

# The Amazing Sled Dog!

## Sled Dog Physiology

**Developed by:** Lisa Wiley

**Discipline / Subject:** Science

**Topic:** Sled Dog Physiology

**Grade Level:** 1-12

### **Resources / References / Materials Teacher Needs:**

For this unit, I have utilized resources and created curriculum for elementary, middle, and high school. All of the curriculum can be interchangeable, but it does become more scientifically complex.

#### **Elementary School**

\*[Born to Run](#), by Albert Lewis (excellent sled dog picture book)

\*[http://teacher.scholastic.com/activities/itarod/dogs\\_life/index.asp?article=for\\_dogs](http://teacher.scholastic.com/activities/itarod/dogs_life/index.asp?article=for_dogs) (good overview on sled dogs, their endurance, and drive)

\*<http://www.pbs.org/wnet/nature/sled-dogs-an-alaskan-epic-interactive-dogsledding-101/4355/> (great interactive power point about sled dogs and equipment for dog mushing)

#### **Middle School**

\* <http://iditarod.com/video/why-do-they-run/> (professional video showcasing sled dog endurance and drive)

\*<http://iditarodoutsider.wordpress.com/tag/sled-dog-positions/> (great resource detailing sled dog positions on the team)

\*<http://video.nationalgeographic.com/video/news/150130-sled-dogs-race-vin> (great current video from National Geographic about sled dogs)

\*<http://www.pbs.org/wnet/nature/sled-dogs-an-alaskan-epic-balto/3145/> (history of Balto with photos)

\*<http://news.nationalgeographic.com/news/2015/01/150131-sled-dog-alaskan-husky-racing-iditarod-winter-video-culture/> (another resource for sled dogs positions on team)

#### **High School**

\*<http://www.outsideonline.com/fitness/endurance-training/It-s-the-Dog-in-You.html> (scientific article involving current studies of sled dog metabolism and glucose)

\*<http://www.scientificamerican.com/magazine/sa/2009/06-01/> (scientific article on sled dog fat metabolism)

\*<http://www.adn.com/article/20130314/long-journey-home-may-missing-iditarod-sled-dog> (feature article about Runaway May)

### **Lesson Summary:**

Students will learn about the unique nature and scientific benefits of sled dogs. Students will start by learning about the breed overall. Students will learn about the unique roles played by the

<p>dogs on the team. Students can choose a role to play on the team. Then, we will ask students to write a profile of a sled dog, modeling from examples. Optional extension assignments exist.</p>
<p><b>Standard's Addressed: (Local, State, or National)</b> Alaska uses Common Core Standards, which have not been created yet for science or social studies. The state is in the process of revising curriculum for science and social studies. I have included applicable Language Arts standards from the Common Core.</p> <p>7. Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.</p> <p>10. By the end of the year, read and comprehend literary nonfiction in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.</p> <p>7. Analyze various accounts of a subject told in different mediums, determining which details are emphasized in each account</p>
<p><b>Learning Objectives:</b></p> <ol style="list-style-type: none"> <li>1. Students will learn about the roles sled dogs play on the team.</li> <li>2. Students will learn about the genetic background of the dogs.</li> <li>3. Students will utilize their writing and research skills to create a sled dog profile.</li> <li>4. Older students will learn about how sled dogs are able to run for so long without lactic acid buildup.</li> <li>2. Older students will learn why scientists are studying sled dogs for human impacts, i.e. curing diabetes.</li> </ol>
<ol style="list-style-type: none"> <li>1. <b>Procedural Activities</b> (There is enough material here for a multi-day unit)</li> <li>2. Introduce the amazing sled dog by sharing pictures from <u>Born to Run</u> by Albert Lewis.</li> <li>3. Share the <u>Alaska Dispatch</u> about Runaway May <a href="http://www.adn.com/article/20140301/meet-sled-dogs-runaway-may">http://www.adn.com/article/20140301/meet-sled-dogs-runaway-may</a></li> <li>4. Show the Iditarod video “Why Do They Run?”</li> <li>5. Teach about the breeding history of the dog.</li> <li>6. _____</li> </ol>
<p><b>Assessments</b></p> <p>Depends on what the teacher has included from above. Highly variable.</p>
<p><b>Materials Students Need:</b></p> <p>See above resources.</p>
<p><b>Technology Utilized to Enhance Learning:</b></p> <p>See resources section above.</p>
<p><b>Other Information:</b></p> <p>Local vets, mushers, or scientists can come into talk.</p>
<p><b>Modifications for Special Learners/ Enrichment Opportunities:</b></p> <p>This resource would be for emerging readers or younger students. <a href="http://teacher.scholastic.com/activities/iditarod/dogs_life/index.asp?article=for_dogs">http://teacher.scholastic.com/activities/iditarod/dogs_life/index.asp?article=for_dogs</a></p>

### Additional Information

If teachers want to modify this for younger students, see above resource. There are tons of reputable articles online about current sled dog research. Here’s a link to great upper level sled dog genetics curriculum by Teacher on the Trail Martha Dobson and Susan Harrington here: <http://iditarod.com/teacher/science-lessons/>



## **The Amazing Sled Dog!**

# **Sled Dog Physiology Worksheet**

Use the [Scientific American](#) and [Outside](#) online articles to complete the following questions. Answer on a separate sheet of paper completely.

Your name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

1. What unique strengths (attributes) make the sled dog “Born to Run”?
2. What are the breeds that run on modern dog teams?
3. How and why have sled dogs changed genetically over time?
4. What is an Alaskan Husky and what is the genetic background?
5. What are modern scientists currently studying about the sled dog? What are they hoping to apply to humans?



## SLED DOG PROFILE

Write at least one page with your best writing, telling the audience about an amazing dog. Describe the dog physically in detail, and include a photo or drawing if possible. Describe the personality traits of the dog, modeling off Born to Run, Martin Buser's profile on his dog Seattle, or an article in the newspaper with more details, i.e. Runaway May.

### Assignment Enrichments

- Make a fantasy Iditarod team.
- Draft a team from your favorite musher's dogs. For an extra challenge, tell which position (lead, wheel, swing, or couch dweller) you think the dog would perform best.
- Make a blog from the perspective of your favorite sled dog, ie. Zuma's Paw Prints: <http://iditarod.com/zuma/meet-the-k9-journalist-team/>
- Make a set of husky or dog mushing trading cards.
- Pick which role students would play on a dog team and write down why. If time, have the students line out as a team and accomplish a goal together.
- For more advanced students, write a paragraph telling what animal you think humans would benefit from studying more and perhaps adapting some of the animal's qualities? Tell why. Propose a scientific study.