

August 3, 2012

Muse Project

Batch # 4 — 9 Brod Bagert Poems

Content Guide

This batch of nine poems focuses on the subject of magnetic and electromagnetic forces, ranging from Primary through Middle School. I'm continuing to focus on writing Science to provide you with fairly complete content blocks when school starts.

And as always, these poems are "Works in Progress" so please look at them with a critical eye. Let me know if I've missed something about magnetism that you think should be addressed.

You'll notice that I've pasted in some non-copyrighted clip art to add a visual spark for your students. This is a temporary expedient that will eventually be replaced with original art. Maybe your students could do some illustrations and send them to me.

Again, should anyone question your right to use and copy these poems for your students, you'll find a formal "Permission to Use Poems" on page 11.

By the way, my secluded Montana cabin turned out to be a not-glamorous-but-functional secluded Montana condominium. I spent three weeks in Big Sky, and things went very well. Every minute of it was empowered by the idea that you guys are part of this effort.

At today's count we have 153 finished science poems, which means I should have the science curriculum covered by the end of August. That will also give me time to finish most of your specific non-science poem requests. Thanks again.

Sincerely,



Brod Bagert

PS – Check out my Facebook page to see some Montana poems and pics: www.facebook.com/BrodBagert.

Push or Pull

by Brod Bagert

North pole. South pole. Time to play.
'This is what I learned today.
All about MAGNETIC FORCE!
Is it easy? Yes! Of course!

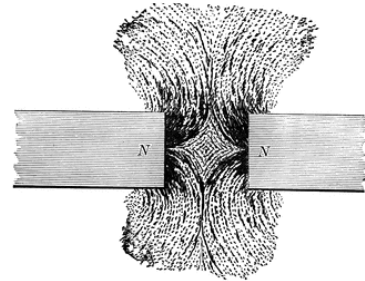
North pole. South pole. Time to play.
'This is what I learned today.
Easy-easy from the start—
Repel! Means PUSH-PUSH-PUSH APART!

North pole. South pole. Time to play.
'This is what I learned today.
Easy-easy as can be—
Attract! Means PULL-PULL-PULL TO ME!

North pole. South pole. Time to play.
'This is what I learned today.
'Take two magnets, it's a fact—
UNLIKE poles? THEY MUST ATTRACT!

North pole. South pole. Time to play.
'This is what I learned today.
'Take two magnets, you can tell—
Two **LIKE** poles? THEY MUST REPEL!

North and South. Time to play.
'This is what I learned today.
Was it easy! Yes, of course!
How I love MAGNETIC FORCE!



Like poles repel.



Unlike poles attract.

PRIMARY & INTERMEDIATE - SC. 2. 49

Note:

North and *South* are the names scientist gave to the *poles* of a magnet. They had to call them something, and I guess *North* and *South* seemed to make sense because the *North pole* of the magnet in the early navigational compass pointed north. But whatever we call them, the important thing to remember is: *like poles repel, unlike poles attract.*

Brain Magnet

by Brod Bagert

Some things will stick to magnets,
and other things will not,
but in my head they get mixed up.
I'm really on the spot.

A bobby-pin?



I've got to guess. I hope I'm right.
Will this magnet hold it tight?
Sometimes my brain is such a mess.
Can someone help me make a guess?

YES!

A plastic cup?



Will it stick or will it fall?
Oh no, I just don't know at all.
Sometimes my brain just will not go.
Tell me, tell me if you know?

NO!

A cast iron pan?



I've got to guess. I hope I'm right.
Will this magnet hold it tight?
Sometimes my brain is such a mess.
Can someone help me make a guess?

YES!

A block of wood?



Will it stick or will it fall?
Oh no, I just don't know at all.
Sometimes my brain just will not go.
Tell me, tell me if you know?

NO!

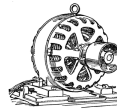
I pour it all into my brain,
but then it all goes down the drain.
I've got to make it stick instead,
I need a magnet in my head!

PRIMARY – SC. 1. 50

Work Force

by Brod Bagert

A magnet's work is never done,
it makes electric motors run.



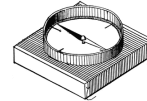
Those headphones when you walk around?
A magnet is what makes the sound.

The radio your mother craves?
A magnet beams the FM waves.



Computers? Please don't go berserk,
but magnets make your hard-drive work.

A magnet in my compass, too,
to point the way from me to you.



Almost every thing you do
a magnet's working hard for you.

A magnet's work is never done!
Magnetic force is number one!

PRIMARY & INTERMEDIATE - SC. 2. 51

Note:

Why should anybody care if like poles repel and unlike poles attract? If magnets were just little things to stick the refrigerator there would be little reason to care at all. But we do care because every electric motor in the world, every radio station, every Wi-Fi networks, even the speakers at rock concerts, it all depends on the properties of natural and electro-magnets.

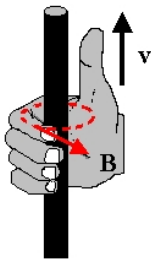
The Making of a Nerd

by Brod Bagert

At first it was totally boring,
this whole thing about electricity and magnetism,
but then I got this basic idea—
Electricity and *magnetism* go together like peanut butter and jelly.
Whenever you have an electric current you always have a magnetic field.
In fact if you run an electric current through a wire
it actually creates a magnetic field around it.
And it also works the other way around,
so if you put a magnetic field around a wire
it actually creates an electric current.
How cool is that!
And that's what all this electronics stuff is about,
wires and coils of wires,
and things I don't understand yet
like transformers and solenoids and alternators.
I don't understand them yet,
but I've got the basic idea,
and I'm going to knock it down row by row
until I get it all,
until I ...
OH... MY... GAWD!
I can't believe this is happening,
that it's actually happening to me.

It started out the most boring stuff
my ears had ever heard,
but then a spark flashed in my brain,
and POOF! I was a nerd.

INTERMEDIATE & MIDDLE - SC. 2. 52



Note:

There's a thing called the **Right Hand Rule** that describes an electric current and the magnetic field it creates. If you point the thumb of your **RIGHT** hand in the direction of an electric current moving through a wire, your fingers will be curved around the wire in the direction of the magnetic field created by the current. This is definitely nerd stuff.

A Good Theory?

by Brod Bagert

I've been learning a lot about magnets,
and I think it might be possible
that all the coolest girls in school
will be attracted to me.

Magnets have poles: North and South,
it sounds a little abstract,
but like-poles always want to repel,
and opposite-poles attract.

So I'm working on a theory,
it isn't a permanent rule,
but what would happen if I became
the rottenest kid in school.

If girls are at all like magnets
and opposites attract,
I'd be the most popular boy in school;
it's a scientific fact.

Opposite poles always attract,
like poles always repel,
so I'm thinking my theory just might work
but only time will tell.



No!

INTERMEDIATE & MIDDLE - SC. 2. 53

Science Obsession

by Brod Bagert

My brain will not slow down,
it's always on the go.
'There's so much stuff for me to learn,
so much for me to know.

And science is making it worse,
and it isn't only in school,
cause every where I turn I apply
a scientific rule.

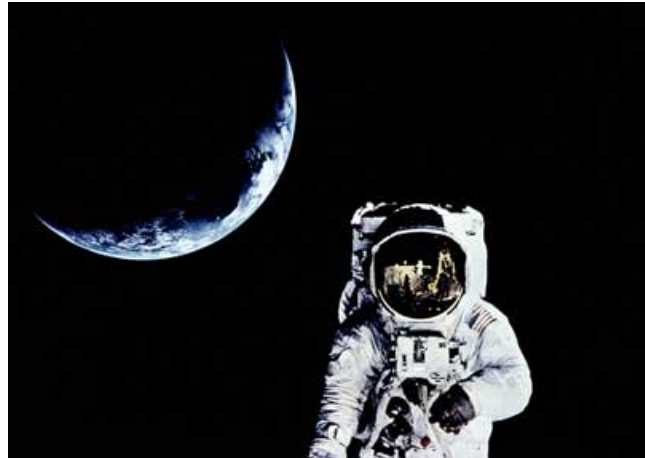
Without *electro magnets*
you won't get very far.
Electro magnets make the force
that lets you start your car.

Electro magnetic radiation,
so be beautiful and bright,
but just the part that falls within
the *spectrum of visible light*.

Electrons! Protons! Neutrons!
How widely thy disburse!
'These tiny subatomic things
make up the universe.

You see? It's driving me crazy!
I'm bouncing off the wall!
My brain will not stop thinking!
I NEED TO KNOW IT ALL!

INTERMEDIATE & MIDDLE - SC. 2. 54



Note:

We remember the names of the scientific giants, people like Eratosthenes of Cyrene, Sir Isaac Newton, Madame Marie Curie, Albert Einstein. Yet scientific knowledge, bit by bit, has always been advanced on the shoulders of scientists whose names may not appear in history books. Today, more than ever before, thousands of scientists dedicate their lives to the meticulous work of scientific research. From time to time one of these researchers turns the stone that reveals a great discovery, yet these historic moments are almost always made possible by the accumulated genius of a generation of anonymous researchers.

What and Why

by Brod Bagert

Magnetic force you'll never feel,
unless your body's made of steel.
and yet magnetic force is true,
because we see **what** magnets do.

Like poles repel. Unlike attract.
And **why**? They say it's just a fact.
A fact? Now wait. How can that be?
Can't someone teach the **why** to me?

I can see for myself that it's all true,
the stuff they say all magnets do,
but thought I know it's not a lie,
I still can't help but wonder—**why**?



PRIMARY & INTERMEDIATE - SC. 2. 55

The Question

by Brod Bagert

"This book is baloney!" I said with a snarl,
unable to subdue it.

"Ten pages to say what magnets do,
but none say how they do it.

Run current through a wire,
and magnetic force is there.

But how does it make an invisible force
that travels through the air?"

My teacher turned and looked at me
with eyes that seemed to glow.

"Young lady," she said with gentle smile.

"Some things we just don't know.

Magnetic force... gravitational force...

the forces within the atom...

the very light by which we see...

all things we don't yet fathom.

But we've learned a heck of a lot,

and we're learning more and more,

with each generation adding a bit

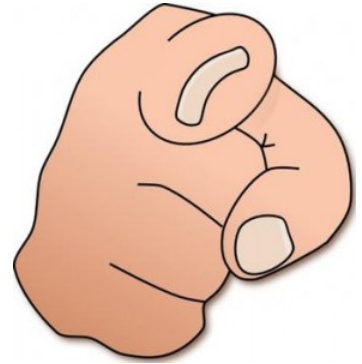
to what we knew before.

It's been going on for a very long time,

and there's lots more work to do,

but it always begins when a question is asked

by someone just like you."



Is it you?

INTERMEDIATE & MIDDLE - SC. 2. 56

Note:

The question posed in this poem is part of one of the great scientific questions of our time: the search for a unified field theory. As we will see later, science has identified four fundamental forces in nature: 1) the force of gravity, 2) the electro-magnetic force, 3) the strong force, and 4) the weak force. The search for a unified field theory is an effort to encompass all four forces within the terms of a single mathematical formula.

This is really advanced so don't be upset if you don't understand it. For now, all you need to know is that this is where the hunt is. Then, if you later become the great physicist figures it out, I'll ask you to explain it to me.

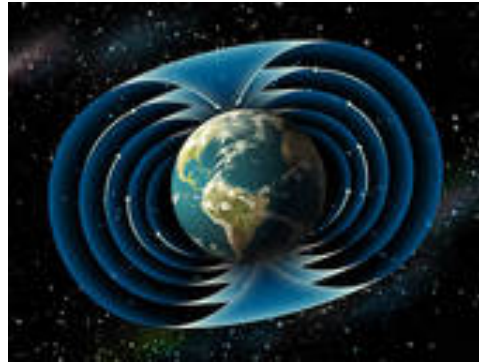
The Compass Heart

by Brod Bagert

Earth is a giant magnet
and that's how the sailors know,
even on a stormy night,
which way their ships should go.

For the magnet in each compass
always points a path that's true,
and I suspect each human heart
has a kind of magnet too.

For sometimes it's just a feeling
that can help my eyes to see
through the darkness of the night
to the path that's right for me.



PRIMARY & INTERMEDIATE & MIDDLE - SC. 2. 57

Note:

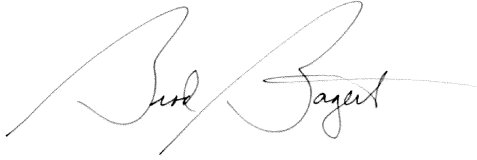
(This is tricky, so get ready.) Planet Earth really is a giant magnet, which is how a compass works. The *North Pole* of the magnet in a compass points north, toward the Earth's geographic north pole. Now stop and think. Opposites attract, so if the *North Pole* of a compass points to the Earth's geographic north pole, then Earth's geographic north pole has got to be its magnetic *South Pole*. Hmmm... They really could have done a better job in naming this stuff.

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Thus done this 25th day of July, 2012,

A handwritten signature in black ink, appearing to read 'Brod Bagert', with a long horizontal flourish extending to the right.

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