

Ashtree Primary School and Nursery Medium Term Plan for DT

EYFS - Nursery – Construction/shelters

Key Vocabulary

Structure, construct, shelter, base, thicker, thinner, 2D, 3D, cube, cuboid, triangular prism, circles, rectangles, triangles, sides, corners, straight, flat round, Make: join, cut, equipment, materials, design: plan, purpose Evaluate: strong, weak.

Key Knowledge

Children can be taught key knowledge by following the steps below:

Age 30-50 months: Children begin to use construction materials to build and create, stacking blocks vertically and horizontally to make structures. They begin to explore the properties of different materials, such as texture and weight, and understand that objects exist even when they are out of sight.

Age 40-60 months: Children begin to plan and design their constructions, considering the purpose and audience of their creations. They use their knowledge of size and shape to make their structures more complex, and can join materials together using a variety of methods.

Age 50-60+ months: Children can use construction materials to create representations of real-life structures, such as buildings or vehicles. They begin to use mathematical concepts such as symmetry and balance to create stable structures, and can communicate their ideas and plans effectively with others.

Key Skills

Development Matters

Physical Development

- Choose the right resources to carry out their own plan.
- Use one-handed tools and equipment, for example, making snips in paper with scissors.

Expressive Arts and Design

- Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park
- Explore different materials freely, in order to develop their ideas about how to use them and what to make.
- Develop their own ideas and then decide which materials to use to express the
- Create closed shapes with continuous lines, and begin to use these shapes to represent objects

Mathematics

- Select shapes appropriately; flat surfaces for building
- Combine shapes to make new ones
- Talk about and explore 2D and 3D shapes

PSED

- Select and use activities and resources, with help when needed.

Understanding the world

- Explore how things work
- Talk about what they see, using a wide vocabulary

Curriculum Enhancements

Construction area: children can explore and experiment with construction materials such as blocks, bricks, and cardboard boxes. The construction area can be enhanced with pictures or photographs of famous structures, tools and safety signs, and books about building. **Loose parts play:** Loose parts such as wooden blocks, pipes, connectors, and natural materials such as stones and pine cones can be made available to children in the outdoor area or inside. Children can use these materials to build, create, and experiment with different structures and designs.

Junk modelling: Collecting and storing recycled materials such as plastic bottles, cardboard tubes, and egg cartons for children to use in their constructions. This activity supports children's creativity and imagination as they repurpose materials to make new things. **Large-scale constructions:** Children can work together to create large-scale constructions using materials such as boxes, large cardboard tubes, or fabric. This activity promotes teamwork, communication, and collaboration. **Building challenges:** Set challenges for children to build or construct using specific materials, such as building a bridge that can support a certain weight, or constructing a tower that reaches a certain height. This activity supports children's problem-solving skills, critical thinking, and understanding of mathematical concepts such as measurement and balance. **Construction kits:** Using construction kits that come with specific pieces and instructions to build a model. This activity supports children's hand-eye coordination, fine motor skills, and understanding of cause and effect. **Organising group construction projects,** such as building a miniature city or creating a model of a famous landmark. This activity supports children's communication, teamwork, and problem-solving skills.

Possible Misconceptions

Thinking that buildings and structures are made instantly: Young children may not understand the amount of time and effort it takes to construct a building or structure. They may believe that buildings and structures appear instantly or are already there.

Believing that all buildings look the same: Children may believe that all buildings look the same and have the same purpose. They may not understand that buildings are designed for specific functions, such as homes, schools, hospitals, etc.

Thinking that people can build anything they want: Children may not understand the limitations of construction and may believe that people can build anything they want, regardless of the materials, tools, or resources available.

Believing that construction is only for men: Children may have gendered ideas about construction and believe that only men can work in construction. This misconception can limit children's understanding of the wide range of careers in construction and the diversity of people who work in this field.

Thinking that construction is a solitary activity: Children may not understand that construction is often a collaborative activity, involving many people working together to complete a project. They may also not understand the importance of teamwork and communication in construction.

Suggested Activities/Questions

What materials can we use to build a tower? Can we use blocks, Legos, or cardboard boxes?
How can we make our tower stronger? Can we add more blocks or stack them differently?
Can you sort the blocks by colour or shape?
Can you build a house for a toy animal or person? What rooms does a house need?
Can you use tools like a hammer, screwdriver, or drill to help build something?
How can we make a ramp for our toy cars? Can we use blocks or cardboard?
Can you use your imagination to create a new type of building or structure?
Can you work with a friend to build something together? How can you communicate your ideas and work together to make something?
Can you follow instructions to build something? Can you look at a picture and figure out how to build it?
How can we clean up and put away our construction materials when we're finished building?

Curriculum links

Role-play area: Set up a construction site role-play area where children can pretend to be builders, architects, or engineers. This activity promotes imaginative play and encourages children to think about the different roles involved in construction.

Literacy: Use construction-themed books as part of reading and storytelling activities. Children can also use labels and signs to communicate and organize their constructions.

Mathematics: Use construction materials to explore mathematical concepts such as measurement, weight, and balance. Children can also use mathematical language such as "tall" and "short" to describe their constructions.

Science: Children can investigate the properties of different materials and explore the physical principles of building and construction, such as stability, strength, and balance.

This will lead to

The progression in construction skills and knowledge for nursery age children going into Reception involves building on their foundational skills and knowledge, and challenging them with increasingly complex tasks and concepts.

Building with blocks and other construction materials, experimenting with balance and stability, and using trial and error to create simple structures. Understanding the concept of size, shape, and space by sorting, stacking, and arranging blocks and other construction materials. Developing fine motor skills by using tools like scissors, glue, and tape to attach materials together, and using their fingers and hands to manipulate smaller objects. Working collaboratively with others to build more complex structures and sharing ideas to achieve a common goal. Using their imagination and creativity to design and build their own structures, and experimenting with different materials and techniques. Following instructions and copying models to build specific structures, and using their problem-solving skills to figure out how to make them. Understanding the importance of safety when using tools and construction materials, and learning how to handle them appropriately. Developing language skills by describing their constructions and using construction-related vocabulary.

Recognising the different types of construction and the roles of people who work in construction, such as architects and builders.

Cleaning up and putting away construction materials when finished, and understanding the importance of taking care of tools and equipment.