

Thanks for pitching in to tackle microplastic!

- 1 THANKS FOR TAKING PART:** You've signed up to our Pitch In project, welcome to the team! We're working together to raise awareness of microplastic loss from 3G sports pitches, and what can be done about it. If you're still not sure what this is all about, explore our website or download our information sheet to find out more.
- 2 COMPLETE THE ACTIVITIES:** This pack contains fun activities and quizzes your school or club can complete to highlight microplastic pollution from 3G sports pitches. By taking part in these activities, you can learn more about microplastic on pitches, how it can escape and how you can help to stop this pollution from your local pitch.
- 3 LET US KNOW YOUR RESULTS:** Let us know when you've finished an activity by sharing with us online. You can add your pin to our Pitch In map to show the world what you've been doing. Help us build a picture of communities and schools taking action to prevent microplastic pollution and highlight your work to encourage others to do the same! **#Teampitchin** @FidraTweets @KIMOint
- 4 SPREAD THE WORD, NOT THE PLASTIC!** We have made guidelines for the people who DESIGN pitches, the people who MAINTAIN the pitch, and the people who USE the pitch, to show exactly how to stop more plastic getting out of bounds. We need your help to share this information with the local managers of your pitch.
- 5** You can also download our poster and information sheet to raise awareness of this problem at your school or local club.

Use our ACTION PACK to get ideas for how to find out more about who owns your pitch, and how to share our guidelines with them. Or just get in touch by e-mail: info@team-pitch.in and we can help you further.

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Activity 1: Shake it Out

This activity is a fun way to see how much rubber crumb is coming off you and your team-mates as you leave the pitch.

What you will need

- A white sheet
- A group of volunteers who have just played on your pitch!
- A Camera
- A Notebook and pen
- Soft clean brushes
- A stopwatch or timer (optional)
- A Jar with a lid (optional)
- Weighing scales (optional)

When?

Do this activity just after you're done with your training / game and make sure everything is set up before players begin to leave the pitch. It's best after a dry spell so the rubber and the ground isn't too wet. It should take you around 15-20minutes.

How does it work?

- 1 Lay the sheet out on the ground just outside the pitch, at the exit.
- 2 In small groups, players step off the pitch and stand on the sheet.
- 3 Using hands or a brush - Players shake off, brush down, and dust off their clothes (Each pair gets 1 minute to shake it out!)
- 4 Make sure to take your shoes off too and shake them out over the sheet.
- 5 Repeat until everyone is off the pitch...
- 6 Now have a look at the sheet. You might see lots of little black speckles which are the rubber crumb.
- 7 Record the amount of microplastic – first take a photo of the sheet - this will be a good way to share your results
- 8 **Now, to measure how much rubber crumb there is** - Carefully collect the rubber crumb by sweeping it up and place in a small container like a jar. Measure how much rubber crumb using one of the following options:
 - a) use some sensitive scales to weigh the total amount of rubber crumb
 - b) use a measuring cylinder to see the volume of rubber crumb collected
 - c) ... if you're feeling ambitious, count the number of pieces!
- 9 Don't forget to **report back to us online**. You can use the recording form below. Make a note of the number of players, and how long you were playing.

Discussion points:

The amount of rubber crumb on the sheet shows you how much might come off the pitch after every practice. Is it more or less than you were expecting? Where did most of it come from?

Extension activity:

If you weighed your rubber, use the calculation below to work out an estimate your team's yearly rubber trail:

$$\begin{array}{|c|} \hline \text{Amount of} \\ \text{rubber on} \\ \text{sheet (g)} \\ \hline \end{array} \times \begin{array}{|c|} \hline \text{Number of} \\ \text{practices per} \\ \text{year on} \\ \text{your pitch} \\ \hline \end{array} + \begin{array}{|c|} \hline \text{Number of} \\ \text{games per year} \\ \text{on your pitch} \\ \hline \end{array} = \begin{array}{|c|} \hline \text{Your team's} \\ \text{rubber trail} \\ \hline \end{array}$$

Imagine now, that each team on your pitch is losing the same amount from the pitch every year. Then picture how many artificial pitches there are in the UK – or even the world!. You can imagine it might start to build up to be quite a lot?

Share your results

Please tell us when you've taken part! Send us a photo of your results by submitting your activity online at www.team-pitch.in or e-mail us: info@team-pitch.in Or tag us on Twitter @FidraTweets #TeamPitchIn

Have you tried our wibble wobble warm down??

No time after your class for a long activity? Use our wibble wobble warm down to shake, brush and wobble off any infill clinging onto your kit!

1. Shake your arms and legs, starting at your feet and hands and ending up at your hips and shoulders. Yes, it's supposed to look silly!
2. Use your hands to give your legs and arms a quick brush down.
3. Don't forget to brush off and shake out your boots before leaving the pitch! (and wash your hands when you're done playing).

Can you spread the joy of the wibble wobble warm down? Can you get your favourite player, or team mascot, to do some silly moves to support our project? Share a video or GIF with us on twitter, Instagram or facebook using #teampitchin @Fidratweets @Kimoint

Shake it Out: Worksheet

Today you took part in the Shake It Out activity to investigate how much rubber crumb comes off an artificial pitch every time you train:

Key information collected:

There were _____ players on the team

The training session lasted _____ minutes

Every person had _____ minutes to 'Shake it Out' on the sheet!

What did you find?

We found black rubber crumb: Yes No

Weight of rubber crumb: _____ grams

OR

Volume of rubber crumb: _____ millilitres

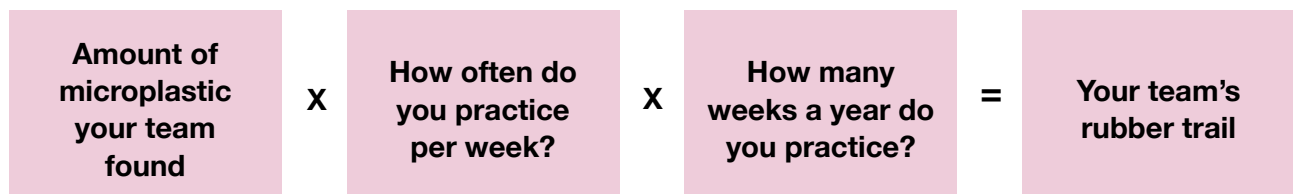
OR

Number of particles: _____

Your team's microplastic trail:

Use this calculation to work out how much rubber crumb might be lost like this every year:

If you weighed your rubber, use the calculation below to work out an estimate your team's yearly rubber trail:



Activity 2: What's on Your Kit?

We know that when players leave the pitch they take rubber crumb with them. Often this ends up being taken home. We want to know how much actually makes it back to the house so, we have prepared a quiz to help find this out. We need your help to do some detective work.

Send this quiz home to find out how much rubber crumb makes it into your kit each week!

What do you need?

- The 'Shake it Out' quiz sheet (below)
- Your team.
- Help from the people who usually wash your kit

When?

This quiz is best done on a different week to the 'Shake it out' activity, as otherwise you won't find much! It could also be an alternative to the first activity. This should take around 15 minutes per person.

How does it work?

- 1 Use the quiz to find out how much rubber crumb goes home with you and your team. Each of the team should take a copy home.
- 2 When at home fill in the quiz.
- 3 You will need to use the quiz to ask the person who usually does the laundry to help answer all the questions.
- 4 Take a photo of any rubber crumb you find!
- 5 Collect all the answers back in during the next lesson, or practice session.
- 6 How many of the players on your team found rubber granules?
- 7 Who found the most?

Share your results

Take a picture of yourselves taking part, or of any rubber granules you've spotted in/on your kit. Send us the photo at info@pitch-in.org.uk or tweet / instagram it using **#teamPitchIn** and tag @Fidratweets @Kimolnt

Extension activity

Use a spreadsheet to put all of the information from your team together and produce a report of your finds, including some key statistics,

E.g.

- What percentage of the team found rubber granules in their kit?
- Where was the most common place to spot the granules?

The “What’s on Your Kit?” Quiz

When you are getting changed:

1 Have you ever noticed the rubber pellets on you / in your kit after practice?

Yes No

2 If yes, where have you spotted it?

In your shoes In your socks
 Stuck to your clothes Stuck to your body
 In your kit bag In the shower/bath
 In your car Other _____

For those in charge of washing:

3 Have you noticed rubber granules in used sports kit?

Yes No

4 If you have noticed rubber granules, what do you do with them?

Brush them away outside
 Wash clothes with granules on them z
 Brush them into the bin
 Other _____

For everyone:

5 What do you think we could do keep these plastic pieces on the pitch and out of the environment?

Activity 3: Find the Microplastic

We know microplastic escapes when players leave the pitch, is washed off during rainfall, or kicked off during play or maintenance. This activity will help you find out whether microplastic is coming off your pitch by some careful detective work!

What you will need:

- Camera
- Dustpan and brush – 1 per group of 3 (or so)
- Jar or tub to collect the microplastic pieces you find
- Stopwatch or timer

When?

Do this after a dry spell so that the ground and rubber you collect isn't wet.

How does it work?

Make sure you have a look at the granules on your pitch before you start so you know exactly what you're looking for. What colour / size/ shape are they?

- 1 Split into teams of 2-3. Each team can take a dustpan and brush and a camera if you have one (or share between you). Each team should take charge of one edge or corner of the pitch, making sure that you have covered the whole pitch perimeter between you.
- 2 Spend 10 minutes hunting around the outside of your pitch. Check on the outside of the pitch perimeter, i.e. on the grass or paving that is just outside the fence surrounding the pitch. If there is natural grass directly surrounding the pitch, have a look to see if you can spot any between the blades of grass. If there are spots with loads of rubber, take a photo. Then sweep up the rubber pieces, trying to avoid including too much other material.
NB Beware of other rubbish, glass and dog poo. If your pitch is next to a road, please keep on the pavements and be traffic-wise! Make sure to wash your hands after the activity.
- 3 At the end of your 10 minutes, combine all the microplastic pieces you have found.
- 4 If you are doing this activity with a class or club – regroup with the rest of your team.
- 5 Weigh the total microplastic you found or measure the volume using a measuring jug (or if you're brave you could try counting up the pieces!). Is it more or less than you were expecting?
- 6 Take a photo– maybe you could do this activity again in a month and compare the results?

Remember to share your findings with us online too

Optional extension –

Use the worksheet below to map out how far the plastic from your pitch might be spreading.

Discussion questions

Do you think, from your investigation, that microplastic is coming off your pitch and into the environment? How do you think it is escaping? Is it different for different areas of pollution?

Now you have seen where the rubber crumb is, can you think of any ideas to help keep the rubber crumb on the pitch and to stop it escaping?

Did you see any barriers in place to stop microplastic getting off the pitch?

Let us know your ideas online by submitting your results and photos using our form. Let us know if your pitch has #PitchPrevention or #Pitch Pollution

Share your results

Take pictures of your team taking part in the activity, and share any ideas you've had with us via e-mail, twitter or Instagram: info@pitch-in.org.uk or tweet / instagram it using **#teampitchin** and tag @Fidratweets @Kimolnt

Use the diagram on page 10 as a map of your pitch.

Pitch Detectives: Worksheet

Your mission, as a team of pitch detectives, is to find evidence of rubber granule pollution around the edges of your pitch.

1 Prepare your pitch map:

- Label the exit / entrances
- Mark the section of the pitch your team is focusing on.
- For your section:
 - o draw in any fences or walls... are they solid or mesh?
 - o Can you see any drains or gutters? Mark these on your map where you find them?
 - o You could also draw on any pathways, roads or other features, such as nearby streams, around your pitch

Now you have made a map of your pitch and its surroundings you can start searching for microplastic!

2 Find the Microplastic:

As you hunt for microplastic in your section of the pitch, fill in your map...

- Shade in red where you found rubber granules. Shade in another colour where there were the most.
- Did you spot rubber near any drains or gutters? Circle these areas.
- What was the furthest distance away from the pitch that you spotted the rubber crumb? Try to estimate in metres or paces how far away they were.

Remember to make a KEY on your map to remember what the colours mean

3 Pitch Prevention:

Have you spotted anything that might be stopping rubber granules from escaping the pitch?

- Label anything on the map you think might be there to stop granules being lost
- Have you got any ideas for what might help to stop microplastic loss? Write or draw your suggestions in a different colour on your map.

Remember to share your results with us online! Let us know if your pitch has **#PitchPrevention** or **#Pitch Pollution** on twitter or Instagram.

Pitch Detective: Map of Finds



Team name: _____

A large rectangular area divided into four quadrants by a horizontal and a vertical line. In the center of the grid, there is a circle with a horizontal line passing through its center, extending to the left and right edges of the grid. This circle and line serve as a reference point for mapping finds.

Key:

Activity 4: Pitch to the Public!

DESIGN A POSTER TO IMPRESS YOUR TEAMMATES AND SHARE YOUR KNOWLEDGE

What you will need

- Info and resources from our PITCH IN website (www.team-pitch.in)
- A3 or A4 paper
- Drawing, painting or collage materials
- [Optional] A laminator and pins or other tools to hang up the posters

How does it work?

Our activities have shown you that microplastic can and does come off your 3G pitch. It's time to share your knowledge with all your teammates and spread the word about how to stop rubber granules coming off the pitch.

- Use our website and downloadable resources to find out a bit more about the problem and solutions to microplastic from pitches.
- Design a poster to share what you've learned. Your poster should
 - o Highlight that the little bits of rubber are a type of microplastic, and should stay on the pitch
 - o Suggest easy ways that your teammates can stop microplastic getting off the pitch
 - o Be designed to catch attention, so no-one misses it!
- Don't forget to put the posters up to help spread the word (not the plastic!)

Tips: You could design your poster to be used on the way out of the pitch, in the changing rooms, or in the classroom.

Extension activity

We're looking for mascots to represent our Pitch In Team... can you design one for us?

What will it be? A 'Microplastic Monster' or a 'Granule Gremlin?' or maybe a 'Pitch In Pal?' Let your imagination run wild!

Send us your posters and mascots

Share pics of your posters and mascots!! Send us the photo at info@pitch-in.org.uk or tweet or instagram it: **#teampitchin** and tag @Fidratweets @Kimolnt

Take action! Write to your local pitch

If the pitch you play on uses microplastic infill, you may already be doing your bit by brushing off your boots or trying our wobble warm down! But to tackle all pathways of microplastic loss bigger changes are needed, which call for the full support of the pitch owners.

To help bring about these bigger changes, you can write to your pitch owner or manager. Write your own or follow the instructions below to promote Fidra's Pitch In project and encourage them to take action.

You could also use this guide to write to your favourite football or rugby star! Can you persuade them to sign up to the Pitch In project and become a Pitch In Ambassador?

Shortcut: You can also use our handy [letter template](#), available on the Pitch In website.

DO YOU KNOW WHO OWNS YOUR PITCH?

In the UK artificial pitches are often owned by the local council, although they might be managed by a private company or your local school/university. If you're struggling to work out who to write to, get in touch with us and we can help you to find a contact:

info@team-pitch.in

How to write a good letter:

Here are some tips on what to include when writing your letter

- **Section 1**
 - o Add your name and address in the top right corner
 - o Make sure to put the name / club name and location of your 3G pitch
- **Section 2**
 - o Start by addressing the owner (by name, company or school)
 - o Add some information about you: who you are, when do you use the pitch
- **Section 3**
 - o Add some information about the problem of microplastic pollution – why are you worried about it?
 - o You can find information on our [website](#) or use the following paragraph:

The performance infill used on our 3G artificial pitch is a type of microplastic. These loose microplastic particles can easily escape the pitch, trodden off by players, through maintenance or by migrating off pitch edges. They can end up in nearby grass, rivers, ponds and could even find their way to sea and could harm animals and the environment. 16,000 tonnes are estimated to be lost to the environment each year across Europe¹.

*Luckily, simple steps can reduce the risk of loss. The **Pitch In** project (www.fidra.org.uk/pitchin), co-ordinated by Fidra and KIMO International,*

¹ estimate by European Chemicals Agency, 2020

has been set up to tackle microplastic pollution from pitches. Guidelines made available on the Pitch In website recommend practical steps that can be taken by pitch designers, owners and users to reduce microplastic loss. Many of these are simple and low cost.

- **Section 4**
 - o Add details of your pitch – have you seen bits of microplastic around the edge of the pitch?
 - o Have you completed any of the other Pitch In activities? Tell them what you found!
- **Section 5**
 - o Tell them what changes you want to see
 - o You can find out more about the solutions on our website or use the following sentences:

We need your help to make further improvements to make the biggest impact. From considering microplastic alternatives and physical barriers in the next refurbishment cycle, to working with maintenance staff to align their practices with mitigation measures, you have the power to make concrete changes to reduce microplastic loss at little extra cost.

We would be delighted if you could commit to following these actions to help improve the environment and prevent plastic pollution.

- **Section 6**
 - o Thank the reader for their time
 - o Sign the letter