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| **Science Year 4 Medium Term Planning – Advent 1: Living things and their habitats** | | | | | | |
| **National Curriculum**   * recognise that living things can be grouped in a variety of ways * explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment * recognise that environments can change and that this can sometimes pose dangers to living things. | | | | | | |
| **Prior vocabulary knowledge**  **habitat, micro-habitat depend organism, reproduction** | | | | | | |
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|  | Lesson 1 | Lesson 2 | Lesson 3 | Lesson 4 | Lesson 5 | Lesson 6 |
| **Learning intention** | **What are the characteristics of living things?** | What animals are vertebrates?  Lesson 2 and 3 can | What animals are invertebrates?  be combined. | What groups are plants classified in? | What is classification? How do I use a key? | What happens if the environment in a habitat changes? |
| **Working Scientifically** | gather, record and report | .  Make systematic and careful observations. | Make systematic and careful observations. | Make systematic and careful observations.  record, report findings.  Use results to draw simple conclusions: flowering/non flowering. | Set up simple, practical enquiries.  Record findings using simple scientific language.  Make systematic and careful observations.  record, report findings.  Use results to draw simple conclusions. | observe  identify and classify  ask questions |
| **Recall and retrieval** | CQ: 1-2 | CQ: 1-6  Mrs Gren and examples | CQ:7-11 | CQ 7-16 | CQ:17-18 | CQ: 18-20  . |
| **Sequence of knowledge throughout the lesson** | **Key knowledge**  Retrieval: Mrs Gren and meaning.  Know the meaning of biodiversity, organism,  invertebrate and vertebrate.  INVESTIGATIONKnow the difference between living things. | **Key knowledge**  **Know what a vertebrate is, different animal groups that have vertebrates; fish, amphibians, reptiles, mammals and birds.**  **Know characteristics of each group and animals that are in each group.**  **CATEGORISE AND COMPARE VERTEBRATE** | **Key knowledge**  Know that insects,Annelids, Arachnids, molluscs are invertebrates, characteristics of each group and examples of animals in each group.  **CATEGORISE AND COMPARE INVERTEBRATE** | **Key knowledge**  To classify plants into flowering and non flowering:  Know types of flowering and non flowering plants.  Know plants that reproduce using flowers to make seeds: different types including trees,  non-flowering plants: plants that reproduce using spores and seed cones and examples of these.  CATEGORISE AND COMPARE FLOWERING AND NONFLOWERING PLANTS. | **Key knowledge**  classification meaning:  sort into groups action of to divide or sort into groups.  Know that Carl Linnaeus invented the way to classify living things in 1737 through taxonomy.  Know origin of taxonomy :Greek: arrange method  Know hierarchy of biological classification (taxonomy)  the top three layers Kingdom animal, plant, fungi…  Phylum invertebrates, vertebrates…  Class mammal, reptile.  Know that a Classification key is a series of questions to identify a living thing that unlocks the identity of the living thing.  CLASSIFY LIVING THINGS USING A KEY. | **Key knowledge**  Know what a habitat, environment and ecosystem are and how they are affected by biotic and abiotic factors.  Know what a nature reserve is and its role in protecting animals.  Know what POLLUTION is and its negative affect an environment and how it can change the balance of the ecosystem. |
| **Scaffolding** | stem sentences | Give example sheet of each and fewer samples. | Give example sheet of each and fewer samples. | **Identification code and pictures with simple examples to classify.** | **Simple classification code to follow.**  **Support to produce a simple classification.** | Simple example to follow with possible options. |
| **Challenge** | give reasons for classification. | Greater variety to observe. | Greater variety to observe. | **Greater variety and more complex categorising.** | **More complex classification.** | Examples of pollution that have more possibilities and give reasons. |
| **Key Vocabulary**  **Tier 2** | Classification  Environment  Interdependence  Interact  Beneficial  Hierachy | Classification  Environment  Interdependence  Interact  Beneficial  Hierachy | Classification  Environment  Interdependence  Interact  Beneficial  Hierachy | Classification  Environment  Interdependence  Interact  Beneficial  Hierachy | Classification  Environment  Interdependence  Interact  Beneficial  Hierachy | Classification  Environment  Interdependence  Interact  Beneficial  Hierachy |
| **Key Vocabulary**  **Tier 3** | Vertebrate  Invertebrate  Biotic  Ecosystem  Species  Niche | Vertebrate  Invertebrate  Biotic  Ecosystem  Species  Niche | Vertebrate  Invertebrate  Biotic  Ecosystem  Species  Niche | Vertebrate  Invertebrate  Biotic  Ecosystem  Species  Niche | Vertebrate  Invertebrate  Biotic  Ecosystem  Species  Niche | Vertebrate  Invertebrate  Biotic  Ecosystem  Species  Niche |