

# Activity 8: Animal architects

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Experiment with different natural materials to discover how birds build nests in different habitats.

## Learning outcomes

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Children will:

- learn that birds use different materials for their nests determined by the habitat in which they live and what is around them
- experiment with, and use understanding of, different natural materials to determine how they could be used for building nests
- work collaboratively to solve simple problems
- discover that some birds are much better builders with their bills than humans are with their hands
- understand that birds and dinosaurs both lay eggs

## Resources required

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Provided in the Natural History Museum package:

- films of birds with their nests
- habitat clue cards

Provided by school:

- trays containing sand, pebbles, water and twigs – one for each group of students
- a supply of natural building materials, such as fine twigs, long grass stems, feathers, reed, straw, moss and leaves

# Activity 8: Animal architects

## Ponds, rivers and wet places



Can you design and build a nest that floats?

## Pebble beaches



Can you design and build a nest that cannot be seen among the pebbles?

## Sandy and dry places



Can you design and build a nest hidden in the sand?

## Woodland, hedgerows and heath



Can you design and build a nest that cannot be seen in a tree or bush?



# Activity 8: Teacher notes

Look at the films of birds with their nests. Discuss the reason birds build nests, and what the purpose of a nest is. You could also think about other types of animals that dig or build structures to protect their eggs (eg turtles, snakes and some fish), or discuss how some types of dinosaur made nests.

## Nesting in trees and bushes

Long-tailed tits nest building:

<https://www.youtube.com/watch?v=UC6QODKkRAs>

Robin nest building:

<https://www.youtube.com/watch?v=c2bG4rh8mOQ>

Female chaffinch collecting nest materials and feeding chicks:

<http://www.arkive.org/chaffinch/fringilla-coelebs/video-09a>

## Nesting on water

Great-crested grebe nest:

<https://www.youtube.com/watch?v=EaGxQmDwMNY>

## Burrowing

Puffin arranging nest materials in burrow:

<https://www.youtube.com/watch?v=HGBbzFABUCU>

## Nesting by the shore

Avocet pair making a nest:

[https://www.youtube.com/watch?v=ytQmcpP-R\\_4](https://www.youtube.com/watch?v=ytQmcpP-R_4)

## Nesting in holes

Nuthatch lining nest hole with leaves:

<https://www.youtube.com/watch?v=8o8mnGNHnRA>

Female great-spotted woodpecker making nest hole:

<http://www.arkive.org/great-spotted-woodpecker/dendrocopos-major/video-09a.html>

Divide the children into small groups and provide each group with a habitat card. Ask the children to imagine they are birds living in this habitat. Make sure that each group knows what habitat they are living in and give them their habitat tray, which is their nesting site. Show them the available materials and challenge them to make a nest to protect their eggs.

Ask them to record how they solved the nest-building challenge. Was it quick or slow to build with different materials? What were the main methods you had to use with each material? You could use this activity to build or use new vocabulary to describe their actions (eg digging, shovelling, lifting, rolling, weaving and pressing).

Ask the children to look at the solutions that other groups have come up with by swapping trays. Can they work out how they have solved their construction challenge. Would they have done the same?

Remind the children that birds don't have hands – they use their beaks and feet to build with.

- You could link this to investigating eggs. Look at pictures of different bird eggs and see how different bird eggs vary in colour and shape and how this relates to habitat.
- You could decorate polystyrene balls or eggs with decoupage or paint. Investigate what colours and patterns are best to keep the eggs hidden safely in different types of nest.
- You could have a discussion about why dinosaurs and birds want to hide or protect their eggs in nests (you could relate this to Activity 6, considering what other dinosaurs ate).
- You could find out about other types of animals that lay eggs and how they protect their eggs.
- You could read *Dino Babies!* by Robert Bakker and find out about how some dinosaurs also cared for their young like birds do today.
- You could collect the building materials outdoors.





## English curriculum links (Key Stage 1)

### Science

#### Living things and their habitats

Pupils should be taught to:

- explore and compare the differences between things that are living, dead, and things that have never been alive
- identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other

### Design and technology

#### Design

- design purposeful, functional, appealing products for themselves and other users based on design criteria
- generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

#### Make

- select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

#### Evaluate

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

#### Technical knowledge

- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products

## Northern Irish curriculum links (Foundation Phase and Key Stage 1)

### The world around us

#### Place

Pupils should be enabled to explore:

- how place influences plant and animal life
- ways in which living things depend on and adapt to their environment

### The Arts

#### Art and design

Pupils should be enabled to:

- investigate and respond to direct sensory experience including visual, verbal, spatial and tactile dimensions, memory and imagination
- look at and talk about resource material to stimulate their own ideas
- explore the visual elements of colour, tone, line, shape, form, space, texture and pattern to express ideas
- talk about their own and others' work and how it was made, use observations to identify difficulties and suggest modifications
- experiment with a range of media, materials, tools and processes such as: drawing, painting, printmaking, malleable materials, textiles and three-dimensional construction

## Scottish curriculum links (Early and First)

### Sciences: Experiences and outcomes

#### Planet Earth: Biodiversity and interdependence

I have observed living things in the environment over time and am becoming aware of how they depend on each other. **SCN 0-01a**

I can distinguish between living and non living things. I can sort living things into groups and explain my decisions. **SCN 1-01a**

I can explore examples of food chains and show an appreciation of how animals and plants depend on each other for food.

**SCN 1-02a**

### Technologies: Experiences and outcomes

#### Craft, design, engineering and graphics: Design and construct models/product

I explore ways to design and construct models. **TCH 0-09a**

I can design and construct models and explain my solutions.

**TCH 1-09a**

### Exploring uses of materials

I explore everyday materials in the creation of pictures/models/concepts. **TCH 0-10a**

I can recognise a variety of materials and suggest an appropriate material for a specific use. **TCH 1-10a**

### Art and design

Working on my own and with others, I use my curiosity and imagination to solve design problems. **EXA 0-06a**

I can use exploration and imagination to solve design problems related to real-life situations. **EXA 1-06a**





## Welsh curriculum links (Foundation Phase)

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### Creative development: Skills

#### Art, craft and design

Children's art, craft and design skills should be fostered and promoted through using their senses, imagination and experience. Creative art, craft and design activities in the Foundation Phase should enable children to express themselves freely and make progress in their ability to:

- explore and experiment with a variety of techniques and materials
- make choices when choosing materials and resources
- mix, shape, arrange and combine materials to create their own images and objects that communicate and express their ideas, feelings and memories creatively
- develop and use their understanding of colour, line, tone, texture, pattern, shape and form
- develop their understanding of planning, designing, modelling, modifying and reflecting
- use a variety of materials and tools for experimentation and problem solving
- design and make simple products and mechanisms

