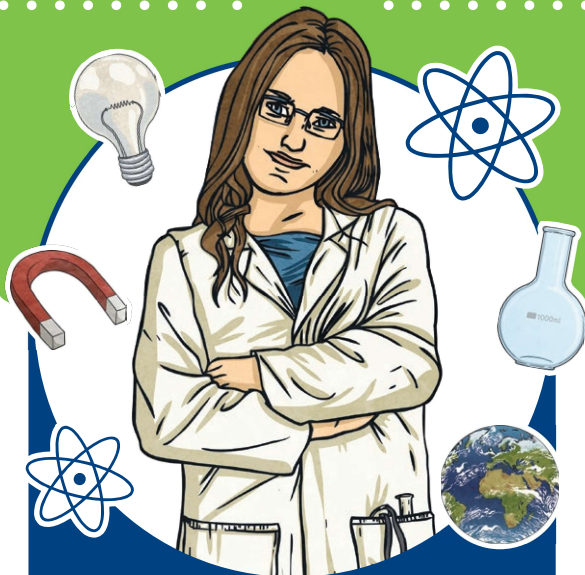


Disclaimer

We hope the information on our website and resources is useful. It is your responsibility to note that some ingredients and/or materials used might cause allergic reactions or health problems and to ensure that you are fully aware of the allergies and health conditions of those taking part. If you have any concerns about your own or somebody else's health or wellbeing, always speak to a qualified health professional. Remember, activities listed within the resource should always be supervised by an appropriate adult.



British Science Week: Innovating for the Future

STEM Skills

There are lots of exciting jobs available in science, technology, engineering and maths (STEM). The British Science Association hopes to encourage children to think about jobs in these areas.

.....

Together with NUSTEM, they have written a list of words that might describe someone who would be good at a STEM job. Take a look at the list below.

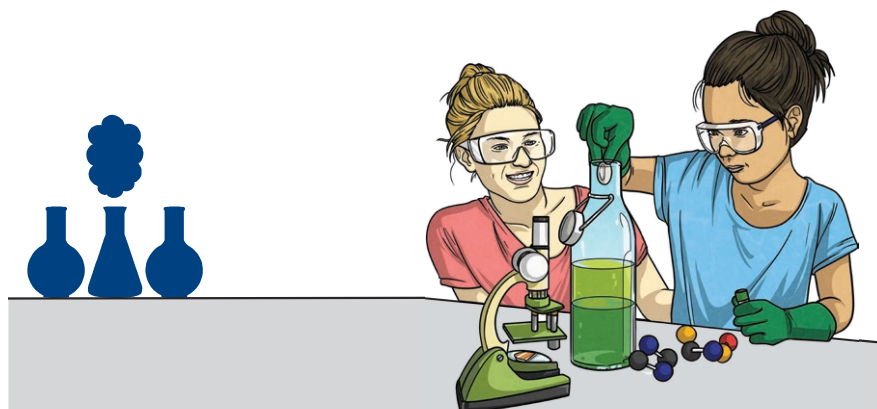
Which of these words best describes you?

collaborative	:	observant
committed	:	open-minded
communicator	:	organised
creative	:	passionate
curious	:	patient
hard-working	:	resilient
imaginative	:	self-motivated
logical	:	tenacious

British Science Week is a celebration of science, technology, engineering and maths (STEM), which happens once a year. It is one of the biggest national science celebrations. Each year, over one million people take part in fun, scientific activities across the UK.

.....

The event is organised by the British Science Association. Their aim is to support everyone with taking part in scientific experiments or discoveries. It is hoped that this will spark an interest in science which may encourage children to take up a job in science when they are older.



What Is This Year's Theme?

This year, the theme for British Science Week is 'Innovating for the Future'. This theme was chosen because innovation is all around us. It's a part of people, animals, nature, materials and everything else in our everyday lives.

.....

The word 'innovate' means to make changes to something: especially if it has been around for a while. This could be by introducing new ways of doing something, coming up with new ideas or creating new products.



What examples of innovation can you think of?

How to Innovate with Colour

You will need:

- a selection of materials;
- a strong bowl or hard surface;
- something to crush your ingredients with (for example, a round pebble);
- a dust mask;
- a shallow bowl.



1

To make your new paint, you will need to gather a selection of materials. You might find something in the kitchen, in a garden or in a local park.

Make sure that you have permission to use the materials before taking them and only take things which have already fallen to the ground. Materials, such as berries, plants, soil or clay, are a good start.

2

Choose one material and put it into your strong bowl or on a hard surface. Then, while wearing your dust mask, grind and crush the material. Keep doing this until you have made a paste or a powder.

3

Scrape the paste or powder into your shallow bowl and add water. Imagine that you need to add enough to make it into a glass of squash (but don't drink it!). Stir the mixture and leave it in direct sunlight until all of the water has evaporated.

4

You will now be left with dried paint powder. Add a tiny drop of water to the powder and try using it as paint on a piece of paper. Repeat the process with other materials to see what different colours you can create.

Questions

1. What does **STEM** stand for? Tick one.

- ☐ Science Teaches Everyone Maths
- ☐ Science, Technology, Engineering and Maths
- ☐ Start Teaching Everyone Mathematics
- ☐ Science, Teaching, Evolution and Measurements

2. Look at the instructions **How to Innovate with Colour**.

Number the instructions from 1-4 to show the order that they should happen in.

- ☐ Grind and crush the material.
- ☐ Use as paint on a piece of paper.
- ☐ Gather a selection of materials.
- ☐ Scrape the powder into a shallow bowl.

3. Look at the paragraph beginning **The event is organised by...**

Find and copy one word which means the same as 'target'.

4. What is the theme of this year's British Science Week?

5. Fill in the missing words.

The word '_____' means to make changes to something:
especially if it has been _____ for a while.

6. Explain why the instructions suggest that you use a **strong bowl**.

7. Using 20 words or fewer, summarise what you have learnt about British Science Week.

8. After reading the text, would you be interested in having a STEM job when you are older?
Explain why.

Answers

1. What does **STEM** stand for? Tick one.

- ☐ Science Teaches Everyone Maths
- ☒ **Science, Technology, Engineering and Maths**
- ☐ Start Teaching Everyone Mathematics
- ☐ Science, Teaching, Evolution and Measurements

2. Look at the instructions **How to Innovate with Colour**.

Number the instructions from 1-4 to show the order that they should happen in.

- 2** Grind and crush the material.
- 4** Use as paint on a piece of paper.
- 1** Gather a selection of materials.
- 3** Scrape the powder into a shallow bowl.

3. Look at the paragraph beginning **The event is organised by...**

Find and copy one word which means the same as 'target'.

aim

4. What is the theme of this year's British Science Week?

The theme of this year's British Science Week is 'Innovating for the Future'.

5. Fill in the missing words.

The word '**innovate**' means to make changes to something:
especially if it has been **around** for a while.

6. Explain why the instructions suggest that you use a **strong bowl**.

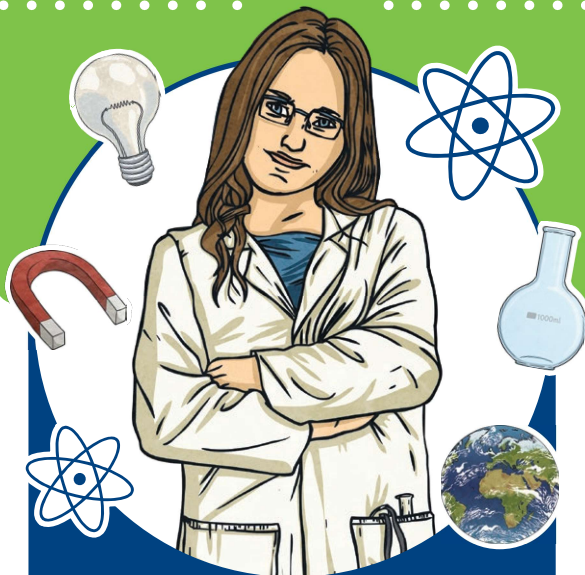
Pupils' own responses, such as: The instructions suggest that you use a strong bowl because you are going to be grinding and crushing materials inside it so you don't want the bowl to break or be damaged.

7. Using 20 words or fewer, summarise what you have learnt about British Science Week.

Pupils' own responses, such as: It happens once a year and is one of the biggest national science celebrations. Over a million people take part.

8. After reading the text, would you be interested in having a STEM job when you are older?
Explain why.

Pupils' own responses, such as: I would be interested in having a STEM job when I am older because the experiment sounds like a lot of fun and that is the sort of thing that I would like to do for a job. I am also hard-working and collaborative which are two things that the text says you need to be.



British Science Week: Innovating for the Future

STEM Skills

There are hundreds of exciting jobs available in science, technology, engineering and maths. The British Science Association alongside NUSTEM want to encourage children to consider following a career in one of these areas.

.....

To demonstrate just how many different people these sorts of jobs are suitable for, they have written a list of characteristics that people might have if they would be well suited for a STEM career. Take a look at the list below.

Which of these characteristics best describes you?

collaborative	:	observant
committed	:	open-minded
communicator	:	organised
creative	:	passionate
curious	:	patient
hard-working	:	resilient
imaginative	:	self-motivated
logical	:	tenacious

Despite its name, British Science Week is a yearly celebration of science, technology, engineering and maths (STEM), which lasts for a total of ten days. The celebration was first held in 1994. It has now become one of the biggest national science celebrations. Each year, over one million people of all ages take part in fun activities across the UK.

The event is organised by the British Science Association, who, with funding from UKRI (UK Research and Innovation), provide grants to schools and communities. These grants help to support people in areas that might not normally have access to scientific projects. It is hoped that this will spark an interest in science among the next generation, which may encourage them to follow a career in science.

Annual Theme

This year, the theme for British Science Week is 'Innovating for the Future'. This theme was chosen because innovation is all around us. It's a part of people, animals, nature, materials and everything else in our everyday lives.



What do you think of when you hear the word 'innovation'?

You might think of inventions or adaptations that have helped to make things easier for people or animals. Think about people that you've spoken to recently or stories that you've heard about on the news; did they mention any innovative ideas? Without innovation of any kind happening all the time, our world would look very different today.

How to Innovate with Colour

Innovation can come in many shapes and forms. Become an innovator yourself by following the instructions below and creating your own colour of paint.

.....

You will need:

- a selection of materials;
- a strong bowl or hard surface;
- something to crush your ingredients with (for example, a round pebble or the end of a rolling pin);
- a dust mask;
- a shallow bowl.



1

To make your new paint, you will need to gather a selection of materials. You might find something in the kitchen, in a garden or in a local park.

Make sure that you have permission to use the materials before taking them. If you are gathering natural materials, only take things which have already fallen to the ground. Materials with a strong colour, such as petals, berries, plants, soil, sand or clay, are a good start.

2

Choose one material and put it into your strong bowl or on a hard surface. Then, while wearing your dust mask, grind and crush the material. Keep doing this until you have made a paste or a powder.

3

Scrape the paste or powder into your shallow bowl and add water. Imagine that you need to add enough to make it into a glass of squash (but don't drink it!). Stir the mixture and leave it on a flat surface in the sunlight until all of the water has evaporated.

4

You will now be left with dried paint powder. Add a tiny drop of water to the powder and try using it as paint on a piece of paper. Repeat the process with other materials to see what other colours you can create.

Questions

1. In what year was British Science Week first held? Tick one.

- ☐ 1949
- ☐ 1994
- ☐ 2020
- ☐ 2021

2. Draw **four** lines and complete each sentence.

British Science Week is...

exciting jobs available in science,
technology, engineering and maths.

There are hundreds of...

many shapes and forms.

This year, the theme is...

a yearly celebration of science,
technology, engineering and maths.

Innovation can come in...

'Innovating for the Future'.

3. Look at the set of instructions.

Find and copy one word which means the same as 'collecting'.

4. Name **three** characteristics that you might demonstrate if you would be well suited to a STEM career.

- _____
- _____
- _____

5. In which section would you find information on how to make your own colour of paint?

6. **Without innovation of any kind happening all the time, our world would look very different today.**

Explain one way in which our world might look different without innovation.

7. Using 30 words or fewer, summarise how to make your own colour of paint.

8. Do you think that people will be encouraged to take part in British Science Week after reading this text? Fully explain your answer.

9. What evidence can you find that the author likes British Science Week?

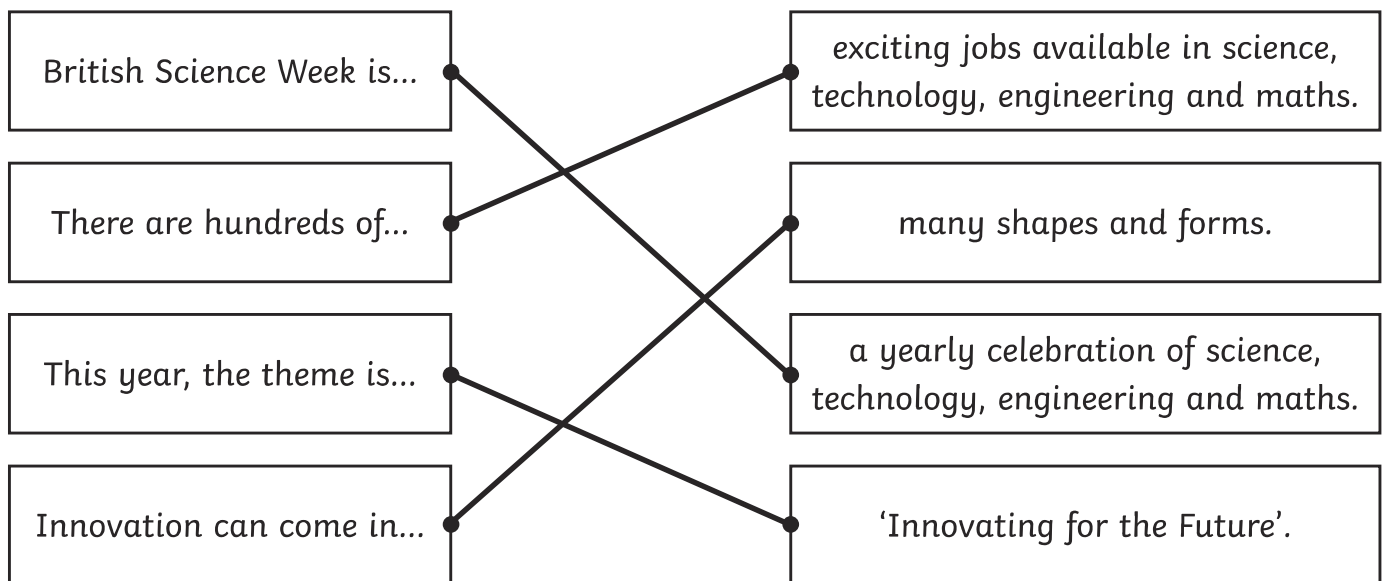
Explain your answer.

Answers

1. In what year was British Science Week first held? Tick one.

- ☐ 1949
☒ **1994**
☐ 2020
☐ 2021

2. Draw **four** lines and complete each sentence.



3. Look at the set of instructions.

Find and copy one word which means the same as 'collecting'.

gathering

4. Name **three** characteristics that you might demonstrate if you would be well suited to a STEM career.

Accept any three of the following: collaborative; committed; communicator; creative; curious; hard-working; imaginative; logical; observant; open-minded; organised; passionate; patient; resilient; self-motivated; tenacious.

5. In which section would you find information on how to make your own colour of paint?

You would find information on how to make your own colour of paint in the section 'How to Innovate with Colour'.

6. **Without innovation of any kind happening all the time, our world would look very different today.**

Explain one way in which our world might look different without innovation.

Pupils' own responses, such as: Without innovation, we wouldn't have any technology and we would still be living in caves and cooking using fire.

7. Using 30 words or fewer, summarise how to make your own colour of paint.

Pupils' own responses, such as: Find a colourful material and crush it into a powder or paste. Add water and let it dry. Then, add a small amount of water and use it as paint.

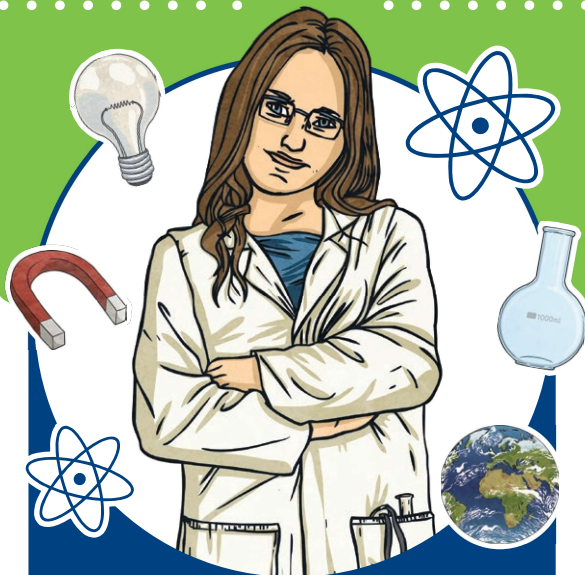
8. Do you think that people will be encouraged to take part in British Science Week after reading this text? Fully explain your answer.

Pupils' own responses, such as: I think that people will be encouraged to take part in British Science Week because the instructions for how to make your own paint are really easy to follow and can be carried out as part of the week.

9. What evidence can you find that the author likes British Science Week?

Explain your answer.

Pupils' own responses, such as: Throughout the text, the author uses lots of positive language to explain British Science Week, such as: 'spark an interest' and 'hundreds of exciting jobs'. This makes it seem as though they like British Science Week and feel as though it is an event that is worth writing about.



British Science Week: Innovating for the Future

STEM Skills

There are hundreds of exciting jobs available in the fields of science, technology, engineering and maths. As part of British Science Week, the British Science Association alongside NUSTEM want to encourage children to consider pursuing a career in one of these fields.

.....

To demonstrate just how versatile these types of jobs are, they have developed a list of characteristics that people might demonstrate if they would be suitable for a STEM career. Take a look at the list below.

Which of these characteristics best describes you?

collaborative	:	observant
committed	:	open-minded
communicator	:	organised
creative	:	passionate
curious	:	patient
hard-working	:	resilient
imaginative	:	self-motivated
logical	:	tenacious

Contrary to what its name might suggest, British Science Week is an annual celebration of science, technology, engineering and maths (STEM), which spans a total of ten days. The celebration was first held under the title of 'Britain's National Science Week' in 1994.

.....

Since its inaugural event over 25 years ago, British Science Week has become one of the biggest national science celebrations. Each year, over one million people of all ages take part in enjoyable, challenging and engaging activities across the UK.

.....

The event is coordinated by the British Science Association, who, with funding from UKRI (UK Research and Innovation), provide grants to schools and communities. These grants focus specifically on areas where people are less likely to have access to scientific projects. By supporting a variety of events across the nation, it is hoped that an interest in science will be sparked amongst the next generation, which may encourage them to pursue a scientific career.

Annual Theme

Each year, British Science Week generates a specific theme which spans across all of their educational resources. The theme for this year's British Science Week is 'Innovating for the Future'. This theme was chosen because innovation is all around us. It's not just a part of people but a part of animals, nature, materials and everything else in our everyday lives.



What do you think of when you hear the word 'innovation'?

How to Innovate with Colour

As previously discussed, innovation can come in many shapes and forms. Why not try and become an innovator yourself by creating and naming a new paint colour. Simply follow the instructions below to innovate with colour.

.....

You will need:

- a selection of materials;
- a strong bowl or hard surface;
- something to crush your ingredients with (for example, a round pebble or the end of a rolling pin);
- a dust mask;
- a shallow bowl.



You might think of an invention that has changed the world or an adaptation that has helped to make something easier for a person or animal. Think about people that you've spoken to recently or articles that you might have seen in the news; what innovative ideas have been mentioned? Without innovation of any kind happening all the time, our world would look very different today.

1

To make the pigment for your new paint, you will need to firstly gather a selection of materials. You might find something in the kitchen, in a garden or in a local park.

Make sure that you have permission to use the materials before taking them. If you are gathering natural materials, only take things which have already fallen to the ground. Materials with a strong colour, such as petals, berries, plants, soil, sand or clay, are a good start.

2

Choose one material and put it into your strong bowl or on a hard surface. Then - while wearing your dust mask - grind and crush the material. Keep doing this until you have made a paste or a powder.

3

Scrape the paste or powder into your shallow bowl and add water. Imagine that you need to add enough to make it into a glass of squash (but don't drink it!). When you have stirred the mixture, leave it on a flat surface in the sunlight until all of the water has evaporated.

4

When all of the water has evaporated, you will be left with a dry powder. This is your pigment. Add a tiny drop of water to the pigment and try using it as paint on a piece of paper. Repeat the process with other materials to see what other colours you can generate.

Questions

1. In 1994, what was British Science Week known as? Tick one.

- ☐ British Science Week I
- ☐ A Celebration of British Science
- ☐ Britain's National Science Week
- ☐ Britain's Science Week

2. Look at the section **How to Innovate with Colour**.

Number the imperatives from 1-5 to show the order that they appear within the instructions.
The first one has been done for you.

- ☐ choose
- ☐ repeat
- ☒ 1 gather
- ☐ crush
- ☐ scrape

3. Read the first paragraph.

Write down a different word that could be used to replace the word **spans**.

4. According to the text, how many people take part in activities for British Science Week each year?

5. In which section can you find information about why **Innovating for the Future** was chosen?

6. How does the author try to engage the reader in the text? Fully explain your answer.

7. **By supporting a variety of events across the nation, it is hoped that an interest in science will be sparked amongst the next generation...**

Explain how this might spark an interest in science in the next generation.

8. **Contrary to what its name might suggest...**

Explain what is meant by this statement.

9. Do you think that people will take part in British Science Week this year? Fully explain your answer.

10. If you could improve one thing about this text, what would it be? Explain why.

Answers

1. In 1994, what was British Science Week known as? Tick one.

- ☐ British Science Week I
- ☐ A Celebration of British Science
- ☒ **Britain's National Science Week**
- ☐ Britain's Science Week

2. Look at the section **How to Innovate with Colour**.

Number the imperatives from 1-5 to show the order that they appear within the instructions. The first one has been done for you.

- 2** choose
- 5** repeat
- 1** gather
- 3** crush
- 4** scrape

3. Read the first paragraph.

Write down a different word that could be used to replace the word **spans**.

Accept any appropriate synonym, such as: covers; lasts.

4. According to the text, how many people take part in activities for British Science Week each year?

Each year, over one million people take part in activities for British Science Week.

5. In which section can you find information about why **Innovating for the Future** was chosen?

You can find information about why 'Innovating for the Future' was chosen in the section 'Annual Theme'.

6. How does the author try to engage the reader in the text? Fully explain your answer.

Pupils' own responses, such as: The author tries to engage the reader in the text by asking lots of rhetorical questions, such as: 'Which of these characteristics best describes you?' and '... what innovative ideas have been mentioned?' These engage the reader by making them think about the text in more depth.

7. **By supporting a variety of events across the nation, it is hoped that an interest in science will be sparked amongst the next generation...**

Explain how this might spark an interest in science in the next generation.

Pupils' own responses, such as: Experiments and activities are really enjoyable and if more people have access to them, they are more likely to enjoy them and think that they would want to do something similar for a career. Also, the more people that get access to take part in these events, the more people that are likely to have their interest sparked.

8. **Contrary to what its name might suggest...**

Explain what is meant by this statement.

Pupils' own responses, such as: The name British Science Week suggests that the celebration lasts for seven days. It actually lasts for ten days which is not what its name suggests.

9. Do you think that people will take part in British Science Week this year? Fully explain your answer.

Pupils' own responses, such as: I think that people will take part in British Science Week this year because it says that over a million people take part each year and some of those people will take part again this year. If they enjoyed it last year, they would have probably told more people about it so that they can join in this year too.

10. If you could improve one thing about this text, what would it be? Explain why.

Pupils' own responses, such as: If I could improve one thing about this text, I would add in more information about the types of jobs that are available in STEM roles because that is something that I would be interested in finding out more about.