

## Kitchen chemistry

### Introduction

Heston Blumenthal is a famous chef. He is well-known for using scientific ideas in his cooking. He helped to write a book called *Kitchen Chemistry*.

In this activity you will be using your research skills to find out about:

- what chemicals are used in the kitchen
- chemical reactions that happen when food is cooked.

You will be using your literacy skills to take the role of Heston Blumenthal and answer interview questions about chemistry in the kitchen.

### Brief

You are going to produce an interview script. The interview questions are provided but you need to write answers to the questions as though you are Heston Blumenthal.

Your interview answers should:

- clearly explain the importance of chemistry in cooking
- explain why the changes that happen during cooking are chemical changes
- be clear and interesting for an audience who don't know a lot about science.

#### Step 1

Find out what chemicals are used in the kitchen and why cooking involves chemical changes.

#### Step 2

Find out about some of Heston Blumenthal's unusual recipes.

#### Step 3 (extension)

Find some more detailed information about chemical changes in cooking.

#### Step 4

Use the boxes on the writing frame to plan your interview answers.

#### Step 5

Now write the whole interview script.

**Sources****Heston's giant ice cream**

An article on Heston Blumenthal's giant ice cream:

<http://www.dailymail.co.uk/news/article-2167197/Heston-Blumenthal-unveils-worlds-largest-ice-cream.html>

**Chemistry in the kitchen**

Videos explaining why everything in the kitchen involves chemistry:

<http://www.rsc.org/learn-chemistry/resource/res00000850/kitchen-chemistry?cmpid=CMPO0000966>

<https://www.leaf.tv/articles/examples-of-chemical-reactions-in-the-kitchen/>

**Chemical changes in cooking**

Some good examples of chemical changes in cooking:

<https://www.bbc.co.uk/bitesize/clips/zskfgk7>

**Royal Society of Chemistry on Heston Blumenthal**

An article describing some of Heston Blumenthal's cooking with chemistry:

<http://www.rsc.org/diversity/175-faces/all-faces/heston-blumenthal/>

**Examples of chemical reactions in the kitchen (extension)**

More detailed explanation of some chemical changes in cooking:

[http://www.ehow.co.uk/list\\_6457215\\_examples-chemical-reactions-kitchen.html#pg=6](http://www.ehow.co.uk/list_6457215_examples-chemical-reactions-kitchen.html#pg=6)

## Writing frame

You will be using your literacy skills to take the role of Heston Blumenthal and answer interview questions about chemistry in the kitchen.

Answer the questions using the guidelines below.

**Interviewer:** Why do people say that cooking is like chemistry?

**Heston Blumenthal:**  
(give an answer, with examples, that describes all the substances in the kitchen as chemicals)

**Interviewer:** How do we know that chemical changes happen during cooking?

**Heston Blumenthal:**  
(explain how we know chemical changes happen and give an example)

**Interviewer:** Can you give me another example of a chemical change in cooking?

**Heston Blumenthal:**  
(describe another example of a chemical change in cooking)

**Interviewer:** What is the largest food item you have ever prepared?

**Heston Blumenthal:**  
(describe the giant ice cream)

**Interviewer:** What is your favourite kitchen-chemistry recipe?

**Heston Blumenthal:**  
(describe one of Heston's special chemical recipes)

**Interviewer:** Do you think chefs should also be chemists?

**Heston Blumenthal:**  
(Give your own opinion here. Does Heston describe himself as a chef or chemist? Is it helpful for a chef to understand chemistry? Can a good chemist/chef make the food taste better?)

## Your work

You have prepared an interview script as though you were Heston Blumenthal.

Look at the questions below and think about whether you have met the brief.

- Have you explained, with examples, that everything in the kitchen is a chemical?
- Have you included a clear explanation of why cooking involves chemical changes?
- Have you given some examples of chemical changes in cooking?
- Have you described Heston Blumenthal's giant ice cream?
- Have you described an interesting meal prepared by Heston Blumenthal using chemistry?

Have you summarised by giving your own opinion on whether a chef needs to understand chemistry?