

		 VRIJE ASO.SCHOOL
Mars, here we come ...		
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EXPERIMENT: BIOLOGY – taste		

RESEARCH QUESTION

In space, astronauts eat more spicy food than they do on earth because they taste less in space than on earth. How come?

HYPOTHESIS (Indicate the correct answer.)

In space, cause of the lack of gravity, there's a fluid shift in the body. The blood and the other fluids in the body are spread less/more equally. On earth, thanks to gravity, there's less/more blood in the legs.

Because in space there's less/more blood in the head, their faces are swollen and their noses are blocked. This feels like having a cold.

After a few days their face is less swollen because the body adapts to life in space.

On long terms the food must be spicier because in the spacestation there are a lot of smells (body odor, machines...) and the smell of the food isn't strong enough to predominate all those smells, so the food tastes less/more.

OPERATION OF THE EXPERIMENT

- 1 a) Put on a blindfold and a nose clip. Another pupil will give you something to eat. Try to guess what you're eating. Don't swallow it!
b) Now remove the nose clip and try to guess again.
- 2 Put on a blindfold. Another pupil will give you something to eat. Try to guess what you're eating while you're smelling an onion.

THE RESULTS / OBSERVATIONS

Experiment 1

a) In the first case I didn't guess what I'm eating. In fact I said that was a celery, while it was a carrot.

b) In the second case I guessed what I was eating: it was a cracker.

Experiment 2

In this case, although I guessed that I was eating was a piece of chocolate, the smell of the onion change the flavour of the foods because of it has a strong aroma.

CONCLUSION

Watch the following clip: <https://www.youtube.com/watch?v=xFgS9alvV1w>

Combine this information with the results of the experiment.

In space, astronauts eat more spicy food than they do on earth because they taste less in space than on earth. How come?

In the space the redistribution of fluids is different from the earth, in fact it can cause a nasal congestion and modify astronaut's taste. In orbit the taste is reduced because of the fluids in the body. They aren't attracted to the bottom and push on the nasal mucosa weakening the smell and for this reason the smell, that is linked to the taste, change the flavour of foods.

REFLECTION

Did you expect this answer?

We didn't expect this answer because we didn't know that in the space the taste is reduced because of the fluids in the body.

Compare your results with the results in the other school. Did you come to the same conclusion?

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