



Metallic Boulders, Crosses & Arches (EY06069, EY11851 & EY1184)

In this case study, Hazel Marsh, from Brampton Primary School, discusses the different ways in which the Metallics were used with the children in Reception and the impact that they had on play in the construction area and for children with SEND.



Background Information

Our school is a fairly large primary school situated near Chesterfield town centre. In addition to our mainstream pupils, we have an enhanced resource for children with autism. We also have a number of other children in school with additional needs, meaning the proportion of disabled pupils and those who have special educational needs is well above average. A number of these pupils have sensory needs, so we were keen to purchase the metallic boulders, arches and crosses to allow them to meet their visually sensory seeking needs. We were also keen to develop our construction and small world areas within our EYFS unit.

How were the Metallics used in your setting?

Firstly, we added the metallic boulders, arches and crosses to our construction area in the classroom and allowed the children to explore. They quickly started to stack the boulders and then began to experiment with building using the crosses and arches. This took a lot of trial and error, along with communication with each other about how to balance and make creations with them. This particularly supported their communication and language skills in addition to their spatial awareness and problem-solving skills.

Through exploration with the metallic resources, children were also able to develop their scientific vocabulary using words such as shiny, reflect, hard, solid etc. This exploration supported their development of the understanding of the properties of different materials. We further developed this by adding different textures to the blocks e.g. fabrics, shredded paper etc.

Once the children were familiar with the resource, we began to add a variety of small world figures and animals. Children particularly enjoyed creating homes and habitats for the creatures. Alongside the materials, we also added a mirror spot tray insert which really helped to set the scene when creating

underwater or arctic scenes. The mirrored tuff tray insert also allowed children to build and see the reflection of their buildings. Children were fascinated by the reflections they were able to create.

Our most recent topic was based on Space. The boulders and crosses were great to use as small world space themed objects and really sparked the children's interests to support their imagination and storytelling.

Following the success of the resource within continuous provision in EYFS, we introduced them to our visually sensory seeking SEN pupils. We have a dark tent within our enhanced resource for children with ASD. The boulders, arches and crosses were placed inside, and children were encouraged to use torches and other light sources to explore the light reflections. In the dark area of the tent, the light in the reflections seemed much brighter. The sensory experience appeared to help some children to become more regulated and ready to learn.

The boulders, arches and crosses were also valuable resources to use in our outdoor space. On a bright, dry day, the metallic nature of the crosses meant that the children could build ever changing models that reflected the environment.

Impact and outcomes

The range of metallic resources have really enhanced our construction provision and has added a new dimension. Children seemed to be captivated by the metallic objects and spend a greater amount of time exploring and building with them in comparison to our regular construction sets. This has impacted on children's imaginative play, communication and teamwork skills.

We saw a particular impact in our setting for those children with additional needs. The metallic nature of the resources really supported those children who require a lot of visual sensory stimulation. Time spent with the resources and light sources in the dark space also helped many of our children become less dysregulated and ready to access time within mainstream classes.



With thanks to Hazel Marsh from Brampton Primary School for writing and sharing this case study with us.



Metallic Crosses, Arches & Zigzags (EY11851, EY11842 & EY11850)

In this case study, Kelly (Teacher, Early Years Specialist and founder of the Tinker Tent) discusses how the Metallic Arches, Crosses and Zig Zags can be used to support development and learning in the Early Years.



At Tinker Tent we love both stacking and reflective play, so exploring the metallic zigzags, crosses and arches from TTS was so much fun!

Why children liked the Metallics?

Reflective materials spark curiosity and motivate little ones to learn skills. Our little learners enjoy looking at themselves in surfaces so these open-ended resources were a perfect addition to our classroom. They are easily handled by our babies. The smooth surface and rounded edges allow for manipulation from hand to mouth and being able to see themselves in the resource motivated our babies reach out to grasp these to practise their skills.

Areas of development where we found the metallics played a supporting role for our babies were:

Tummy time - Encouraging our babies to keep their heads up and look around while on their tummies.

Eye tracking - Their visual tracking skills were practised as they watched the reflections of moving things such as themselves and adults facial expressions or light changes, colours and movements.

Sense of self & motor skills - Babies were motivated to roll, sit up, crawl, and stand to get closer to their reflections in the metallics.

Fine Motor Skills - Babies reached out, pointed, banged and knocked down the metallics.

When using the metallic zigzags, crosses and arches with our toddlers they really enjoyed stacking. They found that the crosses were the easiest to build towers with, then the arches used on the sides. Finally, the arches used upright and the crosses used vertically. The zigzags proved to be a little trickier but really did help to build up resilience and concentration.

How we found using the metallics for stacking helped our toddlers with their learning were:

- They develop coordination and fine motor skills.
- Helped them understand shapes and spatial concepts, such as high or low, narrow or wide and long or short.
- They encouraged playing alongside, cooperation with others, sharing and teamwork.
- They helped to become familiar with the laws of physics, such as gravity and balance.
- They helped with sorting activities as the children sorted and stacked the zigzags, arches and crosses together.
- They helped to increase children's self-esteem, confidence and concentration. The achievement of the effort needed and results of stacking by parents motivated them to do it again.

Finally, our preschools used the zigzags, arches and crosses not only in construction play but also alongside role-play and small world. They created walls and houses for their dolls, bridges for their figures to pass over, games such as ball rolling and noughts & crosses. The children even used them in investigative play such as balancing and on the light projector. They even used them as shapes to draw around for mark making. These open-ended metallic resources from TTS provided much creativity, imagination and communication for our nursery children.

With thanks to Kelly from the Tinker Tent for writing and sharing this case study with us.



Metallic Crosses, Arches & Zigzags (EY11851, EY11842 & EY11850)

In this case study, Deanna, Nursery Manager from Woodlands Nursery and Forest School, discusses the different ways in which the Metallics were used with the children and the learning that took place.



Background Information

We are a big believer of loose parts and natural resources at Woodlands Nursery and Forest School. We have been looking at how to extend our construction areas to offer more challenge and dimensions. Our construction areas are pivotal to our continuous provision, offering challenges to support physical development, communication and language and expressive arts and design. One of the biggest aims is to provide new resources and opportunities that promote and stretch the characteristics of effective learning.

How were the Metallics used?

We had planned to implement the metallic crosses, arches, zig zags and cubes across all ages within the nursery.

We introduced these into the youngest of our babies' rooms first, adding these onto the carpet for babies to explore and to encourage their curiosity. The shiny coating reflected the main lights and caught the eye of a baby who has been learning to crawl. He pulled himself along the carpet to reach out to the cross. He enjoyed exploring the smooth texture with his mouth.

A little girl explored the cubes, holding each with two hands, moving it closer to her eyes and then further away again, watching the shapes and colours change in size and focus. "Peek a peek a peek a boo!" he would say as she moved the cube away from her eyes to gain eye contact with an adult. Within the room for our youngest children, we are looking to support many with their balance and strength in standing up. We arranged these resources onto units of different heights which encouraged the babies to pull themselves up. Whilst holding the different arches and zigzags in their hands, the babies had to work on their own balance with a new amount of weight added.

As the week went on, the babies used these metallics as their main focus to explore. They would tap the pieces together, listening to the sounds made. They would place the cubes on top of each other and watch them topple as the different surface patterns hadn't quite matched up.

We have placed the archways in front of babies enjoying tummy time. We have then laid on the carpet and played peekaboo through them.

In our toddler room, the staff had used these metallics as the basis to support the interest of building and construction. The children have been using traditional wooden blocks to create structures from around the world, however the restriction with this is that they are generally very traditional shapes.

With the arches, zig zags and crosses, the toddlers were able to express their wider ideas and represent more unusual structures. The differing shapes and shiner surfaces posed challenges to the toddlers in how to stack these in less traditional formats. This provoked lots of conversation amongst the group, sharing ideas and testing these out – the perfect start to challenging the characteristics of effective learning just like we'd hoped!

By the end of the week, we had some wonderful structures which were then used as a prop for our small world – people were added and narratives were explored.

The older babies explored the arches in particular. These were taken out into the garden and transported from one area to another. One little boy took the arches into the sandpit. He would sprinkle the sand on the top of the arch and watch how it cascaded down each side, making a pile. He would push the arches into the sand, wedged so they became more stable to stack.

We took our distorting cubes to the forest school site. Laid in a tuff tray, the cubes would reflect an array of colours from the surroundings. Tops of the cubes showed reflections of the sky whilst the sides saw the greens and browns of the trees and surrounding mud hills.

Our preschoolers have generated their own challenges for each other. They have created a game where they would each take turns to see how many high they could stack the cubes before their sand timer ran out. Usually an easy challenge, the preschoolers soon worked out that they had to pay attention to the detail of each side to be able to successfully stack. At the end of the sand time, the children would count how many blocks were used. When staff input, they would challenge this further asking what number they would have if one more was added for example.

One preschooler explored how they could put two arches together and make a circle. "It looks like a nought!" He then added a cross next to it. "We can play noughts and crosses with this!" We used bamboo sticks in the garden to make the grid and instead of using stones to play the game like we usually would, we used the metallics.

Some of our most popular activity ideas we have explored so far:

Understanding the world-

- Metallics form the foundations of 'icebergs' for a winter/arctic scene for small world

Mathematics-

- Stacking cubes and counting how many were used.
- Exploring the number of sides on the shapes.
- Presenting traced shapes on large paper with a basket of these metallic shapes to match back into their outlines.

Literacy-

- We've used these as stampers/printers in paint to make large scale paintings (making sure we wipe clean with damp cloth promptly after).
- Using these shapes as stencils with large paper in the garden to draw around.

PSED-

- Using the arches as facial features- smiles and frowns... and eye brows!
- Exploring different facial expressions on the surfaces of the cubes.

Understanding the world-

- Turning the lights off in the main classroom, using the torches to shine onto the metallics and watch

the rainbows and shimmers appear around the room. We added music and watched the children dance and chase the lights.

Expressive arts and Design-

- Building challenges- Photo prompts for children to try and replicate the image shown.
- Used as ramps for balls/cars to roll up and down.
- Arches used as telephones.

Impact and outcomes

The significant impact these resources have had on language has been very clear. Despite the initial aims of the activities to be linked to another area of learning, due to their unique character, it naturally provoked conversations and questions.

Our biggest hope was to see a versatile resource which would spark the development of the characteristics of effective learning. This has been a big focus in terms of staff continuous professional development.

Creative and critical thinking – children sharing their thoughts and ideas about how to stack the metallics and thinking through trial and error, as to how to get the unusual textures/surfaces to stack. With experience and trial and error, children were able to create more complex structures as the weeks went on as they were making links to what previously did or did not work.

Active learning – The persistence to keep trying to stack these metallics has been remarkable. Children have not only challenged each other but have set their own goals and persevered to reach these with their own motivations. We have seen that the babies and children appear more involved and focused with construction when these metallics are out over the wooden versions.

Playing and exploring- Children using these as props for role play such as using the arches as telephones during a game of mums and dads.

With thanks to Deanna from Woodlands Nursery and Forest School for writing and sharing this case study with us.