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Ready-to-Use English Lessons by Sean Banville

Level 5 – 7th May, 2019

Breakthrough in bio-printing of new body organs

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https://breakingnewsenglish.com/1905/190507-bioprinting-5.html

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Please try Levels 4 and 6. They are (a little) harder.

THE READING

From https://breakingnewsenglish.com/1905/190507-bioprinting-5.html

Scientists have advanced the possibility of reproducing the body's organs via the use of 3D printing. Scientists could replace organs by using a new bio-printing technique. This allows scientists to create networks of thin tubes, like those used in our body for the flow of blood and air. These are called vascular networks. A bio-engineering professor explained why the breakthrough was important. He said: "One of the biggest roadblocks to generating functional tissue replacements has been our inability to print the complex [vascular networks] that can supply nutrients to densely populated tissues."

Another professor wrote about the difficulties scientists had in recreating vascular networks. She said: "Tissue engineering has struggled with this for a generation." She thinks the breakthrough will allow medicine to change in the future. She asked: "If we can print tissues that look and now even breathe more like the healthy tissues in our bodies, will they also then functionally behave more like those tissues?" She added that how well bio-printed tissue functions will affect how successful it will be as a therapy. Scientists hope this method will help millions waiting for organ transplants.

Sources: https://www.**digitaltrends.com**/cool-tech/bioprinting-vascular-networks/
https://www.**popularmechanics.com**/science/health/a27355578/3d-print-lungs/
https://www.**independent.co.uk**/news/health/organ-3d-printing-yellow-food-dye-bioprinting-a8897226.html

PHRASE MATCHING

From https://breakingnewsenglish.com/1905/190507-bioprinting-5.html

PARAGRAPH ONE:

1. reproducing the body's	a. technique
2. the use	b. roadblocks
3. using a new bio-printing	c. air
4. create networks of thin	d. important
5. the flow of blood and	e. organs
6. A bio-engineering	f. tubes
7. why the breakthrough was	g. professor
8. One of the biggest	h. of 3D printing

PARAGRAPH TWO:

1. the difficulties	a. help millions
2. struggled with this for	b. tissue
3. breathe	c. our bodies
4. healthy tissues in	d. organ transplants
5. bio-printed	e. more
6. how successful it will be	f. a generation
7. this method will	g. as a therapy
8. waiting for	h. scientists had

LISTEN AND FILL IN THE GAPS

From https://breakingnewsenglish.com/1905/190507-bioprinting-5.html

Scientists (1) _____ possibility of reproducing the body's organs (2) _____ of 3D printing. Scientists could replace organs by (3) _____ bio-printing technique. This allows scientists to create networks of thin tubes, like those used in our body for (4) _____ blood and air. These are called vascular networks. A bio-engineering professor explained why the breakthrough was important. He said: "One of (5) _____ to generating functional tissue replacements has been our inability to print the complex [vascular networks] that can supply (6) _____ populated tissues."

Another professor wrote (7) _____ scientists had in recreating vascular networks. She said: "Tissue engineering has struggled with this (8) _____." She thinks the breakthrough will allow medicine to change in the future. She asked: "If we (9) _____ that look and now even breathe more like the healthy tissues (10) _____, will they also then functionally behave more like those tissues?" She added that how well bio-printed tissue functions will affect how successful it will be (11) _____. Scientists hope this method will help millions (12) _____ transplants.

PUT A SLASH (/)WHERE THE SPACES ARE

From https://breakingnewsenglish.com/1905/190507-bioprinting-5.html

Scientistshaveadvancedthepossibilityofreproducingthebody'sorgan
sviatheuseof3Dprinting.Scientistscouldreplaceorgansbyusinganew
bio-printingtechnique.Thisallowsscientiststocreatenetworksofthint
ubes,likethoseusedinourbodyfortheflowofbloodandair.Thesearecall
edvascularnetworks.Abio-engineeringprofessorexplainedwhythebr
eakthroughwasimportant.Hesaid:"Oneofthebiggestroadblockstoge
neratingfunctionaltissuereplacementshasbeenourinabilitytoprintth
ecomplex[vascularnetworks]thatcansupplynutrientstodenselypopu
latedtissues."Anotherprofessorwroteaboutthedifficultiesscientistsh
adinrecreatingvascularnetworks.Shesaid:"Tissueengineeringhasstr
uggledwiththisforageneration."Shethinksthebreakthroughwillallow
medicinetochangeinthefuture.Sheasked:"Ifwecanprinttissuesthatl
ookandnowevenbreathemorelikethehealthytissuesinourbodies,willt
heyalsothenfunctionallybehavemorelikethosetissues?"Sheaddedth
athowwellbio-printedtissuefunctionswillaffecthowsuccessfulitwillb
easatherapy.Scientistshopethismethodwillhelpmillionswaitingforor
gantransplants.

BIO-PRINTING SURVEY

From https://breakingnewsenglish.com/1905/190507-bioprinting-4.html

Write five GOOD questions about bio-printing in the table. Do this in pairs. Each student must write the questions on his / her own paper.
When you have finished, interview other students. Write down their answers.

	STUDENT 1 _____	STUDENT 2 _____	STUDENT 3 _____
Q.1.			
Q.2.			
Q.3.			
Q.4.			
Q.5.			

- Now return to your original partner and share and talk about what you found out. Change partners often.
- Make mini-presentations to other groups on your findings.

WRITE QUESTIONS & ASK YOUR PARTNER(S)

Student A: Do not show these to your speaking partner(s).

a) _____

b) _____

c) _____

d) _____

e) _____

f) _____

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WRITE QUESTIONS & ASK YOUR PARTNER(S)

Student B: Do not show these to your speaking partner(s).

a) _____

b) _____

c) _____

d) _____

e) _____

f) _____

WRITING

From https://breakingnewsenglish.com/1905/190507-bioprinting-5.html

Write about **bio-printing** for 10 minutes. Read and talk about your partner's paper.