

**First Year Science**

***Revision Sheet 2018***

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| **Chapter** | **What you need to know** | **Tick when done** |
| **2 Working Safely in a Science Lab** | Understand how and why scientific ideas change over time. p. 29 |  |
|  | Recognise questions that can be investigated scientifically. p. 30, 31  e.g. How strong is human hair? - yes  Who is the best singer in Ireland? - no |  |
|  | Understand how to plan and carry out an investigation p.38 |  |
|  | Recognise safety symbols p 21  Appreciate the need and reason for safety in the lab. Chapter 2 |  |
|  | Recognise different equipment found in the lab, and recognise what they are used for. p24, 25 |  |
|  | Understand the term hypothesis. p.30 |  |
|  | Ways to investigate hypothesis. p.31, 32, 33 |  |
|  | Variables: p.32  Cause variable  Effect variable  Control  Constants |  |
| **7 Cell Structure and Function** | Be able to draw a plant and animal cell p.64 |  |
|  | Can relate each part of a cell to its function p.63,64,66,67 |  |
| **9 The Circulatory System** | Describe the structure of the circulatory system p.87 |  |
|  | Explain the functions of the circulatory system p.87 |  |
|  | Describe the structure of the different parts of the circulatory system:  Heart p.91  Arteries p.90  Veins p.90  Capillaries p.90 |  |
|  | Describe the functions of the different parts of the circulatory system:  Heart p.91  Arteries p.90  Veins p.90  Capillaries p.90 |  |
|  | Explain how the circulatory system works with the digestive system and respiratory system. p.94 |  |
|  | How is the circulatory system affected by exercise, lifestyle and diet? p. 94+95 |  |
|  | Investigate the effect of exercise and rest on pulse rate (EXPERIMENT) p.92 |  |
| **10 Food & Digestive System** | Describe the structure, function and interactions of the organs of the human digestive system |  |
|  | Evaluate how human health is affected by nutrition |  |
|  | Be able to analyse the nutritional information on a food package |  |
|  | Analyse your own diet for a day |  |
|  | Examine the dental composition of various animals and predict the type of diet they have |  |
|  | Investigate the action of amylase on starch |  |
|  | Know a health problem associated with obesity |  |
| **21 Properties of Materials** | Physical properties of different materials including:  Solubility (EXPERIMENTS) p.227-229  Heat conductivity (EXPERIMENTS) p.230  Electrical conductivity (EXPERIMENT) p.231  Melting point (EXPERIMENT) p.231+232  Boiling point p.234 |  |
| **22 Structure of the Atom** | Describe the structure of the atom p.238 +239 |  |
|  | Compare the mass and charge of:  Protons p.238+239  Neutrons p.238+239  Electrons p.238+239 |  |
|  | What is an ion?  What is an isotope? |  |
| **27 Measurement and Units** | Be able to select appropriate measuring instruments |  |
|  | Identify and be able to measure using the correct units:  Length p.296  Mass p.297  Time p.297  Temperature p.297+298  Area p.298  Volume (EXPERIMENTS) p.299-301 |  |
| **35 Our Universe** | Describe the relationships between the following celestial bodies and space:  Moons p.380  Asteroids p.381  Comets p.381  Planets p.378+379  Stars p.377  Solar systems p.378  Galaxies P.378 |  |
|  | Explore a scientific model to illustrate the origin of the universe – the big bang theory p.382 |  |
| **38 Space Exploration** | Hazards of space exploration p.412+413 |  |
|  | Benefits of space exploration p.408-411 |  |
|  | Understand the role and implications of space exploration in society p.408-413 |  |
|  | What is the social and global importance of humans exploring space? Should humans explore space? *SSI Research project* |  |