



Megaherbivore Math - Guidelines for Parents, Guardians & Teachers

Are you looking for a fun way to practice some math skills for kids in grades K-2? Let's be inspired by the megaherbivores from Seneca Park Zoo during this activity that involves measurement, subtraction, addition, and comparison.

What Kids Will Do

- Use a ruler or other measuring tool to measure themselves and three megaherbivores.
- Create a model that represents the heights of a Masai giraffe, an African elephant, and a white rhinoceros.
- Compare their height to the heights of three megaherbivores using subtraction and addition.

Tips for Assisting Kids

- They will need help measuring themselves.
- Be sure to go over safety instructions if they are using scissors or they are drawing with chalk in a driveway.
- If a section seems too difficult, skip it or modify it.
- Measurement can be hard; you may need to show them how to mark the end of a ruler and measure again from that spot.
- If measurement seems too hard, skip it and focus on the subtraction.
- Feel free to simplify the equations if needed, particularly for kindergarteners.
- The most important thing is that they explore, try new things, and learn from their mistakes.

Optional Extensions

- Research the height of an herbivore that is smaller than themselves (ex. rabbit) and compare their height to the small herbivore.
- Use the model of themselves or one of the megaherbivores to measure the heights of household objects (ex. How many pencils tall are you? How many bicycles tall is the giraffe?)
- Measure the height of an adult in your house. Compare their height to the height of the megaherbivores. Put all the heights in order from shortest to tallest.



NYS Next Generation Mathematics Learning Standards

- Grade K
 - **NY-K.CC.4:** Understand the relationship between numbers and quantities up to 20; connect counting to cardinality.
 - **NY-K.CC.6:** Identify whether the number of objects in one group is greater than (more than), less than (fewer than), or equal to (the same as) the number of objects in another group.
 - **NY-K.CC.7:** Compare two numbers between 1 and 10 presented as written numerals.
 - **NY-K.OA.2:** Add and subtract within 10. Solve addition and subtraction word problems within 10.
 - **NY-K.MD.1:** Describe measurable attributes of an object(s), such as length or weight, using appropriate vocabulary.
 - **NY-K.MD.2:** Directly compare two objects with a common measurable attribute and describe the difference.
- Grade 1
 - **NY-1.OA.1:** Use addition and subtraction within 20 to solve one step word problems involving situations of adding to, taking from, putting together, taking apart, and/or comparing, with unknowns in all positions.
 - **NY-1.OA.4:** Understand subtraction as an unknown-addend problem within 20.
 - **NY-1.OA.5:** Relate counting to addition and subtraction.
 - **NY-1.OA.6:** Add and subtract within 20. Use strategies such as: counting on, making ten, decomposing a number leading to a ten, using the relationship between addition and subtraction, and creating equivalent but easier or known sums. Fluently add and subtract within 10.
 - **NY-1.OA.8:** Determine the unknown whole number in an addition or subtraction equation with the unknown in all positions.
 - **NY-1.NBT.3:** Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.
 - **NY-1.MD.1:** Order three objects by length; compare the lengths of two objects indirectly by using a third object.
 - **NY-1.MD.2:** Measure the length of an object using same-size “length units” placed end to end with no gaps or overlaps. Express the length of an object as a whole number of “length units.”



- Grade 2
 - **NY-2.OA.1:** Use addition and subtraction within 100 to solve one-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions.
 - **NY-2.OA.2:** Fluently add and subtract within 20 using mental strategies. Strategies could include: counting on, making ten, decomposing a number leading to a ten, using the relationship between addition and subtraction, and creating equivalent but easier or known sums.
 - **NY-2.NBT.5:** Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
 - **NY-2.NBT.7:** Add and subtract within 1000, using: concrete models or drawings, and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. Relate the strategy to a written representation.
 - **NY-2.MD.1:** Measure the length of an object to the nearest whole by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
 - **NY-2.MD.4:** Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard “length unit.”
 - **NY-2.MD.5:** Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units.