

## **Periodicity Goes to the Dogs**

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- A. National Standards
  - a. A1e
  - b. A1f
  - c. B1b
  - d. B1a
  - e. B1c
  - f. E1c
  
- B. Objectives
  - a. Define Elements and list their properties
  - b. Define Compound
  - c. Define mixture
  - d. Compare and contrast elements, compounds, and mixtures
  
- C. Materials
  - a. Pictures of 7 groups of dogs, classified by their job: working dogs, hound dogs, sporting dogs, non-sporting dogs, toy dogs, terriers, herding dogs. Each group will have 5 different breeds. Gather Three different images of the same breed of dog with different coloring.
  - b. 10 pictures of mixed-breed dogs (mutts)
  - c. Magnets
  
- D. Activity Description
  - a. An exciting way to introduce the characteristics of matter. Students will be required to draw their own conclusions about elements, compounds and mixtures using images of dogs.
  
- E. UNIT
  - a. This activity will fit into both the characteristics of matter unit as well as the periodicity unit. The analogy can also be extended to include discussion of isotopes.
  
- F. Concept Description
  - a. The purebred dogs are the elements. Since an element is made up of only one type of atom. The mutts are the compounds since they are the product of two or more “elements”, ie. Purebred dogs. The mixture was the beginning before the students were asked to separate into two piles. This can lead to a discussion as to how mixtures can be separated physically, but compounds cannot be easily separated into the components.

G. Necessary Background information

- a. The students do not need any prior knowledge regarding the subject matter. This is an introductory activity.

H. References (see attached pages)

I. Assembly Instructions

- a. Using the pictures of the purebred dogs, place each classification of dogs (working, herding etc) on a different colored background. Place magnets on the back of each of the pictures to ensure they will stick to the board. After you have made your master copy all color coded, print out enough pictures for each student group to work with. These don't need to be color coded.



## References

### NON-SPORTING DOGS

Boston Terrier

[www.boston-terrier.de/images/boston2.jpg](http://www.boston-terrier.de/images/boston2.jpg)  
[www.gopetsamerica.com/.../bostonterrier.jpg](http://www.gopetsamerica.com/.../bostonterrier.jpg)  
[www.kateconnick.com/postcards/dominoboston.jpg](http://www.kateconnick.com/postcards/dominoboston.jpg)

Bull Dog

[www.kateconnick.com](http://www.kateconnick.com)  
[bulldogbreeds.com](http://bulldogbreeds.com)  
[www.allevamento-bulldog.com](http://www.allevamento-bulldog.com)

American Eskimo

[www.eskiesonline.com](http://www.eskiesonline.com)  
[www.puppyfind.com](http://www.puppyfind.com)  
[www.dog.com](http://www.dog.com)

French bulldog

[www.dogbreedinfo.com](http://www.dogbreedinfo.com)  
[www.andreaharner.com](http://www.andreaharner.com)  
[www.petplanet.co.uk](http://www.petplanet.co.uk)

Lhasa Apso

[www.comfortpets.com](http://www.comfortpets.com)  
[www.welpen.de](http://www.welpen.de)  
[www.concord-inc.com](http://www.concord-inc.com)

### SPORTING DOGS

Golden Retriever

[www.goldenretriever.popielarz.pl](http://www.goldenretriever.popielarz.pl)  
[www.blogigo.de](http://www.blogigo.de)

Labrador Retriever

[www.labrador-retriever-zucht.de](http://www.labrador-retriever-zucht.de)  
[www.puppyfind.com](http://www.puppyfind.com)  
[www.hundauslaufgebiet.de](http://www.hundauslaufgebiet.de)

Field Spaniel

[www.dogbiz.com](http://www.dogbiz.com)  
[www.dog.com](http://www.dog.com)  
[www.gotpetsonline.com](http://www.gotpetsonline.com)

English Setter

[www.puppyfind.com](http://www.puppyfind.com)

[en.wikipedia.org](http://en.wikipedia.org)  
[www.nextdaypets.com](http://www.nextdaypets.com)

Cocker Spaniel

[www.cyberpet.com](http://www.cyberpet.com)  
[www.welpen.de](http://www.welpen.de)  
[www.blog.central.is](http://www.blog.central.is)

Brittney

[spartasphoto.com/.../brittneys/01266-01103b.jpg](http://spartasphoto.com/.../brittneys/01266-01103b.jpg)  
[www.worldofstock.com](http://www.worldofstock.com)  
[art.by.roncarter.tripod.com](http://art.by.roncarter.tripod.com)

### HEARDING DOGS

Bearded Collie

[www.dogbiz.com](http://www.dogbiz.com)  
[www.dog.com](http://www.dog.com)  
[www.dogdomain.com](http://www.dogdomain.com)

Old English Sheep Dog

[www.bigpawonly.com](http://www.bigpawonly.com)  
[www.fhundek.dk](http://www.fhundek.dk)

Briard

[www.pets.ca](http://www.pets.ca)  
[www.dog.com](http://www.dog.com)  
[www.psy.za.pl](http://www.psy.za.pl)

Sheltand Sheep Dog

[www.wrinkydinks.com](http://www.wrinkydinks.com)  
[puppydogweb.com](http://puppydogweb.com)  
[sheltie.free.fr](http://sheltie.free.fr)

### HOUND DOGS

English Fox Hound

[www.dog.com](http://www.dog.com)  
[www.propettransports.com](http://www.propettransports.com)  
[members.tripod.com](http://members.tripod.com)

Blood Hound

[www.dogbiz.com](http://www.dogbiz.com)  
[www.cz-pes.cz](http://www.cz-pes.cz)  
[www.rmkt.com](http://www.rmkt.com)

Dachshund

[www.magicmist.net](http://www.magicmist.net)

[www.kateconnick.com](http://www.kateconnick.com)

[www.dog.com](http://www.dog.com)

Irish Wolf Hound

[www.gotpetsonline.com](http://www.gotpetsonline.com)

[hunde.haustiere-info.de](http://hunde.haustiere-info.de)

[www.gotpetsonline.com](http://www.gotpetsonline.com)

Beagle

[www.dog.com](http://www.dog.com)

[home.ringnett.no](http://home.ringnett.no)

[members.aol.com](http://members.aol.com)

WORKING DOGS

Alaskan Malamute

[www.tigara-alaskan-malamutes.com](http://www.tigara-alaskan-malamutes.com)

[www.cs.utk.edu](http://www.cs.utk.edu)

[www.nextdaypets.com](http://www.nextdaypets.com)

German Pincher

[www.dog.com](http://www.dog.com)

[www.spikynorman.dsl.pipex.com](http://www.spikynorman.dsl.pipex.com)

[www.hexie.com](http://www.hexie.com)

Mastiff

[www.puppydogweb.com](http://www.puppydogweb.com)

[www.doginfomat.com](http://www.doginfomat.com)

[www.dog.com](http://www.dog.com)

St. Bernard

[www.gentlegiantsrescue.com](http://www.gentlegiantsrescue.com)

[roland.collignon.free.fr](http://roland.collignon.free.fr)

[bradley.chattablogs.com](http://bradley.chattablogs.com)

Rottweiler

[hunde.haustiere-info.de](http://hunde.haustiere-info.de)

[www.rotweiler411.com](http://www.rotweiler411.com)

[www.puppyfind.com](http://www.puppyfind.com)

TOY DOGS

Chihuahua

[revjim.net](http://revjim.net)

[www.chihuahua.hu](http://www.chihuahua.hu)

[web.quick.cz](http://web.quick.cz)

English Toy Spaniel

[www.dog.com](http://www.dog.com)

[www.psy.za.pl](http://www.psy.za.pl)

[www.dogbreedinfo.com](http://www.dogbreedinfo.com)

Maltese

[www.index.hr](http://www.index.hr)

[www.bichon.de](http://www.bichon.de)

[www.westminsterkennelclub.org](http://www.westminsterkennelclub.org)

Poodles

[www.dogbiz.com](http://www.dogbiz.com)

[www.valleyviewdogs.com](http://www.valleyviewdogs.com)

[www.pets.ca](http://www.pets.ca)

Yorky

[www.geocities.com](http://www.geocities.com)

[www.e-michael.jp](http://www.e-michael.jp)

[www.veterinari.it](http://www.veterinari.it)

TERRIERS

Border Terrier

[www.dog.com](http://www.dog.com)

[roland.collignon.free.fr](http://roland.collignon.free.fr)

[www.terrier.com.pl](http://www.terrier.com.pl)

Parson-Russell Terrier

[www.i-love-dogs.com](http://www.i-love-dogs.com)

[www.dog.com](http://www.dog.com)

Jack Russell Terrier

[www.wrinkydinks.com](http://www.wrinkydinks.com)

[www.jack-russell.com](http://www.jack-russell.com)

[www.dogbreedinfo.com](http://www.dogbreedinfo.com)

Welsh Terrier

[www.dog.com](http://www.dog.com)

[www.todoslosperros.com](http://www.todoslosperros.com)

[www.petplanet.co.uk](http://www.petplanet.co.uk)

Bedlington Terrier

[www.dog.com](http://www.dog.com)

[www.gopetsamerica.com](http://www.gopetsamerica.com)

[www.puppyfind.com](http://www.puppyfind.com)