Who's the Lead Dog

Lesson Objectives:

- Understand the history and selective breeding of Alaskan Husky sled dogs.

- Apply specific rules of inheritance.

- Simulate a musher's breeding program through three generations to develop the optimal lead dog.

Mandatory Gear:

- **Law of Dominance**
- **Incomplete Dominance**
- **Codominance**
- **Multiple Alleles**
- **Polygenic Inheritance**

The Selective Breeding of Alaskan Huskies

The history of the Alaskan husky sled dog is thought to have begun approximately 10,000 years ago when early Americans crossed the Bering land bridge from Asia into North America. Many believe that wolves were first tamed during this period, which resulted in the origin of the domestic dog.

The husky was traditionally bred as a draft animal used for pulling freight. In the 1890's, During the Alaskan gold rush, teams of huskies were used for pulling miners and their gear to remote camps. However, the demand for dogs during this time was greater than the supply so other strong, pulling breeds were brought north from the southern states and sold to desperate miners.

"Curry" - Zach Steer's Lead Dog, 2003-2010

By 1908, miners and other northern dwellers had begun to race sled dogs as a means of sport and entertainment. This source of competition was the catalyst for the selective breeding of Alaskan husky racing dogs. Now, just over 100 years later, the Alaskan husky has evolved into the world's greatest animal athlete.

The Alaskan husky is unlike other "pure" bred dog breeds. Whereas purebred breeds are bred more for looks and mechanics, Alaskans are bred for performance. In fact, early Alaskan huskies were the result of breeding several different dog breeds, each chosen for desired traits. For competitive dog mushers, five key traits are desired and selectively bred for. An Alaskan husky must have a *moderately dense coat* for protection in arctic weather while also allowing the escape of excess heat, *durable feet*, a physiology adapted to *high calorie intake of food,* a *willingness to travel and pull*, and an ability to comfortably *change gaits from a walk, trot, and lope.*

Despite their mixed genetic heritage and careful performance-driven breeding, Alaskan huskies still maintain common physical traits. The best sled-pulling dogs have quick, efficient gaits and remarkable strength for their size. Most do not exceed 55 pounds. Their smaller, lean bodies are specially adapted for enduring long runs of up to 150 miles while maintaining speeds around 10 miles per hour.

Trail Report

The following activity will require you to apply your understanding of the following concepts.

- Genotypes
- Phenotypes
- Principle of Segregation
- Principle of Independent Assortment
- Rules of heredity (See *Mandatory Gear*)
- Genetic Probability

INSIDE STORY HEADLINE
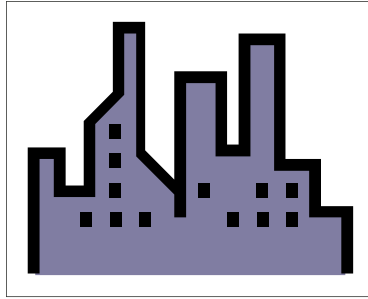
This story can fit 150-200 words.

One benefit of using your newsletter as a promotional tool is that you can reuse content from other marketing materials, such as press releases, market studies, and reports.

While your main goal of distributing a newsletter might be to sell your product or service, the key to a successful newsletter is making it useful to your readers.

A great way to add useful content to your newsletter is to develop and write your own articles, or include a calendar of upcoming events or a special offer that promotes a new product.

You can also research articles or find "filler" articles by accessing the World Wide Web. You can write about a variety of topics but try to keep your articles short.

Caption describing picture or graphic.

Much of the content you put in your newsletter can also be used for your Web site. Microsoft Publisher offers a simple way to convert your newsletter to a Web publication. So, when you're finished writing your newsletter, convert it to a Web site and post it.

INSIDE STORY HEADLINE

This story can fit 100-150 words.

The subject matter that appears in newsletters is virtually endless. You can include stories that focus on current technologies or innovations in your field.

You may also want to note business or economic trends, or make predictions for your customers or clients.

If the newsletter is distributed internally, you might comment upon new procedures or improvements to the business. Sales figures or earnings will show how your business is growing.

Some newsletters include a column that is updated every issue, for instance, an advice column, a book review, a letter from the president, or an editorial. You can also profile new employees or top customers or vendors.

"To catch the reader's attention, place an interesting sentence or quote from the story here."
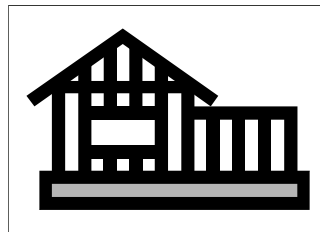
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Selecting pictures or graphics is an important part of adding content to your newsletter.

Think about your article and ask yourself if the picture supports or enhances the message you're trying to convey. Avoid selecting images that appear to be out of context.

Microsoft Publisher includes thousands of clip art images from which you can choose and import into your newsletter. There are also several tools you can use to draw shapes and symbols.

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Once you have chosen an image, place it close to the article. Be sure to place the caption of the image near the image.

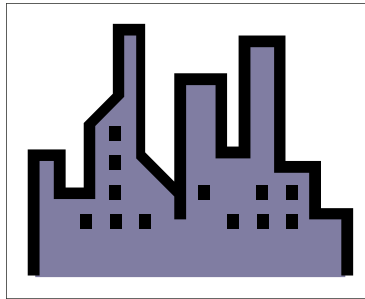# INSIDE STORY HEADLINE

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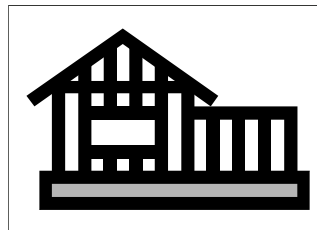
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**We're on the Web!
example.microsoft.com**

Your business tag line here.

Organization

This would be a good place to insert a short paragraph about your organization. It might include the purpose of the organization, its mission, founding date, and a brief history. You could also include a brief list of the types of products, services, or programs your organization offers, the geographic area covered (for example, western U.S. or European markets), and a profile of the types of customers or members served.

It would also be useful to include a contact name for readers who want more information about the organization.

BACK PAGE STORY HEADLINE

This story can fit 175-225 words.

If your newsletter is folded and mailed, this story will appear on the back. So, it's a good idea to make it easy to read at a glance.
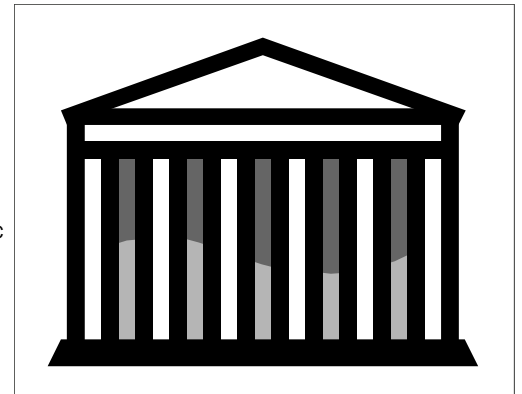
A question and answer session is a good way to quickly capture the attention of readers. You can either compile questions that you've received since the last edition or you can summarize some generic questions that are frequently asked about your organization.

A listing of names and titles of managers in your organization is a good way to give your newsletter a personal touch. If your organization is small, you may want to list the names of all employees.

If you have any prices of standard products or services, you can include a listing of those here. You may want to refer your readers to any other forms of communication that you've created for your organization.

You can also use this space to remind readers to mark their calendars for a regular event, such as a breakfast meeting for vendors every third Tuesday of the month, or a biannual charity auction.

If space is available, this is a good place to insert a clip art image or some other graphic.

Caption describing picture or graphic.