

		
<h2>See you in space</h2>		
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SCHOOL / CLASS: 3 WET a & b	MARKS: /...	
<h3>EXPERIMENT: BIOLOGY – circulation of the blood and the optical nerve</h3>		

RESEARCH QUESTION

Why do astronauts often see flashes of light during their time in space?

HYPOTHESIS (Indicate the correct answer.)

In space, because 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 our legs.

Because in space there's ~~less~~/more blood in the head, there's a pressure on the optical nerve. This causes impulses that go straight to the brain.

OPERATION OF THE EXPERIMENT

Measure the periphery of your neck and ankles while you are standing up straight.

Do the same while you are lying down.

If possible you can measure the periphery while standing upside down on your hands. Be careful☺

THE RESULTS / OBSERVATIONS

	Standing up	Lying down	Upside down (if possible)
Periphery neck (cm)	37 cm	38 cm	39 cm
Periphery ankles (cm)	23 cm	22 cm	22 cm

CONCLUSION

Watch the following clips:

<https://www.youtube.com/watch?v=MTgLO0D9Gew>

<https://www.youtube.com/watch?v=Lur4W5ZSqj8>

Combine this information with the results of the experiment.

Why do astronauts often see flashes of light during their time in space?

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

Because in space there's more blood in the head, there's a pressure on the optical nerve. This causes impulses that go straight to the brain.

REFLECTION

Did you expect this answer?

No, we didn't now that your blood spreads in the space and that we become bigger when we are lying down.

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

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