subtract a two 2-digit number. |
| Grade 3 | Students performing in grade 3 level 1 use a variety of strategies to solve real-life addition and subtraction problems to solve problems within 2,000. Students will choose a tool, such as number line, 100s chart, or base ten blocks, to solve. | NA | NA |

## River Tubing



In River Tubing, students help Lifeguard Keen put the correct number of Keens into groups based on the missing number in an equation. This game promotes numeracy skills in addition and subtraction within 100.

## Skills Assessed by Game Level

| Grade | Game Level 1 | Game Level 2 | Game Level 3 |
| :---: | :---: | :---: | :---: |
| Kindergarten | NA | NA | Students performing in game level 3 in kindergarten compose and decompose numbers less than or equal to 10. |
| Grade 1 | NA | Students performing in game grade 1 level 2 can add or subtract from 0-9 solving for a number when result, change, or start are unknown. | Students performing in game grade 1 level 3 can add or subtract from 0-20 solving for a number when result, change, or start are unknown. |
| Grade 2 | Students performing in grade 2 level 1 can add or subtract up to 100 without regrouping when result, change, or start are unknown. | Students performing in grade 2 level 2 can add or subtract up to 100 with regrouping when result, change, or start are unknown. | Students performing in grade 2 level 3 can write an equation up to $5 \times 5$ to represent repeated addition. |
| Grade 3 | Students performing in grade 3 level 1 can determine the unknown whole number in multiplication problems up to $5 \times 5$. | Students performing in grade 3 level 2 can write an equation up to $10 \times 10$ to represent repeated addition. | Students performing in grade 3 level 3 can determine the unknown whole number in multiplication problems up to $10 \times 10$. |

## Carnival Time



In Carnival Time, students help to learn how to ride the Ferris wheel clock. This game focuses on numeracy skills in measurement and data by asking students to tell and display time using analog and digital clocks.

## Skills Assessed by Game Level

| Grade | Game Level 1 | Game Level 2 | Game Level 3 |
| :--- | :--- | :--- | :--- |
| Kindergarten | NA | NA | NA |
| Grade 1 | $\begin{array}{l}\text { Students performing in } \\ \text { grade 1 level 1 can tell } \\ \text { time to the hour when } \\ \text { shown an analog and } \\ \text { digital clock. }\end{array}$ | $\begin{array}{l}\text { Students performing in } \\ \text { grade 1 level 2 can tell } \\ \text { time to the half-hour } \\ \text { when shown an analog } \\ \text { and digital clock. }\end{array}$ | $\begin{array}{l}\text { Students performing in } \\ \text { grade 1 level 3 can } \\ \text { measure elapsed time to } \\ \text { the hour. }\end{array}$ |
| Grade 2 | $\begin{array}{l}\text { Students performing in } \\ \text { grade 2 level 1 can tell } \\ \text { time to the nearest five } \\ \text { minutes using an } \\ \text { analog and digital clock. }\end{array}$ | $\begin{array}{l}\text { Students performing in } \\ \text { grade 2 level 2 can tell } \\ \text { time to the nearest five } \\ \text { minutes, indicating a.m. } \\ \text { or p.m., using an analog } \\ \text { and digital clock. }\end{array}$ | $\begin{array}{l}\text { Students performing in } \\ \text { grade 2 level 3 can } \\ \text { estimate and measure } \\ \text { elapsed time to the } \\ \text { nearest hour and half } \\ \text { hour, indicating if the } \\ \text { time of day is a.m. or }\end{array}$ |
| p.m., using analog and |  |  |  |
| digital clocks. |  |  |  |$]$


|  | Students performing in <br> grade 3 level 1 can tell <br> time to the nearest <br> minute, indicating if the <br> time of day is a.m. or <br> G.m., using analog and <br> digital clocks. | Students performing in <br> grade 3 level 2 can tell <br> time to the nearest <br> fifteen minutes within an <br> hour, indicating if the <br> time of day is a.m. or <br> p.m., using analog and <br> digital clocks. | Students performing in <br> grade 3 level 3 can solve <br> real-life elapsed time <br> problems to the hour, half <br> hour, and quarter hour <br> with a.m. or p.m. where <br> times presented are only <br> on the hour, half hour, or <br> quarter hour, using <br> analog and digital clocks. |
| :--- | :--- | :--- | :--- |

## Bargain Hunters



In Bargain Hunters, students help the Keens choose appropriate measuring tools and measure the items they need for their homes. This game focuses on building measuring skills by encouraging students to use interactive measuring tools to determine the length or height of a given object.

## Skills Assessed by Game Level

| Grade | Game Level 1 | Game Level 2 | Game Level 3 |
| :--- | :--- | :--- | :--- |
| Kindergarten | NA | Students performing in <br> kindergarten level 3 <br> can compare two <br> objects with a <br> measurable attribute. |  |
| Grade 1 | Students performing in <br> grade 1 level 1 can <br> compare three objects <br> and place them in <br> order by length. | Students performing in <br> grade 1 level 2 can <br> compare the lengths of <br> two objects indirectly <br> by using a third object. | Students performing in <br> grade 1 level 3 can <br> measure the length <br> and width of objects <br> using non-standard <br> units. |


| Grade 2 | Students performing in <br> grade 2 level 1 can <br> choose the appropriate <br> tool to use for <br> measuring a given <br> object. | Students performing in <br> grade 2 level 2 can <br> estimate the lengths of <br> objects with units of <br> measure such as <br> inches, feet, and yards. | Students performing in <br> grade 2 level 3 can <br> measure to determine <br> how much longer one <br> object is than another <br> object. |
| :--- | :--- | :--- | :--- |
| Grade 3 | Students performing in <br> grade 3 level 1 can find <br> the area of objects <br> when given the length <br> measurements. | Students performing in <br> grade 3 level 2 can find <br> the length of a side <br> length when given the <br> perimeter and one side <br> length. | NA |

## Peachling Gym



In Peachling Gym, students help Coach Keen figure out the rules of the Peachlings' new game! This game focuses on building numeracy skills by encouraging students to compare numerals using symbols.

## Skills Assessed by Game Level

| Grade | Game Level 1 | Game Level 2 | Game Level 3 |
| :---: | :---: | :---: | :---: |
| Kindergarten | NA | NA | Students performing in kindergarten level 3 compare two sets of items up to 10 using the words "less than, greater than, or the same as." |
| Grade 1 | Students performing in grade 1 level 1 compare two two-digit numbers up to 50 using concrete models and the words "less than, greater than, or the same as." | Students performing in grade 1 level 2 compare two two-digit numbers up to 80 using concrete models, the words "less than, greater than, or equal to," and symbols $>,<$, or $=$. | Students performing in grade 1 level 3 compare two two-digit numbers up to 100 using concrete models and symbols <, >, and $=$. |


| Grade 2 | Students performing in grade 2 level 1 compare two two-digit numbers up to 250 using concrete models and symbols <, $>$, and $=$. | Students performing in grade 2 level 2 compare two two-digit numbers up to 500 using concrete models and symbols <, $>$, and $=$. | Students performing in grade 2 level 3 compare two two-digit numbers up to 1,000 using concrete models and symbols <, >, and $=$. |
| :---: | :---: | :---: | :---: |
| Grade 3 | Students performing in grade 3 level 1 <br> compare two two-digit numbers from 1,000- <br> 2,000 using symbols <, <br> $>$, and $=$. | Students performing in grade 3 level 2 <br> compare two two-digit numbers from 2,000- <br> 3,000 using symbols <, <br> $>$, and $=$. | NA |

## Peachling Café

Chef Keen discovered a secret recipe to make food that the Peachlings love. Now all these Peachlings have arrived to eat it! But Chef Keen can't feed them all by himself. Chef needs help! Will you help Chef Keen give food to all the Peachlings? Click "Start" to begin!


In Peachling Café, students are challenged to determine how many Peachlings need to be fed and then serve that amount of food for the Peachlings. This game promotes numeracy skills using place value techniques.
Skills Assessed by Game Level

| Grade | Game Level 1 | Game Level 2 | Game Level 3 |
| :--- | :--- | :--- | :--- |
| Kindergarten | NA | Students performing in <br> kindergarten level 3 <br> compose and <br> decompose numbers <br> from 11-19 into tens <br> and ones. |  |
| Grade 1 | Students performing in <br> grade 1 level 1 <br> understand that a ten is <br> a bundle of ten ones. | Students performing in <br> grade 1 level 2 <br> understand how to <br> represent numbers 21- <br> 50 using base ten to <br> show the amount of <br> tens and ones. | Students performing in <br> grade 1 level 3 <br> understand how to <br> represent numbers 51- <br> 120 using base ten to <br> show the amount of <br> tens and ones. |


|  | Students performing in <br> grade 2 level 1 <br> understand that a <br> hundred is a bundle of <br> ten tens. | Students performing in <br> grade 2 level 2 <br> understand how to <br> represent numbers in <br> base ten to show a <br> three-digit number <br> represent amounts of <br> hundreds and tens. | Students performing in <br> grade 2 level 3 <br> understand that the <br> three digits of a three- <br> digit number represent <br> amounts of hundreds, <br> tens, and ones. |
| :--- | :--- | :--- | :--- |

Guitar Maker


In Guitar Maker, students will sort shapes to find the shapes each Peachling needs to build their guitar. This game focuses on building geometry skills by encouraging students to identify two-dimensional and three-dimensional shapes.

## Skills Assessed by Game Level

| Grade | Game Level 1 | Game Level 2 | Game Level 3 |
| :---: | :---: | :---: | :--- |
|  |  |  | Students performing in <br> kindergarten level 3 can identify <br> shapes. Students can also <br> identify shapes as two- <br> dimensional (flat) or three- <br> dimensional (solid). Students <br> can compare similarities and <br> differences between and among <br> two-dimensional (flat) and three- <br> dimensional (solid) shapes. <br> Students can compose simple <br> shapes to form larger shapes. |


|  | Students performing <br> in grade 1 level 1 <br> can identify 2-D and <br> 3-D shapes with <br> specific non-defining <br> attributes. | Students performing <br> in grade 1 level 2 can <br> identify 2-D and 3-D <br> shapes with specific <br> defining attributes. | Students performing in grade 1 <br> level 3 can distinguish between <br> different types of attributes (both <br> defining and non-defining). <br> Students can identify 2-D and 3- <br> D composite shapes. <br> Grade 2 |
| :--- | :--- | :--- | :--- |
| Students performing <br> in grade 2 level 1 <br> can identify 2-D and <br> 3-D shapes. | Students performing <br> in grade 2 level 2 can <br> identify 2-D and 3-D <br> shapes having a <br> specified attribute. | Students performing in grade 2 <br> level 3 can sort 2-D and 3-D <br> shapes having a specified <br> attribute or set of attributes and <br> can compare attributes of a <br> given shape within the category <br> of quadrilaterals. |  |

## Ski Lodge



In Ski Lodge, students are challenged to organize the winter gear and food orders using a frequency table and ask questions to make sure the order is correct. This game focuses on building numeracy skills by encouraging students to interpret data displayed in a bar or pictograph.

## Skills Assessed by Game Level

| Grade | Game Level 1 | Game Level 2 | Game Level 3 |
| :--- | :---: | :---: | :--- |
| Students will observe, gather, and organize data in a frequency chart with two or three <br> categories. The data will be displayed on a single-scaled bar and/or pictographs, and <br> students will interpret data results and answer questions about the displayed data. |  |  |  |
|  | NA | Grade 1 level 3, <br> students will interact <br> with two or three <br> categories and up to 20 <br> total data points with no <br> more than 10 in a <br> category. |  |
| Grade 1 | NA |  |  |
| Students will observe, gather, and organize data in a frequency chart with three categories. <br> The data will be displayed on a single-scaled bar and/or pictographs, and students will <br> interpret data results and answer questions about the displayed data. |  |  |  |


| Grade 2 | Grade 2 level 1, students will interact with three categories and up to 30 total data points with no more than 10 in a category. | Grade 2 level 2, students will interact with three categories and up to 45 total data points with no more than 15 in a category. | Grade 2 level 3, students will interact with up to four categories and up to 60 total data points with no more than 15 in a category. |
| :---: | :---: | :---: | :---: |
| Students will observe, gather, and organize data in a frequency chart with up to four categories. The data will be displayed on a multi-scaled bar and/or pictographs, and students will interpret data results and answer questions about the displayed data. |  |  |  |
| Grade 3 | Grade 3 level 1, students will interact with four categories and up to 60 total data points with no more than 15 in a category. | Grade 3 level 2, students will interact with four categories and up to 80 total data points with no more than 20 in a category. | Grade 3 level 3, students will interact with five categories and up to 100 total data points with no more than 20 in a category. |

## Lunch Munch



In Lunch Munch, students are challenged to help Beanie Keen get the Peachlings' food orders partitioned correctly before they get tired of waiting and leave. This game focuses on building numeracy skills by encouraging students to sort partitioned shapes.
Skills Assessed by Game Level

| Grade | Game Level 1 | Game Level 2 | Game Level 3 |
| :--- | :--- | :--- | :--- |
| Grade 1 | NA | Students performing in <br> grade 1 level 3 can <br> partition circles and <br> rectangles in halves <br> and fourths and <br> identify the shares with <br> words. |  |
| Grade 2 | Students performing in <br> grade 2 level 1 can <br> partition circles and <br> rectangles in thirds and <br> identify the shares with <br> words. | Students performing in <br> grade 2 level 2 can <br> partition circles and <br> rectangles in halves <br> and thirds and identify <br> the shares with words. | Students performing in <br> grade 2 level 3 can <br> partition circles and <br> rectangles in halves, <br> thirds, and fourths and <br> identify the shares in <br> words. |


|  | Students performing in <br> grade 3 level 1 can <br> partition various <br> shapes into halves, <br> thirds, and fourths. | NA | NA |
| :--- | :--- | :--- | :--- |

## Intergalactic Fair



In Intergalactic Fair, students are challenged to use repeated addition to create arrays. This game focuses on building numeracy skills by encouraging students to use repeated addition to build multiplication skills.

## Skills Assessed by Game Level

| Grade | Game Level 1 | Game Level 2 | Game Level 3 |
| :--- | :--- | :--- | :--- |
| Grade 2 | Students performing in <br> grade 2 level 1 can <br> create a rectangle up <br> to 5 by 5 based on the <br> given columns and <br> rows and answer how <br> many total squares in <br> the array. | Students performing in <br> grade 2 level 2 can <br> create a rectangle <br> based on given <br> columns and rows and <br> answer how many total <br> squares are in each <br> row or column. | Students performing in <br> grade 2 level 3 can <br> create rectangles <br> based on a given <br> repeated addition <br> expression to find the <br> total number of square <br> units in the array or <br> write an equation to <br> express the total as a <br> sum of equal addends <br> in a rectangular array. |


|  | Students performing in <br> grade 3 level 1 can <br> create a rectangle up <br> to 10 by 10 based on <br> the given columns and <br> rows and answer how <br> many total squares in <br> the array, create a <br> rectangle based on <br> given columns and <br> rows, and answer how <br> many total squares are <br> in each row or column, <br> and write an equation <br> to express the total as <br> a sum of equal <br> addends in a <br> rectangular array. | Students performing in <br> grade 3 level 2 can find <br> the area of a rectangle <br> array by using <br> multiplication of the <br> side lengths or relating <br> multiplication when <br> given a repeated <br> addition expression. | Students performing in <br> grade 3 level 3 can <br> find the area of a <br> rectangular array by <br> multiplying the <br> dimensions of a <br> rectangle. |
| :--- | :--- | :--- | :--- |

Get Those Beans!


In Get Those Beans!, students are contestants on a game show to test their knowledge. This mini-game is open to students throughout the school year (i.e., free play). The Get Those Beans! mini-game is designed to promote practice with numeracy skills and build students' confidence to add and subtract within 100. Students start play with the least complex content/skills and progress to the most complex content/skills.
Skills Assessed by Game Level

| Grade | Game Level | Skill Assessed |
| :--- | :--- | :--- |
| Grade 1 | $\mathbf{1}$ | Add 1-10 (start, change, and result unknown) |
|  | $\mathbf{2}$ | Add 10 and some more |
|  | $\mathbf{3}$ | Subtract 1-20 |
|  | $\mathbf{4}$ | Add doubles within 50 |
|  | $\mathbf{5}$ | Add doubles within 100 |
|  | $\mathbf{6}$ | Add near doubles |


| Grade 2 | $\mathbf{7}$ | $\mathbf{8}$ |
| :--- | :--- | :--- |
|  | $\mathbf{8}$ | Add two-digit number + a multiple of 10 <br> OR <br> Add two-digit number + two-digit number making a multiple <br> of 10 |
|  | $\mathbf{9}$ | Add two-digit numbers within 100 (tens are 1-5 and ones <br> are 0-5) |
|  | $\mathbf{1 0}$ | Add two-digit numbers within 100 (tens are 1-9 and ones <br> are 0-9) |

## Space Train



In Space Train, students use their knowledge of patterns to help Astro-Keen on Planet Peachy Keen keep the trains running so they can explore the moon's surface. This mini-game is open to students throughout the school year (i.e., free play). Space Train is a mini-game designed to promote practice investigating patterns found in everyday math. Students complete a pattern, repeat patterns, and determine if a pattern is growing or shrinking. The patterns encompass a multitude of learning opportunities aligned to repeating an operation, a series of shapes, or a number string. Students start play with the least complex content/skills and progress to the most complex content/skills.

## Space Train Game Level Content Descriptions

| Grade | Game Level | Skill Assessed |
| :---: | :---: | :---: |
| Grade 1 | 1 | Extend the pattern up to 4 (shapes, symbols, colors) |
|  | 2 | Extend the pattern of up to 10 attributes (shapes or number strings) |
|  | 3 | Extend the pattern of up to 10 attributes (repeating operations, a series of shapes, or number strings) |
|  | 4 | Identify growing pattern (shapes or number strings) |
|  | 5 | Identify shrinking pattern (shapes or number strings) |
|  | 6 | Describe and identify numerical patterns from repeating operations (addition or subtraction) |
| Grade 2 | 7 | Describe and identify the missing number in the shrinking or growing pattern within 500 |
|  | 8 | Describe and identify the shrinking or growing number patterns |
|  | 9 | Identify what is true about the shrinking or growing number pattern within 1,000 and identify the changes in terms |
|  | 10 | Identify and describe the shrinking or growing number pattern (backward or forward within 1,000 ) and identify the changes in terms |

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