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1

Plants can suffer from mineral deficiencies. If the soil is lacking in either nitrate or magnesium ions there will be distinctive symptoms visible on the plants growing in the soil. Complete the table below to describe the symptoms of each deficiency and explain the science behind those symptoms. **[4 marks]**

mineral deficient in the soil	symptom of the deficiency	explanation of the symptom
Nitrate ions	_____	_____
	_____	_____
	_____	_____
	_____	_____
magnesium ions	_____	_____
	_____	_____
	_____	_____
	_____	_____

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2

Plants are prone to infections from pathogens just like us. For each human defence listed in the table below, describe a comparable plant defence mechanism **[2 marks]**

[2 marks]

Type of defence	Human	Plant
Physical	keratin in the skin or mucus in the airway	_____

Chemical	antimicrobial enzymes in tears and sweat or hydrochloric acid in the stomach	_____

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Describe and explain three ways that plants can defend themselves against herbivores

[6 marks]
