**Colton Hills Community School medium term planning**

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| **Topic title:**Cells | **Year: 7Term: 1** | **Why we teach this:**…this builds on particles to explain what life is made from of and how diffusion works | **Why we teach this here:**… The Science journey from atomic to cosmic starts with the parts that make up our Universe, materials and all living things. This allows us to build on this idea in later topics |
| **Big questions:**1. What is the importance of a microscope?
2. What are the differences between animal and plant cells?
3. What is diffusion?
4. What is the function of a nucleus?
5. What does specialised cell mean?
6. What are cellular and unicellular organisms?
7. What is the function of a cell membrane?
 | **Builds on previous topics:**… KS2 Science | **Links to future topics:**… All Biology, Chemistry and Physics  |
| **Key knowledge:*** cells as the fundamental unit of living organisms, including how to observe, interpret and record cell structure using a light microscope
*  the functions of the cell wall, cell membrane, cytoplasm, nucleus, vacuole, mitochondria and chloroplasts
*  the similarities and differences between plant and animal cells
 | **Key knowledge continued:***  the role of diffusion in the movement of materials in and between cells
*  the structural adaptations of some unicellular organisms
*  the hierarchical organisation of multicellular organisms: from cells to tissues to organs to systems to organisms.
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| **Skills developed:**Microscopy, recall, processing, comparing, drawing, presenting observations, interpret observations and data, including identifying patterns and using observations. |
| **Mini/Interim assessments:*** Multiple choice questions
* Retrieval questions

**Termly summative assessment:*** End of topic test
* Year 7 Spaced learning assessment
 | **Independent study tasks/resources:**1. OAK<https://teachers.thenational.academy/units/cells-tissues-and-organs-03b2>
2. Bitesize <https://www.bbc.co.uk/bitesize/topics/znyycdm>
3. Seneca <https://app.senecalearning.com/classroom/course/419c7523-d408-4bc7-9b96-f7f12abdacae/section/cc9ec29c-c0dd-4bb4-a6d0-fa1fe2992730/session>
 | **Key vocabulary** AmoebaCell membraneCell wallCellsChloroplastsConcentrationCytoplasmDiffusionEuglenaFlagellumLeaf cellsMitochondria | **Key vocabulary** Nerve cellsNucleusObservationOrganismsRed blood cellsRespirationRoot hair cellsSpecialised Cells Multicellular |
| **Cultural capital opportunities:** …Opportunity to show the basis of life and how we are all made of the same building blocks. Opportunities for learning outside and studying natural history. Careers links. | **Whole school Curricular Concept links:**…Healthy Living |

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| **Week/Phase** | **Key Features** |
| 1 | **Small Questions:** … |
| **Key Activities/Resources:**… | **Retrieval focus:**…**Independent study:**… |
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| 2 | **Small Questions:** … |
| **Key Activities/Resources:**… | **Retrieval focus:**…**Independent study:**… |
|  |  |
| 3 | **Small Questions:** … |
| **Key Activities/Resources:**… | **Retrieval focus:**…**Independent study:**… |
| **Week/Phase** | **Key Features** |
| 4 | **Small Questions:** … |
| **Key Activities/Resources:**… | **Retrieval focus:**…**Independent study:**… |
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| 5 | **Small Questions:** … |
| **Key Activities/Resources:**… | **Retrieval focus:**…**Independent study:**… |
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| 6 | **Small Questions:** … |
| **Key Activities/Resources:** … | **Retrieval focus:**…**Independent study:**… |