

TORONTO CARIBBEAN CARNIVAL HEADPIECE

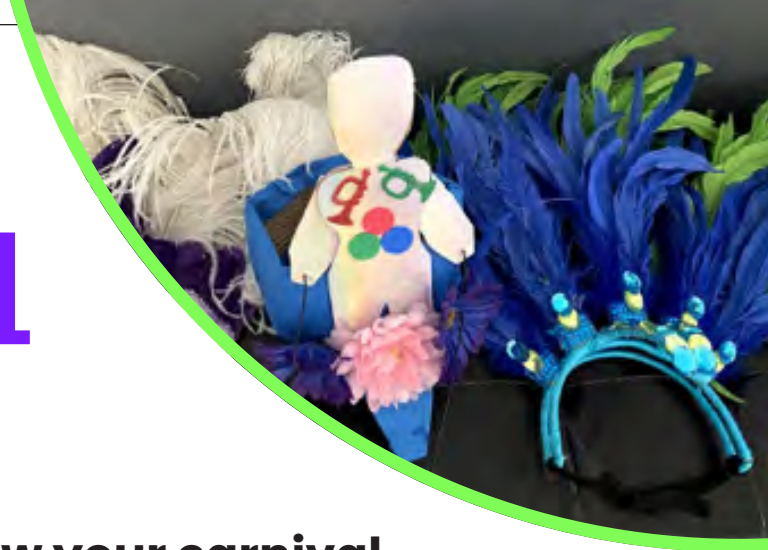
Upcycle household items to show your carnival flair...and your engineering skills

What you'll need:

- Glue
- Scissors
- Tape
- Cardboard
- Any decorative materials you have handy—recycled is best. Think yarn, gift wrap or bags, tissue paper, feather, flowers, cardboard, sequins, beads, construction paper, old greeting cards.

Activity setup:

1. Create a space where you can lay all your materials.
2. Take a piece of cardboard and shape it around your head.
3. Starting from your forehead, guide the cardboard around your head until you come back to the starting point. (You might need help with this!).
4. Once you have gone all the way around, mark the spot where the ends meet. This is where you'll trim the cardboard for the perfect fit. (You may need to combine multiple pieces of cardboard together to go all the way around your head.)
5. You now have the base for your headpiece. It should look like a crown.
6. Get creative! Cut, colour and attach materials to your headpiece until it reflects your personality.
7. Think about balance and the centre of gravity when you're adding pieces, so that your headpiece doesn't topple or wobble when you move.
8. Put on some calypso music and proudly parade around the house in your new headpiece.



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How does it work?

Toronto Caribbean Carnival costumes are an excellent example of where art and science meet. In addition to their imaginations, designers use design principles, engineering skills and materials science when creating their masterpieces. When creating a headpiece, designers consider the centre of gravity, so it doesn't fall off. They also think about balancing the weight of the headpiece from side to side and from front to back to ensure it doesn't affect the wearer's balance. Finally, they choose materials that are strong enough to last through the Carnival but light enough so that the wearer's neck won't be injured by its weight.

Bonus Challenge

Add moving parts to your headpiece! Spend time thinking about how these parts will move, where the joints will go and how they'll hold together. Thumbtacks and strings can help form basic gears and pulleys, allowing you to control the moving parts on your headpiece by hand—like puppets.

The scientific merit of carnival costumes

The Ontario Science Centre established the Innovation Mas' Award in 2010 to recognize innovative carnival costume design at the annual Toronto Caribbean Carnival. The Award honours the designer whose creation best demonstrates the principles and practices of engineering innovation, including risk-taking, problem-solving and collaboration. The judging criteria also consider the creative use of materials and a commitment to the advancement of this unique craft for future generations.

