

## **Exciting Science.**

Science can be so exciting. I was listening to the BBC World Service the other day while I was driving in my car. Their series called Science in Action, which, by the way, comes out in podcast form, is a lively presentation of the most up-to-date science innovations(1). I don't always listen to it, but the other day I was on my way to pick up the kids from school, when I turned on the radio just at the right time. By the time I reached the Middle School, I was bursting to(2) tell my boys the latest scientific news. They were impressed. Since then, I have told everyone I have been around. Well, you shouldn't keep good news to yourself, should you? There were two main points that I managed to catch(3). The first discovery was made by an Australian scientist who has been involved in genetically engineering plants. He and his team have successfully managed to grow and harvest from a salt tolerant(4) wheat plant. It can grow in salty soil, which up until now has been impossible for many kinds of grains. Changing its genetic makeup allows the plant to keep the salt at its roots, so it doesn't get into the plant and affect it at all. Just think what that could mean for global production. That kind of wheat could be grown in many more areas, and perhaps even be watered with sea water! The next discovery is also something to do with salt. An Irish scientist is finding a way to make the leftovers(5) of desalinization(6) profitable and practical. After salt water is processed so it can be used for drinking water, there is a super salty solution left over. He has found that if you add naturally occurring (7)bacteria, plus natural food for them, they begin to give off an electrical charge. When this happens, particles of metals from the salty water stick to the bacteria. The more they eat, the more metal sticks to them, until they get so heavy that they sink(8) to the bottom of the container, and can be easily separated. Metals such as Magnesium which are expensive and really useful, can be gathered in this way. By doing this, scientists will be able to use the waste product of desalinization, and offset(9) the cost of producing clean water by harvesting metals. I was blown away by all of this(10). It seems that, in spite of what the general media tells us, science may be innovating just in time to keep up with our global needs.

1. Innovation means a new idea, method, or device. It is often used in the fields of science and technology. We also use it in its verb form 'to innovate'.

a. These scientific innovations will improve our daily lives.

b. You have to be creative and have a vision to innovate.

2. To be bursting to tell someone something. This means that you are so excited that you can hardly wait to spread the news.

3. Catch is sometimes used when we talk about hearing the *remainder* of a conversation, perhaps the last part, or something that is hard to hear.

a. Did you catch what he said at the end? I'm not sure if he said that the bank is to the right or to the left.

b. I'm so glad that I caught the news summary when I turned the tv on; I really want to keep up with the daily events.

4. Tolerant means that you put up with, you cope with, you can manage something. You can be tolerant of people, conditions, or elements. We use the word tolerant a lot when we talk about peoples ability to digest food.

a. She is wheat tolerant, but lactose intolerant. She has to be careful with her diet.

b. I planted drought tolerant plants in the area of my garden that I don't water.

c. They are so intolerant of people who are different from themselves.

5. Leftovers are one of my favorite things. They are different foods that are left over, or have not been eaten by the end of a meal. You can also have leftovers of a process, similar to by-products.
- a. Thanksgiving leftovers are yummy. There are usually enough to feed us for a whole day.
6. Desalinization, as you probably know, is the process of getting clean, drinking water from sea water. As it's a long word, let's repeat it a few times.
7. Naturally occurring is often used in science or natural history arenas.
- a. There are naturally occurring minerals in that water.
  - b. The naturally occurring process of photosynthesis keeps our planet alive.
8. To sink is to fall down in water, to go down, to do the opposite of float. It is the same word and pronunciation as the kitchen and bathroom sink. The verb has an irregular preterite.
- a. The ship crashed on the rocks and sank out of sight.
  - b. When I woke up at the end of the math exam, I had a terrible sinking feeling when I realized that I had slept through the whole thing.
9. To offset is to make up for, or to counteract.
- a. The company's profits this month offset its losses from last month.
  - b. Planting hundreds of trees on the mountainside will offset the risk of erosion.
10. To be blown away by something means to be completely surprised. It can be used negatively and positively.
- a. When he opened his mouth and started to sing, I was blown away.
  - b. I was shocked at his ignorant comments; in fact, I was blown away by them.