

## Worksheet 1.1 – Stimuli and impulses

We need our nervous system for every process inside our body and for everything we want to do, like walking and it is necessary to keep our body in good shape. Nerve cells sent signals to our brain and to all the parts of our body. We use sense organs to perceive our surroundings which gives us the possibility to adapt. For example, you can put on a sweater when you're feeling cold.

When doing this assignment, you will find examples which show you that our nervous system is really important. We will take a look at a couple of these examples, but don't forget that we need our nerve cells every moment of the day!

### The goals of this assignment

- You will learn about the difference between stimuli and impulses
- You will learn to recognize stimuli and impulses
- You will learn about a reflex action and a reflex arc

### An afternoon in the park

1. It was a beautiful day. The sun was shining and the birds were singing. I decided to go to the
2. park, but first I called a couple of friends to ask if they wanted to join me. About an hour
3. later we reached the park together. I walked in the direction of a nice spot on the grass, I
4. stooped and I touched the grass to see if it was still wet. It was dry. "Guys, we can sit over
5. here!" I said to the others and we sat down. I sat down first. My best friend suddenly stood
6. on my left hand by mistake. I pulled away my hand very quickly. "Ah! Watch out where you
7. put your feet!" I shouted. My hand was still aching. My best friend was a bit startled and
8. apologized for what she did.
9. I laid myself down and closed my eyes. I felt the sun on my face, it was almost summer. I
10. was getting warm so I took off my jacket and closed my eyes again. In the background I
11. heard some kids playing and I heard my friends talking to each other. My stomach was also
12. telling me something: it's time for something delicious! We were all a bit hungry from the
13. long day at school.

1. What's the difference between a stimulus and an impulse? Explain by giving a definition for both using the terms 'sense organ', 'nervous system' and 'brain'.

2. Underline all stimuli in the story. List a couple of these stimuli below. Also write down the line number of the sentence in which you have found the stimulus.

Line number	Stimulus

3. Underline all impulses in the story (with a different colour). List a couple of these stimuli below and write down where they start and where they end. Also write down the line number of the sentence in which you have found the stimulus.

Line number	Impulse
	From _____ to _____

4. Which conclusion can you draw about impulses after doing question 3?
5. List all sense organs and match these sense organs with the stimulus type they can perceive.

Line number	Sense organ	Stimulus