

Hibernation

Activity Structure – 45min

| Activity | Timing |
|-----------------------------|------------|
| Warm up Game | 5 mins |
| Introduce Story and Project | 10 mins |
| Main Activity | 25 mins |
| Final test & debug | throughout |
| Share with group | 5 mins |

Overview

Let's create a simple hide & seek game to locate the animals who are hibernating during the winter.

*FYI there is a PPT about Hibernation from the Twinkl website.

This is for internal use only, and not to be used in classes.

Learning Objectives:

- To independently use the Hide & Show blocks.
- To independently position characters on a screen.

EYFS Curriculum Links

Communication & Language: Beginning to understand 'why' and 'how' questions.

The World: Can talk about some of the things they have observed such as plants, animals, natural and found objects.

Warm up game: Code cards Hide & Seek

- Hide the code cards around the room.
- Play a few rounds: ask the children to look for specific types of code blocks each round. E.g. *Can you find a looks block? Can you find a motion block? Can you find a trigger block? Can you find a control block? Etc.*
- If your class are a bit lively the children can take in in turns or go in pairs to find a code block.
- Discuss what each of the blocks do. Offer lots of praise and encouragement, especially if the children have a guess for a code block they haven't used yet.

Introduction (discuss the project together, share ideas and create excitement)

- You may want to read a hibernation-themed story at the start of your class. There is a list of possible titles below (page 3).
- *Have you every heard of the word 'hibernation' or of an animal 'hibernating?' Can you tell me anything about it? What might it mean?* You could use pictures from a book to give the children a clue.
- Bring in a cuddly toy (bear, hedgehog, mouse, tortoise etc.). This is my friend 'Teddy'. Now that it's getting colder she's starting to feel very sleepy. She needs to take a long rest until it is warm again in Spring. This rest is called 'Hibernation'. Lots of different animals do it to save energy during the cold winter months.
- *Do you know any other animals that hibernate?* Hedgehogs, dormice, and bats. Lots of other animal including badgers, tortoises and snakes don't technically hibernate (they go through cycles of inactivity called 'topor') but because our children are very young we'll include them in our list of hibernating animals.
- Share the project. Invite the children to tap on the sleeping places to reveal the sleeping animal. *Who might be in the cave? Who could be hiding in the hole?*
- Let's have a look at the code for the cave. Read through the code. *Why did I use a wait block?*
- Let's look at the code for the bear and the bat. *What will happen when if I push the green flag? Why does the bat have an extra line of code? What might it be for?*

Hibernation

Main Activity Key questions and teaching

1. Select a winter/autumn background. *Why would a beach not be appropriate?*
2. Select three characters to hibernate. Bats, brown bears, polar bears, snakes, bats and frogs all 'hibernate' and are in the library.
3. *Where do you think they would like to go to sleep?* Use the Paint Editor to draw some simple sleeping places: caves, holes, etc.
4. Select a human character. *Will you take a picture of yourself for the character?* Support the children to do this.
5. Let's code the human character: make a recording to introduce the project. "It's Winter and all the animals are hibernating. Can you find any sleeping animals?" Help the children to rehearse and plan what they would like to say.
6. Now let's code the hibernating animals. See if the children can remember how to make each animal character grow then shrink repeatedly (use the green flag as your start block). *This is a bit quick. Which block could I put at the start of my code to slow it down?*
7. Code the animal characters to grow and shrink to look like they are snoring. Encourage more experienced children to experiment with the wait blocks and speed blocks.
8. Position the human and the animals characters on the screen. Then place the caves and hole characters on top of the animals.
9. Now let's code the caves and the holes. *Which start block should I use for the cave? Why? What do we want the cave to do?*
10. Code the caves and the hole to say "who is sleeping in the cave" + [hide] + "A bear" + [wait 15 seconds] + [show].
11. Add a final line of code to one of the characters (not the human). Record a snoring sound and code it to repeat forever when the green flag is tapped.

Teaching points

- For progression, children could copy-code the first animal character, code the second animal character with support, and attempt to code the third animal character independently.
- Have the code blocks the children will use displayed on the table in front of them.
- Remind children that the last thing we touch will move to the front of the screen.
- Some children are very shy about recording their voice so be prepared to help them, or to encourage them to record a friend's voice instead.

Possible Extensions

- Have four animals hibernating.
- The children could draw the characters instead of using the library ones.
- Add a second page with a 'Spring' animation. Tap on the sleeping places to reveal the animals waking up.

To Simplify

- Only have 1-2 characters hibernating.
- Use the tree characters from the library to hide the animals rather than drawing caves and a hole.
- Reduce the number of sound recordings by not including an introduction.
- Drag down the blocks the children will need and the children can put them in the correct order.

Finishing up

- Share the projects. *What did we learn today?*
- *Did we learn any new coding blocks? Did we learn anything else about the world around us?*

Resources

Here is a small selection of Picture Books I found in my local library

Hibernation Station By Michelle Meadows

Everybody at the station! It's time for winter hibernation! This rhyming book shows all kinds of different animals that hibernate. Different creatures get on the train and try to snuggle into sleep. Although, with a passenger list that includes chipmunks, bears, snakes, hedgehogs, groundhogs, frogs, turtles, mice, bats, and more, there's a lot of noise Will the hibernating critters ever get to sleep?

Over and Under the Snow by Kate Messner and Christopher Silas Neal

While on a ski trip, they discover what's under the snow. A secret world of squirrels and snowshoe hares, bears and bullfrogs, and many other animals who live through the winter, safe and warm

Bear Snores on By Karma Wilson and Jane Chapman

This is a funny story where Bear's cave fills with animal friends as he sleeps. They have tea, tell stories, and throw a party as bear snores on

Sleep Black Bear Sleep by Jane Yolen and Heidi Stemple

This story goes through many different animals and the places they like to sleep.

Secrets of Winter Shine a light book by Carron Brown

Meet some amazing animals and learn how they adapt to winter with this cleverly designed 'Shine-a-Light' picture book! From the bears in their lairs and the foxes in their dens, to the squirrels and birds in the treetops, discover nature's secrets about the animals and plants that live in and around a snow-covered forest.

Resources

Hibernation Facts

- Hibernation occurs when an animal becomes inactive, or "sleeps," during the short, cold days of winter.
- Hibernating and dormant mammals include bears, squirrels, groundhogs, raccoons, skunks, opossums, dormice, bats, bees, hedgehogs.
- Frogs, toads, turtles, lizards, snakes, snail, fish, shrimp, and even some insects hibernate or are dormant during the winter.
- To prepare for hibernation, many animals eat to gain weight in the summer and fall. The extra fat keeps them alive during the winter.
- A black bear can gain up to 30 pounds a week during its pre-hibernation eating binge.
- During the fall, hibernating animals prepare nests for their winter sleep. Some store extra food in their nests.
- Some hibernating animals wake for short periods during hibernation to eat and relieve themselves. Others sleep through the entire winter.
- During hibernation, the heart rate for many animals slows to less than 10 beats per minute. Breathing also slows.
- A hibernating animal has internal controls that prevent its body temperature from falling too low. The animal will wake up if its temperature is too near the freezing point.
- Some female bears have babies during hibernation.