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| Year 8: Spring Awakening  Spring term 2 (6 Weeks):  **Why are we studying this unit of work?**  This unit begins to allow students to explore the variety of invertebrates that can be found in the UK, the role that they play and the importance of the within an ecosystem. This unit also allows students to develop their fieldwork skills in the world of ecology.  **How does this unit build on students’ prior learning?** This unit builds previous skills of investigation and fieldwork enquiry questions. This topic allows consolidation and practice of fieldwork which is a vital aspect of Geography and has cross curricular links to science.  **How does this unit provide a foundation for future learning?** This unit provides an opportunity for students to embed their learning of urban biodiversity, ecosystem engineers and fieldwork skills.  **SMSC & Careers**: Skills – teamwork, staying positive, listening, aiming high, Career links – Countryside Ranger, Ecologist, Forest School Leader.  **Summative assessment:** Teacher Assessed – biodviersity analysis.  End points: By the end of the Scheme of work pupils should:   * Lower ability: Students should be able to identify a range of British invertebrates. Students should also be able to collect data to describe the level of biodiversity within the school grounds. * Middle ability: In addition to the above, students should be able to describe the role that a range of invertebrates within an ecosystem. Students should also be able to collect data, present using the most appropriate data presentation method and begin to provide some analysis of the biodiversity of invertebrates within the school grounds. * Higher ability: In addition to the above, students should also be able to explain the importance of protecting invertebrates within an ecosystem. Students should also be able to provide a detailed analysis, comprehensive conclusion and provide an evaluation on their investigation.   THEME FOR THIS TOPIC: Biodiversity  Questions to consider:   * Why are invertebrates important? * What would life look like without invertebrates? * What are the main causes of habitat loss? | | | | | |
| Time | Non negotiables | | | Adapt to the needs/size of the class | |
| Key Idea | Content | Key Vocabulary / Case Study | Suggested approaches to learning and resources | Assessment/homework |
| 1 | What invertebrates can be found within the UK? | **Know more**: What invertebrates can be found within the UK?  **Do more:** Investigate the range of invertebrates that can be found within the UK.  **Go Further:** Use team work skills to collect information on invertebrates in the UK. | PUSH: Invertebrate | **Reminder Health and Safety – Expectations and rules of being outside.**  **Connect:**   1. What is an invertebrate? 2. What is the sequence of an investigation? 3. Give an example of a land use within the UK.   **Content:**   * *PUSH: Invertebrate* * Class Discussion of what invertebrates are *– Why are they needed?* * *THINK, PAIR, SHARE – Collectively create a list of invertebrates that could be found within the forest school.*   ***Checkpoint****: What is an invertebrate?*  **Consolidation:** Students move around forest school collecting information on the different genus and species of invertebrates that could be found in British Woodlands (information cards to be located in similar habitats as they would be found)  **Consolidation:** What invertebrates can be found within the UK woodland ecosystem?  **Challenge:**  **Support:** |  |
| 2 | What is the sequence of an investigation?  (Classroom based) | **Know more**: What is the sequence of an investigation?  **Do more:** Complete a risk assessment and methodology for your mini beast investigation.  **Go further**:  Aim high to complete a methodology on |  | **Connect:** What is the sequence of an investigation?  **Content**:   * What is the sequence of an investigation? * Create a hypothesis – ‘*There are more invertebrates within the forest school than on the yard’* * Discuss sampling methods and decide on most appropriate sampling technique – *random, stratified or systematic. -* Students to justify the most appropriate sampling technque. * What is a methodology – mind map of what should be included. * What are the risks associated with carrying out this investigation? - Complete a risk assessment using provided proforma.   **Checkpoint: What should be included in a methodology?**  **Concentration:** Write a methodology for an invertebrate biodiversity investigation.  **Consolidation:** Whiteboards: What data will you collect?  **Support:** | Self Assess |
| 3/4 | Mini Beast data collection | **Know more**: What data is needed to prove or disprove your hypothesis?  **Do more:** Collect data on biodiversity of invertebrates.  **Go further**:  Work as a team to collect the data needed for your investigation. |  | **Connect:**   1. What is your hypothesis? 2. Give one risk and management strategy for that risk. 3. State the data sampling method.   **Content:**   * Discuss safety and boundry limits with class.   **Checkpoint:** What data are you collecting?  **Concentration:** Students to carry out data collection in:  Forest school, School Garden and area around BSU.  **Consolidation**: Evaluate your data collection strategy.  **Challenge:**  **Support:** | Career Link: Ecologist, Field Biologist, Exotic Animal Handler. |
| 5 | Data presentation | **Know more**: How can data be presented?  **Do more:** Complete data presentation for your investigation.  **Go further**:  Aim high to accurarely plot and produce data presentaiton on your investigation. |  | **Connect:**   1. What is a methodolgy? 2. What data was collected? 3. Give 3 examples of data presentation methods.   **Content:**   * Think Pair Share: Why use graphs and other data presentaiton methods? * Class to consolidate findings to produce ‘class data’ * What is the most appropriate data presentation method? - Discrete vs continious data   **Checkpoint:** Which is the most appropriate data presentation method?  **Concentration:** Students to complete a bar chart for their investigation.  **Consolidation**: Green pen bar chart  **Challenge:**  **Support:** | Peer Assess |
| 6 | Data analysis and conclusion. | **Know more**: What does the data show?  **Do more:** Complete data analysis and write a conclusion for your investigation.  **Go further**:  Aim high to complete data analysis and conclusion to your investigation. |  | **Connect:**   1. Give an example of data presentation methods. 2. What should be included in a conclusion? 3. What should a risk assessment cover?   **Content:**   * Think Pair Share: What does our data show? * What should be included in a data analysis – mind map * Smart Writer – Data analysis.   **Checkpoint:** What is included in a data analysis?  **Concentration:** Students to complete their data analysis and conclusion.  **Consolidation**: Green pen bar chart  **Challenge:**  **Support:** | Whole class feedback |