

ACTIVITY 9

Junk Mandalas

Mandala means ‘circle’ in Sanskrit. In religious practices mandalas are used as symbols and tools for meditation, protection and healing. The pattern of a mandala is grounded in biology (in cells), in botany (flowers) and chemistry (atoms). ‘Junk mandalas’ are made so that children can explore textures, types and properties of waste materials and they can think about how wastes can be re-used and recycled. Teachers can use this opportunity to develop counting, comparing, ordering, classifying and creating patterns.

Maths ACMNA 001 Establish understanding of the language and processes of counting by naming numbers in sequences, initially to and from 20, moving from any starting point

Maths ACMNA002 Connect number names, numerals and quantities, including zero, initially up to 10 and then beyond

Maths ACMNA003 Subitise small collections of objects

Maths ACMNA289 Compare, order and make correspondences between collections, initially to 20, and explain reasoning

Maths ACMNA005 Sort and classify familiar objects and explain the basis for these classifications. Copy, continue and create patterns with objects and drawings

Maths ACMNA012 Develop confidence with number sequences to and from 100 by ones from any starting point. Skip count by twos, fives and tens starting from zero

Maths ACMNA014 Count collections to 100 by partitioning numbers using place value

Maths ACMNA016 Recognise and describe one-half as one of two equal parts of a whole

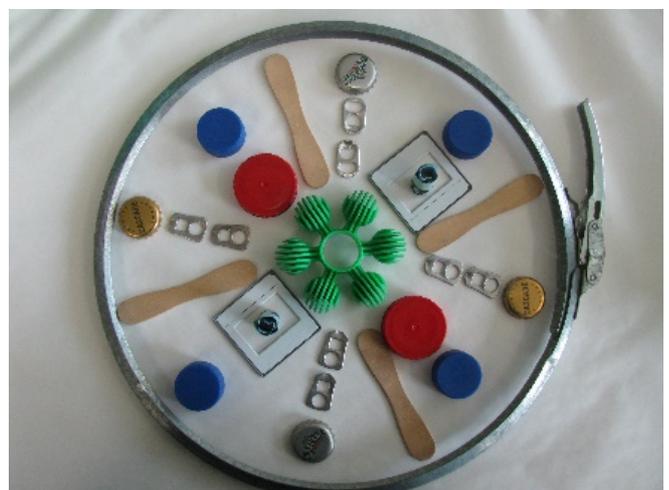
Maths ACMNA018 Investigate and describe number patterns formed by skip-counting and patterns with objects.

The Arts ACAVAM 107/107 Use and experiment with different materials, techniques, technologies and processes to make artworks

Sustainability OI.5 OI.6 The sustainability of ecological, social and economic systems is achieved through informed individual and community action that values local and global equity and fairness across generations into the future. Actions for a more sustainable future reflect values of care, respect and responsibility.

Before the activity

Weeks or months before the activity, collect as many items as you can of several types of small inert waste materials of different shapes and colours. Store these in separate containers such as ice cream containers, together in a larger box. Items could include bottle tops, aluminium ring pulls, icy pole sticks, pieces of toys, bread tags. Encourage students and parents to start collecting for you!



You will need

- The collected small inert waste items, in containers
- Hoops of various sizes e.g. hula hoops, hoops from paint tins
- Camera

Method

Ask the children what they know about the volume of waste/rubbish going to rubbish tips/transfer stations/landfill. Can they think about the amount of waste that is created (e.g. *plastic they use every day, and how much gets thrown away?*)

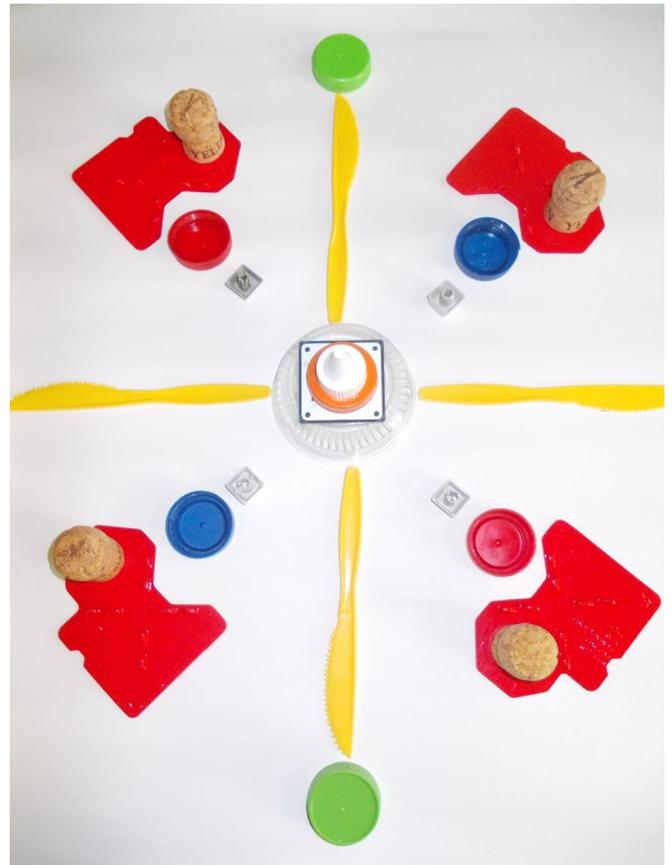
Children can create ephemeral 'junk mandalas'. Usually mandalas have a central piece and are divided into equally sized 'pieces of pie' (see photos as an example). The children could aim for symmetry between two 'sides' of the mandala, or repetitions of patterns. Discuss symmetry in nature (e.g. *scallop shells, flowers, fins fish*) and the concept of halves and quarters. The mandalas could be 2-D or 3-D.



At the end of the mandala session, take photos of the mandalas. Discuss each waste material and what it was previously used for. Observe the properties of the different materials – are they hard or soft, strong or weak, elastic, heavy or light? Notice how many uses there are for different types of plastic. Are any of the materials able to be recycled, either in the kerbside bin at home, or via other collections? Some schools, for example, collect bottle lids for prosthetic limbs, via Lids4Kids.

Reinforce the Reduce, Re-use, Recycle message.

Children should then put the items from their mandalas away, sorting their items into the appropriate containers, either sorting by colour or type of material, or both. Encourage them to count, compare, order and classify.



References

ABC News Hobart, "Lids 4 Kids Founder Asked To Put A Cap On Donations", Posted 24 September 2019, viewed 15 February 2021

<https://www.abc.net.au/news/2019-09-24/lids-4-kids-founder-asked-to-put-a-cap-on-donations/11543196>