Animal Olympics
Studying the Capabilities and Competition
of the Animal Kingdom
3rd Grade

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A comprehensive unit that:

- Aligns with many Common Core Learning Standards

- Encompasses multiple reading and writing opportunities

- Provides valuable hands-on, performance-based learning projects

- Stresses the importance of visual learning

- Develops life-long oral and written communication skills

- Offers differentiated learning opportunities

- Engages students in science, math, social studies, and research

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Instructor Guidelines

Thank you for purchasing Animal Olympics for your 3rd grade class! We are confident that your students will enjoy learning about animals in the context of a very human activity – the Olympics, and that you will love how engaged the students will become in science, math and social studies! We want to give you a few suggestions on how to best utilize this kit:

Animal Olympics.PDF – This document contains all of the documentation for this comprehensive kit. It is in PDF form to keep it properly formatted and uneditable. Keep an intact copy of this as the reference document for the unit.

Teacher Materials – These pages are provided as a Word document so that you can edit them to meet your own requirements. We have designed this unit with the expectations that teachers will revise it somewhat to make it their own and to meet the individual needs of their classes.
- **Vocabulary** – Feel free to add or delete words and to tweak the definitions if desired.
- **Some Useful Resources** – You can add or delete resources from this list and then provide the students with your final resource list if you wish. Since the links are live, if you open the document on your computer with a projector or interactive whiteboard, you can quickly access the websites for a lesson with the whole class.
- **Essential Questions and Big Ideas** – These are supposed to get the creative juices flowing! Brainstorm with the class to come up with other essential questions and big ideas and then involve the class in great critical thinking opportunities. Remember, it is important for them to see the big picture and understand why they are learning about the differences between animals and humans.
- **Common Core Learning Standards (CCLS)** – Isn't it exciting to see how many standards you can cover in one lesson?
- **Instructor Details** – These pages give specific suggestions for the individual projects. Feel free to tailor them to meet your needs.
- **Informational Data Report Rubric** - This rubric has been designed using the same terminology and requirements as the student checklist, which has the same terminology as the Common Core State Standards. By using these valuable assessment tools, you are providing your students with the opportunity for them to assess themselves as they are working and to understand the grade you award them at the end.

Student Handouts - These documents were compiled with the expectations of you printing and handing these pages out to the students. They are also in Word document format so that you can edit them to meet your needs.
- **Vocabulary without Definitions** – This is for the students to use if you want them to look up the definitions.
- **Performance Task** – You can edit this task to fine tune it with regard to your students and community.
- **Project Details** – We provide basic instructions for the students on these pages with room for you to add more details if desired. Your Instructor Detail Pages provide more detailed project instructions.
- **Student Checklists** – The project checklists are less detailed than the writing checklists. Feel free to add other requirements that you feel are important to the project checklists. The writing assignments have more detailed checklists that use the terminology from the CCSS. The rubric for the Informational Data Report uses the same terminology as the CCSS and the checklist, so if you edit any of the writing assessment pieces, be careful to keep them aligned with the appropriate standard.

Project Templates – The templates that you will need for the projects are in a separate folder. Before beginning that project, make sure the template is available to the students on their computers or network drive.

Tutorial Videos – The tutorial videos are accessible from our website. Use the password that you were given to download this kit to access the links to the project videos. The videos will teach the students step-by-step how to make the projects. Pause the video as needed to allow them to work, contemplate, organize and save their work. Manipulating graphics is a very creative form of self-expression. These projects will prove that the students understand the material they have learned and give them an opportunity to teach back in an effective visual format. Let the students have the time to work, make mistakes, correct their mistakes, and revise their layouts so that they can complete a project and show it with pride.

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Introduction

Animal Olympics is a comprehensive project-based learning unit that has been designed to draw students into the lives of animals. Studying the animal's speed, habitat, and nutrition, along with other key factors, will enlighten the students with a newfound respect for the animal kingdom. It may also humble them a bit! As a class, you will research the characteristics of human athletes, and then the students will do independent research on an animal of their choice. They will do hands-on, visual projects that will bring the research to life and attract the curiosity of students and teachers around the school. Appreciating earth's amazing animals is an essential way for us to better understand ourselves and the creatures that inhabit the world with us.

We hope that you and your students learn as much from using this unit as we did from developing it! Please contact us with your feedback. We are continuing to expand our library of Common Core Learning Units and we are interested in your comments on this kit and your suggestions for future topics. Happy learning!

Sincerely,

Melissa Wiederhold

Summary / Purpose

The projects selected for Animal Olympics were chosen carefully to provide a thorough and exciting opportunity for 3rd graders to learn about the animal kingdom. The hands-on projects allow them to carefully examine the life of one animal of their choice, share their findings with their classmates, and collaborate with their fellow students to provide a well-developed analysis of all their animals. Learning from each other can be a lot more fun than learning from the teacher sometimes too, right? Although the topic is about animals, the students will also learn about the animal on the top of the food chain – man. They will do so with an exciting 21st century approach. The students incorporate relevant technology and learn to present their perspectives in formats that will be valuable for future classes and adult careers. Then by delivering their findings in an informational essay and an oral presentation, the students will develop their persuasive writing and public speaking skills.

Take advantage of these great student projects to compile dynamic visuals for hall bulletin boards. It is a great way to showcase the student's work, show parents, administrators, and colleagues how effective a teacher you are, and inspire other students to learn more about the topic.

Overall, all the entire **Common Core English Language Arts Standards for Grade 3: Reading Informational Text, Writing and Speaking & Listening as well as many Math Standards** are covered in this unit. As you engage your students in learning, you can be confident that you are aligning your curriculum with the standards that are expected of all 3rd graders across our nation.

Expectations

After racing their way through this highly engaging project kit, your students will be ready to calculate just how above "average" they really are in their math skills. With each step of the way the students will be able to build on their math skills to high-level computations of velocity and finding averages. Not only will they be calculating these numbers but representing their scientific data in highly attractive, computer-generated charts and graphs. The students will be able to stand their ground for making decisions based on research-based calculations and facts. All students will have the opportunity to develop their public speaking abilities each time they present to their peers and ultimately to the Olympic Committee for review. Get ready teachers. You will have Olympic scaled mathematicians and public speakers on your hands in just a few short weeks!

Integrating Animal Olympics into your curriculum adds the rigor into project-based education. You are raising the bar on what you expect from your students and preparing them to be competitive in our highly visual and technological world. The hands-on projects will help the students learn the material in a deeper way, and they will be able to express their own personal creativity in the execution of those projects. You are also helping them learn to assess their level of knowledge and performance by using the checklists and rubrics that are included. This unit will give them the opportunity to learn the material in a more intimate and thorough way, and with each project you are helping them achieve 4's on those rubrics!

Unit Projects

1. Running and Research
2. Calculations
3. Individual Findings – Individual Speed Graph
4. Small Group Findings – Animal Graphs
5. Elimination Committee & Scientific Board Proposals
6. Presentation to the Olympic Committee
7. Final Data Report to the Olympic Committee

Required Software

- Graphics-Toolbox
- Microsoft Word

Suggested Materials

- 6 Trifold Presentation Boards

Common Core State Standards[1]

English Language Arts Standards » Writing » Grade 3
Text Types and Purposes
3.W.1 Write opinion pieces on topics or texts, supporting a point of view with reasons.
- Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists reasons.
- Provide reasons that support the opinion.
- Use linking words and phrases (e.g., because, therefore, since, for example) to connect opinion and reasons.
- Provide a concluding statement or section.

3.W,2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- Introduce a topic and group related information together; include illustrations when useful to aiding comprehension.
- Develop the topic with facts, definitions, and details.
- Use linking words and phrases (e.g., also, another, and, more, but) to connect ideas within categories of information.
- Provide a concluding statement or section.

3.W.4. With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose. (Grade-specific expectations for writing types are defined in standards 1–3 above.)

3.W.5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grade 3 on page 29.)

3.W.7. Conduct short research projects that build knowledge about a topic.

3.W.10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

English Language Arts Standards » Speaking & Listening » Grade 3
Comprehension and Collaboration
3.SL.1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
- Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
- 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).
- Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others.
- Explain their own ideas and understanding in light of the discussion.

3.SL.3. Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.

3.SL.4. Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details; speaking clearly at an understandable pace.

3.SL.6. Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification. (See grade 3 Language standards 1 and 3 on page 28 for specific expectations.)

English Language Arts Standards » Language » Grade 3
Conventions of Standard English
3.L.1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences.
- Form and use regular and irregular plural nouns.
- Use abstract nouns (e.g., childhood).
- Form and use regular and irregular verbs.
- Form and use the simple verb tenses (e.g., I walked; I walk; I will walk).
- Ensure subject-verb and pronoun-antecedent agreement.*
- Form and use comparative and superlative adjectives and adverbs, and choose between them depending on what is to be modified.
- Use coordinating and subordinating conjunctions.
- Produce simple, compound, and complex sentences.

3.L.2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
- Capitalize appropriate words in titles.
- Use commas in addresses.
- Use commas and quotation marks in dialogue.
- Form and use possessives.
- Use conventional spelling for high-frequency and other studied words and for adding suffixes to base words (e.g., sitting, smiled, cries, happiness).
- Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing words.
- Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.

Knowledge of Language
3.L.3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- Choose words and phrases for effect.*
- Recognize and observe differences between the conventions of spoken and written standard English.

Vocabulary Acquisition and Use

3.L.6. Acquire and use accurately grade-appropriate conversational, general academic, and domain specific words and phrases, including those that signal spatial and temporal relationships (e.g., After dinner that night we went looking for them).

Mathematics » Operations and Algebraic Thinking » Grade 3
Represent and solve problems involving multiplication and division.

3.OA1. Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5×7.

3.OA.2. Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as $56 \div 8$.

3.OA.3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

3.OA.6. Understand division as an unknown-factor problem. For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8.

Multiply and divide within 100.

3.OA.7. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Solve problems involving the four operations, and identify and explain patterns in arithmetic.

3.OA.8. Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Mathematics » Number Sense and Base Ten » Grade 3

3.NBT.3. Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 Å~ 80, 5 Å~ 60) using strategies based on place value and properties of operations.

Mathematics » Measurement and Data » Grade 3
Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.

3.MD.1. Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.

Represent and interpret data

3.MD.3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one and two-step

"how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.

3.MD.4. Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.

4.NF.6. Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram.

4.NF.7. Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model.

2.MD.1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

2.MD.10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.