## Student worksheet

## 1.7 Alleles for blood group traits co-dominate

Pages 16-17

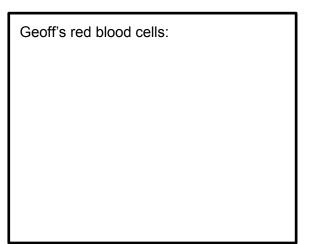
## Co-dominant traits

1	What is co-dominance?		
2	List all the different alleles for ABO blood grouping.		
3	Which allele is recessive and which alleles are co-dominant with regards to ABO blood grouping?		
4	What is the phenotype for each of the following individual's genotypes?  a I <sup>A</sup> I <sup>B</sup> b I <sup>B</sup> i:  c ii:  d I <sup>B</sup> I <sup>B</sup> :		
5	What percentage of individuals are rhesus negative?		
6	Emma has the genotype I <sup>A</sup> I <sup>B</sup> and Geoff has the genotype I <sup>A</sup> i.		
	a What is Emma's phenotype?		
	b What is Geoff's phenotype?		

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c Draw a diagram in the space below to show how the surface of Emma's red blood cells differ to those of Geoff's.

Emma's red blood cells:	



d Complete the Punnett square below to determine the possible genotypic and phenotypic ratios of Emma and Geoff's children.

	Geoff	
	I <sub>A</sub>	i
	I <sup>A</sup> I <sup>A</sup>	I <sup>A</sup> i
5 - - -	I <sup>A</sup> I <sup>B</sup>	l <sup>B</sup> i

Genotypic ratio:

Phenotypic ratio:

## **Extend your understanding**

1	Explain why it is preferable for a patient to be given the same blood group when receiving a blood transfusion.		

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8	Explain why it is possible in an emergency for a patient who is AB+ to receive blood from any other blood group, while a patient who is O– can only receive blood from an O– donor. You may need to u the internet to research this topic.		