

Vampire
Chronicles
NSTA 2016
Nashville, TN



<http://www.popsugar.com/beauty/How-Do-Vampire-Makeup-Halloween-20100160>

ward's
science+

Ward's Kits

- Easy to use resources are being linked to the product pages
- Quality materials you can trust
- Kits are ready to use straight from the box!
- Contact: michelle.pagani@vwr.com
585-208-8564



Learning Outcomes- Story



10 years ago, Vampy fed from Franco and Morticia. She has fed on many people since, but it never gave her the great taste and high energy that came when she fed from them!

http://the-romanian-women.blogspot.com/2010/11/iulia-vantur_09.html

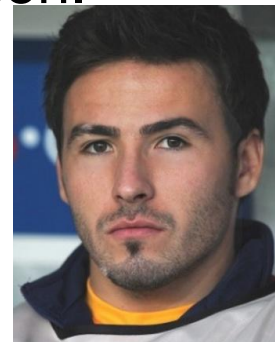
She remembers that they had a son!
Using a blood test and her knowledge of Genetics she will verify which of the two boys that are the right age in their small town could be their son.

Godfrey



<https://prewetta.wordpress.com/2014/04/15/beauty-in-eastern-europe/>
Confidential. For internal distribution only.

Stefan



Blood Types

Blood Type

Antigens

Antibodies

A

B

AB

O



Blood Types

















<u>Blood Type</u>	<u>Antigen</u>	<u>Antibodies</u>
A	A	anti-B
B	B	anti-A
AB	A, B	none
O	none	anti-A , anti-B





Blood typing- what difference does it make?



Compatibility

		PATIENT			
		A	B	AB	O
DONOR	O				
	AB				
	B				
	A				

 YES
 NO

https://ehealth.gov.mt/HealthPortal/health_institutions/units/nbts/all_about_blood/blood_groups.aspx



Genetics-

Chromosome 9 has a gene for glycosyltransferase activity

- Multiple alleles- I^A , I^B , i

A I^A/I^A , I^A/i

B I^B/I^B I^B/i

AB I^A/I^B

O ii

Codominance

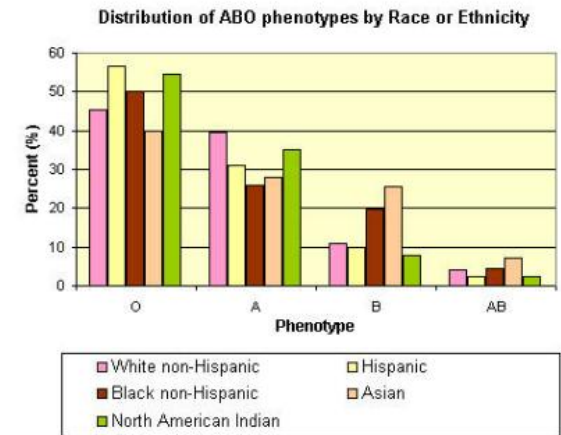
Recessive



Interesting Facts

	Caucasians	African American	Hispanic	Asian
O +	37%	47%	53%	39%
O -	8%	4%	4%	1%
A +	33%	24%	29%	27%
A -	7%	2%	2%	0.5%
B +	9%	18%	9%	25%
B -	2%	1%	1%	0.4%
AB +	3%	4%	2%	7%
AB -	1%	0.3%	0.2%	0.1%

<http://www.redcrossblood.org/learn-about-blood/blood-types>



<http://www.ncbi.nlm.nih.gov/books/NBK2266/>

Type B individuals have a weaker protection against plague and is more prevalent in countries of NE Europe that were not affected by the Black Death during the Middle Ages.

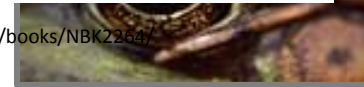
Type AB is the most resistant to cholera which is highest in the Asian population.

Type A is resistant to cholera and plague and sensitive to smallpox. This blood group clots easily and they have higher rates of heart disease and cancer of the esophagus, pancreas, and stomach. Oldest Blood type from research with primates such as Bonobos.

Most native Americans are **Type O** due to a resistance of this blood type against Syphilis. Type O blood is less likely to get malaria, pancreatic cancer, stomach, breast, ovarian and cervical cancer. Slightly protective against cardiovascular disease, TB. More likely to exhibit ulcers and blood clots, and cholera. <http://www.medicalnewstoday.com/articles/262991.php>

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3827391/>

Confidential. For internal distribution only.



<http://blogs.scientificamerican.com/guest-blog/2011/02/15/you-are-what-you-bleed-in-japan-and-other-east-asian-countries-some-believe-blood-type-dictates-personality>



Which teen should I take?

	Type	Alleles
Franco (Father)	A	I^A/I^A I^A/i
Morticia (Mother)	AB	I^A/I^B
Stefan	O	
Godfrey	B	



Sharing Session

This chart shows the potential blood types you may inherit.

	Parent 1	AB	AB	AB	AB	B	A	A	O	O	O
Possible blood type of child	Parent 2	AB	B	A	O	B	B	A	B	A	O
O						X	X	X	X	X	X
A		X	X	X	X		X	X		X	
B		X	X	X	X	X	X		X		
AB		X	X	X			X				

<http://www.redcrossblood.org/learn-about-blood/blood-types>

Who's sample did you test? Could they be the child of Morticia and Franco?



Additional resources

- http://www.biologycorner.com/anatomy/blood/notes_bloodtype.html
- <https://www.dnalc.org/view/15404-Chromosome-9-gene-for-blood-group-Matt-Ridley.html>



Next Steps

- Find the products used in this workshop at wardsci.com
- Pick up **helpful literature** on your way out
- Any questions? Email our Plus Us team at: sciencehelp@vwr.com
- Stop by **Ward's Science booth #142** for a chance to win a science shopping spree!

