



## Rocket Round Leicester Challenge

Summer 2021

The Rocket Round Leicester Sculpture Trail is being organised as a major fundraiser by LOROS, to run between July and September 2021. There will be 40 giant rocket sculptures decorated by professional artists and sponsored by national and local businesses and organisations alongside 100 junior jets decorated by schools and other organisations.

This Challenge is designed to promote engagement in a variety of rocket related activities to compliment the Sculpture Trail and fundraising initiative of the LOROS charity. Units can send the challenge straight out to parents if they wish for it to be completed over the summer break or complete it as part of a unit.

### The Challenge

Each section should undertake an appropriate number of tasks to complete the challenge. Recommended minimum number of challenges:

Rainbows: Smarties challenge plus four challenges (one from each of the three zones and an additional challenge)

Brownies: Smarties challenge plus six challenges (one from each of the three zones and an additional three challenges)

Guides/Rangers/Leaders/Trefoil: Smarties challenge plus eight challenges (two from each zone and an additional two challenges).

### Smarties tube challenge

For this challenge you will need a Smartie tube. You can even eat the Smarties to give you motivation! Ask your family and friends to give you some change each time you are helpful or do a good deed and store this in your Smartie tube. We have even created a template for you to use to cover the tube if you wish. See end of this pack.

LOROS will receive 100% of all money received from Smartie donations.

Please see the badge order form for details on how and where to send donations to.



## Rocket Zone



### Recycling Rocket

Have a competition within your unit or at home to see who can create the most imaginative rocket.

Why not think up a list of things to use for marking (goes furthest, best decoration, best use of materials)

### Colourful Rocket

Print out the attached rocket picture (see end sheet) and colour in. Why not put this up in your window (don't forget to ask permission) or on your unit noticeboard so that everyone can see your artwork.

### Rocket and Star Biscuits

Make some rocket or star shaped biscuits and share these with your family and friends.

You will need:

85g butter  
115g sugar  
200g plain flour  
1 egg  
½ teaspoon baking powder  
¼ teaspoon salt  
½ teaspoon vanilla essence (optional)



1. Cream butter and sugar
2. Beat in egg
3. Fold in dry ingredients.
4. Roll up in clingfilm and put in the fridge for an hour to cool
5. Roll out (flour surface and rolling pin), cut out shapes
6. Bake on greased baking tray at 180 degrees for 8-12mins.
7. Make icing using 6 oz icing sugar, teaspoon of hot water and few drops of food colouring. Decorate biscuits when cool and cover with decorations of choice.

Adult Supervision

### Clay Rocket

Using air dry clay why not make a clay model of a rocket and decorate it with felt tip pens or water-based paints

### Rocket Cupcakes

Decorate with colourful icing. Who can make the best decorations?

Adult Supervision

You will need:

115g margarine or butter  
115g sugar  
2 eggs  
115g self-raising flour  
½ teaspoon baking powder



1. Cream fat and sugar
2. Beat in eggs
3. Fold in sieved flour and baking powder
4. Add milk if required to make dropping consistency
5. Put into cake cases
6. Bake for 12-15 minutes, at 180 degrees, until risen.
7. Leave to cool, then decorate as required.

**Plastic Bottle Rocket** Whose rocket goes the furthest?

You will need: Plastic bottle with cork (pencils/sticks to hold bottle upside down, attach with tape), vinegar (3cm in bottom of bottle), baking soda (1 teaspoon wrapped in piece of tissue/toilet paper)

Wrap the baking soda in tissue paper (slow fuse). When you are ready, drop this into the bottle, secure the cork, place cork end down and stand back! Once the bicarb and vinegar have reacted (releasing CO<sub>2</sub>), the pressure will build up within the bottle and the cork will be expelled, launching the rocket (bottle)! [See here for ideas.](#)

**Air-powered Rocket** *Harder activity - requires preplanning, preparation and outdoor space*

Adult Supervision

You will need: Water bottle, bicycle pump, tyre valve inserting into bottle lid, water bottles (recycling)

Use a large water bottle or fizzy drink bottle and add 40-50mls of water.

Make a hole in the bottle lid and fix a tyre valve into this and screw it back onto the bottle.

Inflate the bottle until it feels tense (but don't burst it!).

Hold the bottle upside down and carefully unscrew the bottle top. The air pressure will expel the water and shoot the bottle upwards. (don't hold on too tightly)

[Here's a link for more guidance](#)

**Mini Balloon Rockets** Whose rocket goes fastest, whose rocket goes furthest?

You will need: small balloons (water bomb size work well), paper, colouring pens, Sellotape.

Use the paper to draw a rocket design about 6cm high, colour in and cut out.

Blow up your mini balloon, then attach with a single strip of Sellotape (or double-sided tape) to your card rocket (you may want to use a peg to secure the end - or get a friend to help).

Are you ready? Release your rockets and see how far they all go.

**Ribbon Rocket** Make your own game

You will need: Toilet roll/kitchen roll inner, 2 long lengths of thin curling ribbon or string (approx. 2 metres)

Make a rocket from your cardboard tube, colour it in and add fins. Decorate as creatively as you can!

Thread two separate lengths of ribbon or string through the cardboard tube from the top to bottom of your rocket.

You will need one person standing and holding the ends of the string/ribbon at each end. Player 1 pulls the two ribbons apart sideways to send the rocket flying to Player 2. Keep this going to make your rocket fly.

[Here's a link to more instructions](#)

**Straw Rockets** Whose 'puff' can launch their rocket the furthest?

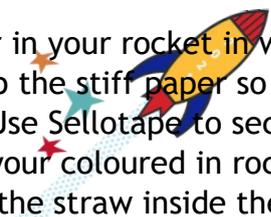
You will need: Straw, rectangle of stiff paper, Sellotape, Rocket outline (see template picture at the end of the challenge)

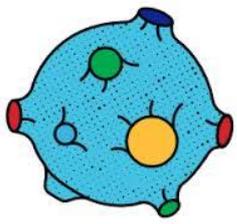
Colour in your rocket in whatever design you would like.

Roll up the stiff paper so it forms a tube around half of the straw and fold over at one end to seal. Use Sellotape to secure it together but don't stick it to the straw!

Stick your coloured in rocket to the paper tube with the folded end at the top of the rocket.

Place the straw inside the paper tube and blow through the straw to launch your rocket in the air.

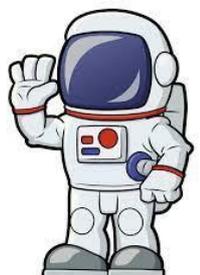
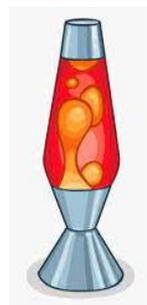


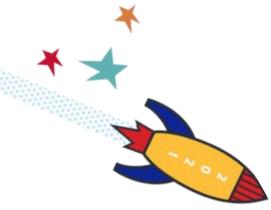


## Round Zone



- Learn something about LOROS. Ask your family and friends what they know about LOROS. Consider asking one of the Ambassadors to come and talk to your unit about the work that the charity does and why it needs to raise money every year.
- Have a film night with your unit or at home. Choose a space or rocket themed film (The Cat from Outer Space, Space Buddies, Space Chimps, Wall-E), choose your snacks, bring your blankets and snuggle up together. (If watching as part of a unit check film suitability for age group and also that it is covered under the MPLC license agreement see [here](#)).
- Hold a fancy-dress party. Use your imagination and come up with a costume representing rockets or space. You could limit the materials available to make this more of a challenge e.g, newspaper, bin liner bags or recycling.
- Play a card game. Print off copies of the rocket template onto card, decorate them (remember to make sure you have two matching ones) and play snap or pairs together in your groups.
- Explore the internet to find out about some space history: what was the name of the first dog in space, who was the first person in space, who was the first person on the moon, who else was in the space craft that landed on the moon? Think up some other questions too.
- Who was Katherine Johnson and why was she important to space travel? (Women in STEM: NASA, human calculator -film “Hidden Figures” for Rangers).
- Find out about Tim Peake. What is his connection with our Challenge?
- Make cupcakes and decorate them any way you like to represent Guiding or LOROS. Perhaps you could hold a cake sale to raise some money to fill your Smarties tubes.
- Make a lava lamp (vegetable oil, water, food colouring, Vitamin C tablet).
- Dress like an astronaut. Collect lots of layers of clothing (t-shirts, jumpers, leggings, gloves). See who can put on the most layers. Now try doing some activities like writing your name, cutting up a bar of chocolate, picking up a piece of paper. How did you get on?





## Leicester Zone



- Take a tour around the city with the [What3Words quiz](#) (computer/phone app access required) Use the attachment at the bottom of this challenge.
- Find out where some of the rockets are being placed in Leicester by checking the [Rocket Round Leicester website](#) for information. Which is your favourite rocket? Can you draw a picture of your favourite one?
- Using [Rocket Round Leicester](#) find a Leicester landmark near one of the 40 Giant Rockets being exhibited. Find out something about this place. Why have you chosen it? What happens around here/makes this place special for you or for the people in Leicester?
- Find a map of Leicester. Can you work out directions to walk from one of the rockets to another one? Try and think about all the obstacles on the way: how many roads do you need to cross, what landmarks do you pass? Try to measure the route with a piece of string and estimate how far you would need to walk? (use the scale at the side of the map to help)
- Find a map of Leicester city centre. Can you find the Cathedral? Who is buried here? (clue -he was King of England!) When was he buried? Can you find the hospital? What is it called? Find out how many beds it has. What animal lives nearby? (Clue -it is sport related). Where is LOROS? Can you find it on the map? What is the name of the hospital that is close by?
- Plan a trip to Leicester to visit some of the rockets. Choose how you would get there, how much it will cost, where you will visit and how long it will take you. Can you budget for this? Take some photos of your group with one of the rockets (check that you have photo permission for all participants). Could you visit virtually?
- Visit the National Space Centre in Leicester or invite one of their team to visit your unit (online visits are available). Draw a picture or write a journalistic report of the visit to show what you enjoyed most about it.
- Leicester is a multi-ethnic city. Find out about some of the different religions and cultures represented here. Try a new food from a different culture to your own.
- Leicester is a centre for sporting excellence. Find out about the sports, the team names, where they play? Can you find them on the city map? Rainbows could draw pictures of the different balls used to play rugby, football and basketball.
- Get arty: draw or craft a picture to represent Leicester (you could try making this with rice or pasta!)



## Leicester City Tour - Using [What3Words.com](https://www.what3words.com)

Use the directions below to take a tour around the city. Let's see where you can get to. If you enjoy this, you may want to devise a tour around your own village or town or visit somewhere further away. Choose between street or picture view (picture view lets you see where you are visiting).

1. Deed.foster.songs You have arrived! But where are you?
2. Lively.pops.prom Is this someone important? I wonder where he is now?
3. Volume.learn.stole He must have been important to be buried here!
4. Giving.sweat.busy There is a very nice Gelato shop on the corner! Where are we?
5. Relax.asking.bucked Don't eat too much or you may end up here!
6. Fakes.aspect.dips Don't get lost! You don't want to end up in here! Or is it a castle?
7. Sock.races.combining This looks very studios. I wonder where we are now?
8. Trial.allow.slams Oh, there are some good shows on here! Let's see what's going on today!
9. Grit.mats.bats Oh my, very bouncy. Will my ice-cream stay down? Where are we now?
10. Pose.files.motel Let's take a bus to get here. This is out of this world! What is it?
11. Drift.frame.settle Right next door, this looks a bit old! Where are we now?
12. Dare.fairly.pink We need another bus to get here! This is who we are fundraising for. Where are we?
13. Glory.armed.hits Even in the middle of a city you can find some surprising places. Where are we now? What can you find here?
14. Struck.trying.scary Lets go for a run around. Who's for playing rounders?
15. Blunt.speaks.living This looks a bit sporty. What team plays here? Who is your favourite team?
16. Woes.nods.chains Or do you prefer this sport? Whose stadium is this?
17. Struck.judge.years We recognise that flag! Shall we go in and buy our badges?
18. Deed.foster.songs We're all worn out. Time to go home again.



'Rocket Challenge'

Fundraising for



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# JUNIOR JET DESIGN TEMPLATE

