CAMBRIDGE HOUSE GRAMMAR SCHOOL REVISION CHECKLIST

YEAR 9: Science

Winter 2026

Your Winter Examination will assess your knowledge and understanding of the topics listed (below).

Use this checklist to help you with your revision and identify any gaps in your knowledge.

I can:	✓	✗
1. State that acids have a pH below 7 and release H^+ ions in water.		
2. State that alkalis have a pH above 7 and release OH^- ions in water.		
3. Name at least 3 everyday acids e.g. citric acid in citrus fruit, ethanoic acid in vinegar, carbonic acid in fizzy drinks.		
4. Give the names and formulae of HCl, H_2SO_4 and HNO_3		
5. Name common alkalis and their formulae Ammonia (NH_3), Sodium Hydroxide (NaOH).		
6. State two uses for common alkali substances (oven cleaner, soap-making, indigestion remedies).		
7. Recognise the main hazard symbols (corrosive, toxic, flammable, irritant, oxidising) and explain what each means.		
8. Explain what a chemical indicator is and how it functions.		
9. Describe how to make red cabbage indicator.		
10. Recall the colour changes for litmus and universal indicator in a range of pH conditions.		
11. Classify acids and alkalis as strong or weak based on their pH.		
12. Recall some examples of when a neutralisation reaction is useful (farmers lime acidic soil; neutralising excess stomach acid).		
13. State the equation between average speed, distance travelled and time taken (Rearrange the speed formula to calculate distance or time).		
14. Use the equation between average speed, distance travelled and time taken to carry out calculations.		
15. Know which units of speed to use in calculations.		
16. Interpret a distance-time graph including stationary periods, constant speed, faster/slower speeds, start and finish times.		
17. Draw a distance – time graph from information given.		
18. Use information from a distance – time graph to calculate speed.		
19. Use a distance – time graph to describe an object's journey.		
20. Interpret a **speed – time** graph (acceleration, constant speed, deceleration).		
21. Use a speed – time graph to calculate distance travelled (area under the line).		

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22. State the definition of Thinking Distance.		
23. State the definition of Braking Distance.		
24. State how to calculate the total stopping distance from thinking distance and braking distance. (*total stopping distance* = thinking distance + braking distance)		
25. Write down how total stopping distance can be increased.		
26. Interpret a thinking distance/braking distance chart.		
27. Give factors affecting thinking distance (tiredness, alcohol or drugs, distractions, speed) separately from factors affecting braking distance (road and weather conditions, tyre and brake condition, speed, mass of vehicle).		
28. List the seven nutrient groups: carbohydrates, proteins, fats, vitamins, minerals, fibre and water.		
29. Match foods with the nutrients found in it.		
30. Recall the reagent and positive result for each food test (Benedict's, Iodine solution, Biurets reagent, and the Ethanol Emulsion test).		
31. Recall the consequences of imbalances in the diet, including obesity, starvation and deficiency diseases.		
32. Recall the investigation to measure energy content in food and identify sources of error in this investigation.		
33. Recall the main organs of the digestive system (their location on a diagram of a human torso) and their function.		
34. Chemical digestion - know the definition of an enzyme.		
35. Name 3 digestive enzymes (amylase, protease and lipase) their role and location in the digestive system.		