**Food Science Article Questions**

Directions: Read the specified article first. Then answer the questions that correspond to the article. I will not be with you to locate every answer. Therefore, you will need to use your good reading skills to locate the answers. If you get stuck, go back and read the article again. All questions are in order. So go back to your last answer and start reading the packet again until you find the answer. You will be graded on both your answers and your independent reading skills. Remember that you can summarize the answer - do not write a book!

Below you will see the title of the article followed by a link. If your parent selected the online version, simply follow the link to the article and follow the above directions in answering the questions. If your parents selected the paper/pencil option, you will have a printed copy of each article.

**It is important to carefully label your assignments that you turn in. Please submit your name, title of the article and your answers.**

**Chemistry of Foods Week 1**

Cooking Fish <https://www.finecooking.com/article/cooking-fish>

1. Describe what you need to know to cook fish at its best.
2. Describe whether you should buy fresh or frozen fish?
3. Is it better to cook fish whole or filleted? Skin on or skin off?
4. What cooking methods are best for lean and fatty fish?
5. Do farmed and wild fish cook differently?
6. What’s the white substance that sometimes seeps from cooked fish?
7. How do I get crisp skin on my fish?

The Science of Eggs <https://www.finecooking.com/article/the-science-of-eggs>

1. What happens when eggs cook?
2. How do you control the texture of eggs with heat and stirring?
3. Describe the added variable of stirring scrambled eggs.
4. What is the secret to good omelets?
5. Why should you NOT boil “hard-boiled” eggs?
6. Describe the cold-start method of boiled eggs.
7. Describe the best way to poach eggs.
8. List some tips for peeling cooked eggs.

The Science of Melting Cheese <https://www.finecooking.com/article/the-science-of-melting-cheese>

1. What happens when cheese melts?
2. Which cheeses are good melters, and why?
3. What about the age of a cheese affects how it melts?
4. What role does factors like fat content and acidity play in how a cheese melts?
5. List the “Dos and Don’ts for Smooth Melted Cheese”
6. What’s Process Cheese?

The Science of Baking with Yeast <https://www.finecooking.com/article/the-science-of-baking-with-yeast-2>

##### What exactly is yeast?

1. List and describe the three different types of yeast.
2. How does yeast make bread rise?

##### What can go wrong when bread doesn't rise?

##### How much yeast do you really need?

The Science of Baking Cookies <https://www.finecooking.com/article/the-science-of-baking-cookies-2>

##### Describe the importance of each of the major ingredients in baking including flour, sugar, fats, eggs, leavens and salt.

##### Beyond Ingredients, a number of other key elements can affect the way your cookies bake. Describe how the following affects cookies:

* 1. Mixing
	2. Shaping
	3. Spacing
	4. Time and temperature
	5. Equipment
	6. Oven position
	7. Cooling

**Chemistry of Foods Week 2**

The Science of Cooking Potatoes <https://www.finecooking.com/article/the-science-of-cooking-potatoes-2>

#### What exactly is a potato?

#### Where is the best place to store potatoes?

#### How to make spuds that aren’t duds:

* 1. For the crispiest french fries, you should:
	2. For better browning on roasted potatoes, you should :
	3. To retain a potato’s shape in salads or long-cooked stews, .you should :
	4. To prevent gluey mashed potatoes, you should:
	5. For more nutrients and flavor, you should:

The Science of Ice Cream <https://www.finecooking.com/article/the-science-of-ice-cream>

1. How is ice cream made?
2. What gives ice cream its creamy texture?
3. What makes creamy ice cream turn grainy?
4. What is brain freeze?

Flattened Cookies <https://www.finecooking.com/article/flattened-cookies>

1. How do you keep cookies from going flat?

How are Baby Carrots Made <https://www.finecooking.com/article/how-baby-carrots-are-made>

1. Why do regular carrots have more “carrot” taste than baby carrots?

Muffin/Cupcake Taxonomy <https://www.finecooking.com/article/muffincupcake-taxonomy>

1. When does a muffin become a cupcake? Or vice versa?

**Chemistry of Foods Week 3**

Melted Butter in Baked Goods <https://www.finecooking.com/article/melted-butter-in-baked-goods>

1. Melted vs. softened butter – why does it matter in baked goods?

Roasting Meat <https://www.finecooking.com/article/roasting-meat>

1. Why do so many roasting recipes say to let the meat stand at room temperature for up to an hour before cooking?
2. Should I roast meat on or off the bone?
3. Is it better to roast meat at a high heat quickly or at a low heat slowly?
4. Why should meat rest after roasting?

The Comfort of Soup <https://www.finecooking.com/article/the-comfort-of-soup>

1. Why is soup so delicious and comforting when you’re sick?

Shortening versus Butter in Cookies <https://www.finecooking.com/article/shortening-vs-butter-in-cookies>

1. Why do people use shortening in cookies instead of butter?

The Science of Cooking Rice <https://www.finecooking.com/article/the-science-of-cooking-rice>

1. Why isn’t there a one-size-fits-all cooking method for rice?
2. Why do some recipes call for soaking and/or rinsing rice and others don’t?
3. Why do you have to make risotto with Arborio rice, and why does it have to be stirred?

**Chemistry of Foods Week 4**

One Egg at a Time <https://www.finecooking.com/article/one-egg-at-a-time>

1. Why do recipes say to add flour slowly or eggs one at a time?

The Application of Salt <https://www.finecooking.com/article/the-application-of-salt>

1. Does using salt at the beginning of cooking result in the need to use less salt if saved for the end of cooking?

The Purpose of Sifting <https://www.finecooking.com/article/the-purpose-of-sifting>

1. What is the purpose of sifting flour when making a cake?

The Cake Bump <https://www.finecooking.com/article/the-cake-bump>

1. Why do cakes rise more in the center and what can be done to fix the problem?

Baking Soda and Baking Powder <https://www.finecooking.com/article/baking-soda-and-baking-powder>

1. What is the difference between baking soda and baking powder?

**This sheet belongs to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Chemistry of Foods Check Sheet**

The purpose of this sheet is to help you see how you are progressing with your assignments as well as a way for me to keep up with your grades for the packets. You will place a check mark in the column labeled completed. I will fill in the column that says grade. You must turn in this sheet.

|  |  |  |  |
| --- | --- | --- | --- |
| Week # | Item | Completed | Grade |
| 1 | Read the 5 Food Science Articles |  |  |
|  | Answer the Food Science Article Questions |  |  |
|  | Complete 1 of the Chemistry of Foods Projects |  |  |
|  | Complete 1 Weekly Cooking Assignment  |  |  |
| 2 | Read the 5 Food Science Articles |  |  |
|  | Answer the Food Science Article Questions |  |  |
|  | Complete 1 of the Chemistry of Foods Projects |  |  |
|  | Complete 1 Weekly Cooking Assignment  |  |  |
| 3 | Read the 5 Food Science Articles |  |  |
|  | Answer the Food Science Article Questions |  |  |
|  | Complete 1 of the Chemistry of Foods Projects |  |  |
|  | Complete 1 Weekly Cooking Assignment  |  |  |
| 4 | Read the 5 Food Science Articles |  |  |
|  | Answer the Food Science Article Questions |  |  |
|  | Complete 1 of the Chemistry of Foods Projects |  |  |
|  | Complete 1 Weekly Cooking Assignment  |  |  |
|  |  |  |  |
| Bonus Points |  |  |  |