



Baylab

DESIGN A LAB COAT competition

Theme 2022

Food and Food Waste

Teacher instructions

British Science Week Competition (11th-20th March 2022)



This year is the 5th anniversary of the Baylab's hugely popular Lab Coat Competition, which runs during British Science Week. So, for this year and all the following, we're introducing a twist! Competitions will now officially be themed.



In honour of COP-26, the UN's Sustainability Goals and Food Waste Action Week (7-13 March 2022), this year's theme is **food and food waste**.

All students need to do to be in with a chance of winning a grow-your-own veg pack for themselves and a set of lab coats for their class, is design a lab coat around this year's designated theme!

Who can enter?

All schools are eligible, but entries must be within the age categories below.

Entrants can be teams or individuals, but we ask you only select the top 2 entries from your school to submit.

Winners and runners-up will be selected from each of the following categories:

Infant Year 1-2

Junior Year 3-6

Senior Year 7-9



Did you know

Did you know that one third of our food goes to waste in the UK? This is enough food to provide all chronically undernourished people with 10 meals per day, every day.

Can we sustain this level of waste? The answer is no. Why? With the global population set to rise by 2 billion over the next 18 years, it's predicted that we will need 50% more food to meet global food demands. Coupling this with the impacts of climate change (which are projected to cause 20% of arable land degradation and 17% of harvest losses), we will face even greater global food shortages.

Therefore, raising awareness of the impact food waste will have on world hunger is an incredibly important focus in STEM. We hope that engaging students with the topic of food waste, its impact on the climate, and what they themselves could do to reduce their impact, will be one step in the right direction for young people implementing mindfulness and making small changes to reduce food waste.

How to take part:

- // 1 Aim to complete the competition in or around British Science Week (11th-20th March) or Food Waste Week (7th-13th March).
- // 2 Print off the template found in this pack for the number of students taking part. Be sure to include the front and back in your print outs.
- // 3 Individually, in pairs or groups, design a lab coat around the theme of food and food waste.

This is open to interpretation by the students. For example, they could focus on:

- Their favourite food
- Food and nutrition
- Growing food and farming
- Food waste recipe ideas
- Food distribution
- Food politics and poverty
- How food is wasted
- Improving food sustainability



And remember:

The more creative, the better!

How to send in entries?

Once teachers have judged and selected the top 2 designs for each age category taking part, we kindly ask schools to submit the top 2 designs for each category, along with their completed entry form, either by posting to:

**Bayer PLC, Lab coat competition,
Baylab, 400 South Oak Way,
Green Park, Reading,
RG2 6AD**

Or by emailing baylabinfo@bayer.com with the Subject: **Lab Coat Entry, school name and category.**

Closing date for entries is **Friday 22nd April 2022**

We look forward to viewing all the amazing Lab Coats!

If you'd like to share any of your designs on Social Media, please tag us on Twitter or Instagram.

[@UKBayer](https://twitter.com/UKBayer) [@Bayer4CropsUK](https://twitter.com/Bayer4CropsUK) #labcoatcomp22 #BSW22 [@bayeruki](https://www.instagram.com/bayeruki) [@bayer4cropsuk](https://www.instagram.com/bayer4cropsuk)

*Please send in the following entry form with
your best designs.*

Entry Form

// School name:

.....

// School address:

.....

// School email:

.....

// Number of students who took part:

.....

// Number of entries submitted:

.....

// Age categories of the entries:

.....

// Please say how this activity was used at your school:

.....

// Please say if this activity was compulsory or optional:

.....

// Please say how students responded to designing their own Lab Coats:

.....

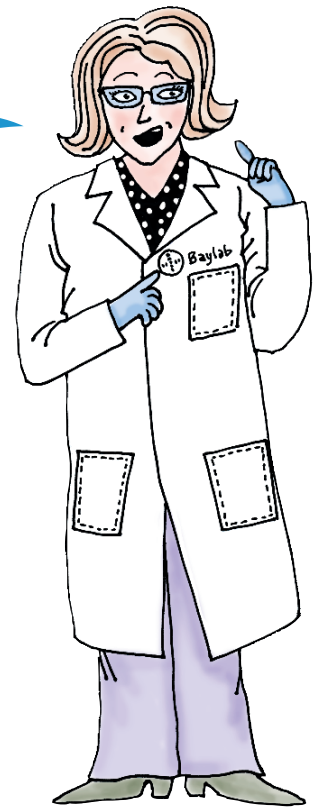
// Please tell us how you heard about the competition:

.....



**Thank you for taking part and well done to
everyone who has entered our competition.**

Competition Resources



Within this pack you will find:

- // 1 'Junior + Senior' and 'Infant' Lesson Plan
(PowerPoint available online)
- // 2 Lab Coat Template

To help support teachers in delivering this as a lesson, we have PowerPoints for Infants and Junior + Senior categories available. How you wish to use them is completely your choice, and there is scope to extend to 2 lessons if you have time.

Learning Objectives:

- // Understand that a scientist solves global problems
- // Recognise that a scientist can look like anything/anyone
- // State ways in which food is wasted
- // Understand how food waste links to climate change.

Junior and Senior Lesson Plan



Slide	Content	Resources
1-3	Title slides and Contents - run students through the lesson agenda.	n/a
4	Defining a Scientist - focus on the idea that scientists ask questions and find answers to them. It's all about advancing knowledge to help the environment or people in some way through scientific research.	n/a
5	Drawing a Scientist - encourage imagination in the students as they each draw what they think a scientist looks like.	Sheet of paper each, colourful pencils per table
6	Guessing the scientists - focus on the idea that it is a game of luck, since scientists can look like anything. Can they spot the scientists?	n/a
7	Global Issues - ask your students to make a list of all of the problems they think scientists face currently and will face in the future.	One sheet of paper per table
8	Answers! Celebrate if correct! Can mention COP26, and any other current stories that they may have heard about.	n/a
9-11	Climate Change - add detail if desired, if the class has already studied the topic in their Science lessons.	n/a
12-13	Food Waste - details minimising food wastage as a solution to some of the impacts climate change has on food supply.	n/a
14	Chain of Waste - explain to students that there is accountability for food waste at every level, even in their own homes. But not to worry, since there are many options available to them to try to reduce food wastage. Can they think of any ways they could reduce waste?	n/a
15	Food Waste on the Farm – A Message from Farmer Tom, further explaining the Chain of Waste	n/a
16-18	Quiz! Ask your students to write their answers on a sheet of paper and then mark. Celebrate their successes!	Mini Whiteboard set each
19-20	Bayer Crop Science – introduce Bayer as a company focussed on mitigating food waste.	n/a
21	Introduce COP26 and the UN Sustainability Goals – the two concepts that inspired the theme of this year's Lab Coat Competition. Optional: impress upon your student's the importance of watching/reading the news in order to keep up with news in agriculture. Reassure them with the idea of the Paris Accord, and that countries are actively tackling climate change.	n/a

5 minutes

10 minutes

Junior and Senior Lesson Plan *continued*

Slide	Content	Resources
22-25	Lab Coat Competition - aim to enthuse students, with the competition now being topically themed.	
26	Accountability for food waste – ask your students to think up any times they may have wasted food in the past week.	Reuse mini-whiteboards
27	Tackling food waste – as students to explore ways in which they could reduce food waste in their own homes	
28	Use by/Best Before – ask students if they recognise the labels, and explain the differences	
29	Template - depicts the template on which the students will draw their designs. Ensure they do not forget to draw both front and back!	Template each
30-31	Theme and Prizes – more details of the competition (the theme), and prizes up for grabs!	n/a
32	Theme Ideas. The list is not exclusive – students should be encouraged to draw whatever they like around the subject of food waste! Remember, the more creative, the better.	Colourful pencils, rubbers
33	Food Waste Warrior – call to action! Optional slide that you can show if you wish your school to take part in our Food Waste Warrior activity for the Summer term and beyond. To find out more regarding this activity please visit www.bayer.co.uk/en/baylab/food-waste-warrior	
34-37	Optional – ‘ <i>Wacky Wellies Fun-raiser</i> ’. Please assure students that if they do not already own wellies, they do not need to buy new – they could simply upcycle old ones and bring them in if they wish. If they do wish to take part, encourage students to make their wellies as blingy as possible. This is all about boosting student confidence, as well as engagement with the concept of food waste and the impact it’s having on those in need. We encourage you to share your images on Twitter and Instagram to enter our competition too. All details about this ‘ <i>Fun-raiser</i> ’, including the prizes available, can be found in the ‘ <i>Wacky Wellies</i> ’ resource pack.	n/a
38	Inspirational Message - a little inspirational message for your students, designed to break down the barriers of joining STEM, and the stereotypes they might have been exposed to in the media and pop culture. Encourage your students to think of each of their interests, no matter how ‘ordinary’ or ‘eccentric’, as science. Encourage them to think of all of their endeavours of curiosity as scientific inquiry. You may want to cycle back to the very first questions posed by the powerpoint, reiterating that scientists don’t look like anything particular, and that global problems need solving – perhaps they could be the ones to do it! This is all about leaving a positive message.	n/a
39	Complete competition, roll into next lesson or finish for homework. Consider evaluating your LOs with your class.	n/a

25 minutes

40 minutes

Junior and Senior Lesson Plan continued

Further Quiz Guidance:

- Q1:** Get students thinking about why it might be cheaper to waste, rather than redistribute, food.
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- Q2:** Explain that all of the other options are 'wasted food', rather than 'surplus food'. Define surplus food as food that is excess, and is likely to go to waste if not redistributed.
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- Q5 and Q6:** Impress upon them that the values are both majorities – there are actions they can take in their own households to save edible foods that will significantly reduce food wastage.
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- Q5 and Q6:** Impress upon them that there are many types of waste, but conversely, there are many options available to them to try to reduce food wastage.
-
- Q9:** 1 in 8 people go hungry – when does this not apply? It depends on food access, and therefore access to food is a privilege.
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- Q10:** We return to food waste reduction methods later in the PowerPoint.
Optional: create a short maths activity using the UK population and 15 billion meals wasted.

Infant Lesson Plan



Slide	Content	Resources
1-3	Title slides and Contents - run students through the lesson agenda	n/a
4-5	Defining a Scientist - focus on the idea that scientists can look like anything	n/a
6	Drawing a Scientist - encourage imagination in the students as they each draw what they think a scientist looks like	Sheet of paper each, colourful pencils per table
7	Guessing the scientists - focus on the idea that it is a game of luck, since scientists can look like anything	n/a
8	Global Issues - ask your students to make a list of some of the problems they think world could face in the future	n/a
9	Answers! Talk to the students about how world problems can be solved through science	n/a
10-11	Mention Climate Change as a problem - add detail if desired, if the class has already studied the topic in their Science lessons.	n/a
12-14	Food Waste - details minimising food wastage as a problem caused by climate change.	n/a
15	Chain of Waste - explain to students that there is accountability for food waste at every level, even in their own homes. But not to worry, since there are many options available to them to try to reduce food wastage.	Mini Whiteboard set each
16-17	Quiz! Ask your students to write their answers on a sheet of paper and then mark. Celebrate their successes!	n/a
18-19	Bayer Crop Science - introduce Bayer as a company focussed on mitigating food wastage.	n/a
20-23	Lab Coat Competition - aim to enthuse students, with the competition now being topically themed.	n/a
24	Personal Accountability – ask students to make a list of any food that they might have wasted in the past week.	
25	List of methods for reducing food waste to take your students through. Discuss how they could implement them in their own homes.	

5 minutes

10 minutes

15 minutes

Infant Lesson Plan *continued*

	Content	Resources	
26	Use by and Best-before dates – ask if your students recognise these labels and explain the differences.		20 minutes
27	Template - depicts the template on which the students will draw their designs. Ensure they do not forget to draw both front and back!	Template each	
28-29	Theme and Prizes - more details of the competition (the theme), and prizes up for grabs!	n/a	
30	Theme Ideas. The list is not exclusive – students should be encouraged to draw whatever they like! Remember, the more creative, the better.	Coloured pencils, pencils and rubbers	25 minutes
31-34	Optional – ‘ <i>Wacky Wellies Fun-raiser</i> ’. Please assure students that if they do not already own wellies, they do not need to buy new – they could simply upcycle old ones and bring them in if they wish. If they do wish to take part, encourage students to make their wellies as blingy as possible. This is all about boosting student confidence, as well as engagement with the concept of food waste and the impact it’s having on those in need. We encourage you to share your images on Twitter and Instagram to enter our competition too. All details about this ‘ <i>Fun-raiser</i> ’, including the prizes available, can be found in the ‘ <i>Wacky Wellies</i> ’ resource pack.	n/a	
35	Inspirational Message - a little inspirational message for your students, designed to break down the barriers of joining STEM, and the stereotypes they might have been exposed to in the media and pop culture. Encourage your students to think of each of their interests, no matter how ‘ordinary’ or ‘eccentric’, as science. Encourage them to think of all of their endeavours of curiosity as scientific inquiry. You may want to cycle back to the very first questions posed by the power-point, impressing upon your students the idea that scientists look like anything, and that global problems need solving – perhaps they could be the ones to do it! This is all about leaving a positive message.	n/a	
36	Complete competition, roll into next lesson or finish for homework. Consider evaluating your LOs with your class.		40 minutes

Further Quiz Guidance:

- Q3:** If 1 in 8 people in the UK go hungry – why might this pattern not be visible everywhere?
It depends on food access – therefore food access is part of privilege.

If you'd like to continue the conversation about Food Waste, you may wish to take part in our suggested 'Fun-raiser' activity, 'Wacky Wellies'. To find out more, please see the 'Fun-raiser' pack, or if you didn't select to take part in this option on the registration form, you can still request the resource by contacting Baylabinfo@bayer.com





Other resources

If you would like to find out more around the topic of environment, agriculture and farming please take a look at the resources below.

COUNTRYSIDE CLASSROOM

Connecting schools with **food, farming and the natural environment**

Countryside Classroom helps teachers to find resources, places to visit and school support relating to the themes of food, farming and the natural environment. Their site contains a range of quality assured educational content from hundreds of contributors.

They aim to inspire and enable teachers to use food, farming and the natural environment more often, in and out of the classroom, because all children should have the opportunity to learn about and experience these essential topics.

Countryside Classroom is managed by a partnership of organisations that represent the very best in food, farming and environment education. We are committed to working together to increase the sector.

Please visit <https://www.countrysideclassroom.org.uk/>



Farmer Time is an ongoing digital connection between a farmer and a class of school children. The initiative is completely free, and allows open and honest conversations via video call, on a regular basis between the class and a farmer. The calls will link back to curriculum areas, with almost all subjects being discussed in calls! 100% of teachers have enjoyed the experience, and would recommend Farmer Time to another, with 97% of teachers believing their students have gained a better understanding of the food supply chain.

www.farmertime.org



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FRONT DESIGN TEMPLATE



Turn over for

BACK DESIGN TEMPLATE

DESIGN A LAB COAT competition



Name
(all names if a team)
and age
(all ages if a team)

Age category
(of the oldest team member)



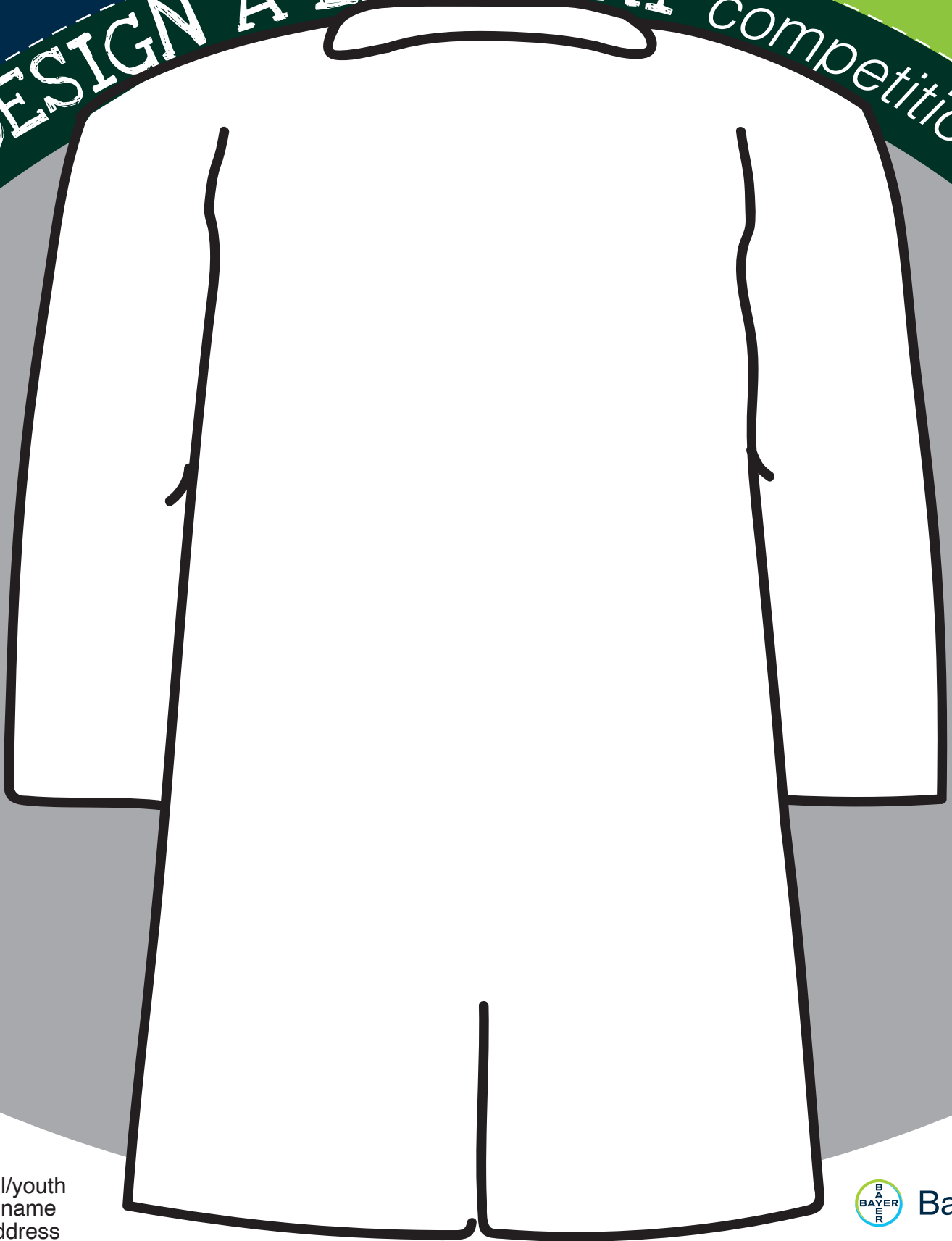
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BACK DESIGN TEMPLATE

Suggestion -
cut out dotted line
and hang on a line
to view designs

DESIGN A LAB COAT competition



School/youth
group name
and address



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