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| Year 9: Camp HibernationAutumn Term 2 (8 Weeks)**Why are we studying this unit of work?**  This unit combines practical skills that allow students to develop a deep understanding of the biodiversity of the forest school and allows students to develop their evaluation skills through completing an investigation into the biodiversity of the bird species within the forest school.**How does this unit build on students’ prior learning?** This unit builds Year 7 soil sampling and pond dipping and Year 8 mini beast investigations. This unit allows students to draw on previous investigation skills to develop their evaluation skills through writing a written report assessing biodiversity. **How does this unit provide a foundation for future learning?** This unit provides the foundations of woodland management, which is needed for the next half term which is ‘Working Woods’ which provides students with a greater understanding of forestry. This unit also allows students to gain valuable experience with completing investigations, writing reports and making recommendations, which is an essential skill for students looking to progress on to L2 land Based Studies or GCSE Geography.**SMSC & Careers**: Skills – teamwork, staying positive, listening, aiming high, Career links – Wildlife officer, Arboriculturist, Tree Officer, Forestry worker. **Summative assessment:** Written report evaluating the biodiversity within the school grounds. End points: By the end of the Scheme of work pupils should:* Lower ability: Students will be able to: Identify different bird and mammal species using a guide. Students should also be able to produce a basic report which details what has been done in the investigation and demonstrates the results of the investigation.
* Middle ability: In addition to the above, students will be able to: complete a bar chart to record the species that are found in the forest school. Students should also be able to begin to evaluate the success or limitations to the investigation in their written report.
* Higher ability: In addition to the above, students will be able to; calculate the biodiversity index of the forest school and use graph skills to plot and record this data. Students should also be able to make recommendations for future investigations and suggestions of how to improve biodiversity within the school grounds.

Theme for this topic is: BiodiversityQuestions to consider:* What impact do we have on urban biodiversity?
* What small changes can we implement to improve biodiversity?
* Why is biodiversity important in 2024?
* Why is it important to produce long term data on biodiversity?
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| 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 | Winterisation.  | **Know more**: What do animals need to survive in winter? **Do more:** Create information guide to help educate the wider school on what can be done to improve wildlife’s survival chances in winter. **Go Further:** Use Team work skills to prepare for the forest school for winter.  | PUSH: Biodiversity | **Connect: Recall questions**Computer room/tablets to be used.**Content:** Class discussion on the following:* What do humans need to survive winter?
* What do animals and birds need to survive over winter?
* What does the forest school need to survive over winter?

Research task: What strategies can be used to prepare wildlife in urban areas for winter? **Checkpoint: What strategies can be used to help wildlife survive over winter?**  **Concentration:** Create an information sheet that gives hints and tips on how to prepare gardens, parks and urban green spaces in order for wildlife to survive over winter. **Consolidation**: How can we encourage more wildlife to the forest school?**Challenge:****Support:**  | HOMEWORK: Creation of British Bird Identification poster.  |
| 2 | Woodland Food  | **Know more**: What food source will help birds survive the winter months?What makes the best location for a feeding station? **Do more:** Complete a survey of the forest school to identify the best location for a feeding station. **Go further**:Use team work to choose the most appropriate location for a feeding station.  |   | **Connect:** What birds might we find in the forest school? **Content:** * Group discussion on what birds need to survive over winter?
* How can we help to increase biodiversity in the school grounds?
* Discussion of the decline of songbirds in urban environments due to habitat loss.
* Student to then think about where would be the best feeding station that we could install cameras to watch the birds feed from?
* Teacher to set out methodology of the investigation and what makes a good methodology?

**Checkpoint: What makes a good methodology?****Concentration:** Students to write up their methodology for investigating bird biodiversity within the forest school. **Consolidation:** Peer assessment **Challenge:****Support:**  | Peer Assessment  |
| 3 | Natural Bird Feeders | **Know more**: How can you create a bird feeder from natural products? **Do more:** Create a bird feeder using natural products. **Go further**:Use Problem solving to create a bird feeder. |  | **Connect:** Recall Questions:1. What is the acronym for First Aid?
2. What is the Role of First Aid
3. What makes a suitable location for a bird feeder?

**Content:** In pairs discuss how could you use natural products to make a bird feeder?Demonstration from teacher on how to create natural bird feeder using pinecones or other large products, using Lard and bird seed to create a natural feeder. Items to use as a bird feeder include pine cones, jaggered sticks. **Checkpoint: What are the safety rules that you must follow when making the bird feeders?****Concentration:** Students to create their own bird feeders.**Consolidation** What birds will be attracted to your feeder?   | Peer Assessment – What makes this a successful bird feeder? |
| 4 | Artificial bird feeders | **Know more**: How can you create a bird feeder from recycled products? **Do more:** Create a bird feeder using natural products. **Go further**:Use Problem solving to create a bird feeder. |  | **Connect:** Recall Questions: 1. What do birds need to survive over winter?
2. Describe a suitable location for a bird feeder.
3. What does ‘A’ stand for in DRsABCD?

**Content:** * Group Discussion – recycled bird feeders.
* Demonstration from teacher on how to create recycled bird feeder using bottles, carboard and other items.

**Checkpoint: What are the safety rules that you must follow when making the bird feeders?****Concentration:** * Students to create their own bird feeders.
* Hang bird feeders in the 2 feeding stations around the forest school and install wildlife cameras to monitor which feeder the birds prefer.

**Consolidation** Evaluation of which bird feeder is best.  |  |
| 5 | What are the results of the investigation? (CLASSROOM BASED) | **Know more**: What bird species were attracted to the bird feeders? **Do more:** Evaluate the success of the bird feeding stations. **Go further**:Work as a team to identify a range of British Birds that visited the forest school.  |  | **Connect:** Recall Questions: 1. What is biodiversity?
2. What can be done to improve biodiversity?
3. Why should we monitor biodiversity?

**Content:** * Students to use their homework (creation of Bird ID chart) to identify a range of bird species that are found on the wildlife cameras.
* Students to complete the data collection sheet based on this information.
* Introduce Biodiversity index – uses and examples

**Checkpoint: What is a biodiversity index?****Concentration:** * Complete a bar chart using the data from the camera traps.
* Calculate the biodiversity index of the forest school using Simpsons Diversity index.

**Consolidation** Exit ticket | Cross Curricular Graph and equation skills used in Maths and Science. |
| 5/6 | How can we evaluate the biodiversity of the school grounds? (2 Lessons) | **Know more:** How diverse is the school grounds for bird biodiversity? **Do More:** Produce a written report evaluating the biodiversity of the forest school**Go Further:** Aim high to complete a full written report.  |  | **Connect:** 1. What are the stages of an investigation?
2. What is biodiversity?
3. What is the role of First Aid?

**Content:** * Think Pair Share: What is the biodiversity like within the school grounds?
* What should be included within a report? - Creation of mind map of features.
* What recommendations could you suggest to improve biodiversity within the forest school?
* Smart Writer: Creation of plan to support students.

**Checkpoint: What should be included in the written report?****Concentration:** Students to produce their written report evaluating the biodiversity of the school grounds. **Consolidation** Complete evaluation of the investigation – what worked? How could it be improved? | Teacher Assessed.  |