

# Breaking News English.com

Ready-to-Use English Lessons by Sean Banville

**"1,000 IDEAS & ACTIVITIES  
FOR LANGUAGE TEACHERS"**

[breakingnewsenglish.com/book.html](http://breakingnewsenglish.com/book.html)

**Thousands more free lessons  
from Sean's other websites**

[www.freeeslmaterials.com/sean\\_banville\\_lessons.html](http://www.freeeslmaterials.com/sean_banville_lessons.html)

**Level 6 – 7th May, 2019**

## Breakthrough in bio-printing of new body organs

**FREE online quizzes, mp3 listening and more for this lesson here:**

<https://breakingnewsenglish.com/1905/190507-bioprinting.html>

### Contents

The Article	2	Discussion (Student-Created Qs)	15
Warm-Ups	3	Language Work (Cloze)	16
Vocabulary	4	Spelling	17
Before Reading / Listening	5	Put The Text Back Together	18
Gap Fill	6	Put The Words In The Right Order	19
Match The Sentences And Listen	7	Circle The Correct Word	20
Listening Gap Fill	8	Insert The Vowels (a, e, i, o, u)	21
Comprehension Questions	9	Punctuate The Text And Add Capitals	22
Multiple Choice - Quiz	10	Put A Slash ( / ) Where The Spaces Are	23
Role Play	11	Free Writing	24
After Reading / Listening	12	Academic Writing	25
Student Survey	13	Homework	26
Discussion (20 Questions)	14	Answers	27

**Please try Levels 4 and 5 (they are easier).**

**Twitter**



[twitter.com/SeanBanville](https://twitter.com/SeanBanville)

**Facebook**



[www.facebook.com/pages/BreakingNewsEnglish/155625444452176](https://www.facebook.com/pages/BreakingNewsEnglish/155625444452176)

**Google +**



<https://plus.google.com/+SeanBanville>

# THE ARTICLE

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

Scientists say they have greatly advanced the possibility of being able to reproduce the body's organs via the use of 3D printing. Replacement organs could be created using a new technique for bio-printing organic tissue. This allows scientists to create networks of thin tubes and vessels, like those used in our body for the flow of blood and air. These are called vascular networks. Bio-engineering professor Jordan Miller explained why the breakthrough was so 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."

Professor Kelly Stevens of the University of Washington wrote about the difficulties scientists had in recreating a vascular network. She said: "Tissue engineering has struggled with this for a generation." She believes the new breakthrough will allow medical practices 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?" Professor Stevens said "This is an important question, because how well a bio-printed tissue functions will affect how successful it will be as a therapy." Scientists hope this method will help millions of people waiting for an organ transplant.

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>

# WARM-UPS

**1. BIO-PRINTING:** Students walk around the class and talk to other students about bio-printing. Change partners often and share your findings.

**2. CHAT:** In pairs / groups, talk about these topics or words from the article. What will the article say about them? What can you say about these words and your life?

possibility / organs / 3D printing / technique / blood / breakthrough / roadblock / print difficulties / network / generation / medical / breathe / tissue / successful / therapy

Have a chat about the topics you liked. Change topics and partners frequently.

**3. ORGAN CREATION:** Students A **strongly** believe organ creation is a good thing; Students B **strongly** believe the opposite. Change partners again and talk about your conversations.

**4. 3D PRINTING:** What are the advantages and disadvantages of 3D printing these organs? Complete this table with your partner(s). Change partners often and share what you wrote.

	Advantages	Disadvantages
Eyes		
Lungs		
Heart		
Skin		
Liver		
Brain		

**5. TISSUE:** Spend one minute writing down all of the different words you associate with the word "tissue". Share your words with your partner(s) and talk about them. Together, put the words into different categories.

**6. SCIENTIFIC BREAKTHROUGHS:** Rank these with your partner. Put the biggest scientific breakthroughs at the top. Change partners often and share your rankings.

- the wheel
- water purification
- antibiotics
- the Internet
- air transport
- electricity
- sewage systems
- 3D printing

# VOCABULARY MATCHING

## Paragraph 1

- |              |   |
|--------------|---|
| 1. advanced  | a. A substance that provides nourishment essential for growth and the maintenance of life.                            |
| 2. reproduce | b. A part of an animal or human that is self-contained and has a specific vital function, such as the heart or liver. |
| 3. organ     | c. A tube or canal holding or transporting blood or other fluids.   |
| 4. tissue    | d. Made or caused to make progress.   |
| 5. vessel    | e. Move along or out steadily and continuously in a current or stream.  |
| 6. flow      | f. Creates something very similar to something else.  |
| 7. nutrient  | g. Any of the types of material of which animals or plants are made.  |

## Paragraph 2

- |                  |   |
|------------------|---|
| 8. struggled     | h. Act or conduct oneself in a specified way, especially toward others.             |
| 9. generation    | i. Work or operate in a proper or particular way.                                   |
| 10. breakthrough | j. A surgical operation in which an organ or tissue is taken out and replaced.      |
| 11. behave       | k. All of the people born and living at about the same time, regarded collectively. |
| 12. function     | l. Treatment intended to relieve or heal a disorder.                                |
| 13. therapy      | m. A sudden, dramatic, and important discovery or development.                      |
| 14. transplant   | n. Striving to achieve or attain something in the face of difficulty or resistance. |

# BEFORE READING / LISTENING

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

**1. TRUE / FALSE:** Read the headline. Guess if a-h below are true (T) or false (F).

- a. Scientists have perfected the use of 3D printing to recreate organs. **T / F**
- b. Scientists won't be able to make vessels for transporting blood. **T / F**
- c. A professor called Jordan Miller said the breakthrough wasn't important. **T / F**
- d. The inability to supply nutrients to tissues was a big roadblock. **T / F**
- e. A professor said scientists had struggled for many generations. **T / F**
- f. A professor believes the breakthrough will change medicine. **T / F**
- g. A professor said the breakthrough could be a new form of therapy. **T / F**
- h. Scientists hope the 3D printing will help organ transplant patients. **T / F**

## 2. SYNONYM MATCH:

Match the following synonyms. The words in **bold** are from the news article.

- |                        |                  |
|------------------------|------------------|
| 1. <b>greatly</b>      | a. movement      |
| 2. <b>reproduce</b>    | b. wrestled      |
| 3. <b>via</b>          | c. procedure     |
| 4. <b>flow</b>         | d. through       |
| 5. <b>densely</b>      | e. development   |
| 6. <b>difficulties</b> | f. considerably  |
| 7. <b>struggled</b>    | g. issue         |
| 8. <b>breakthrough</b> | h. complications |
| 9. <b>question</b>     | i. duplicate     |
| 10. <b>method</b>      | j. tightly       |

**3. PHRASE MATCH:** (Sometimes more than one choice is possible.)

- |  |                             |
|--|-----------------------------|
| 1. Scientists say they have greatly        | a. scientists had           |
| 2. reproduce the body's organs via the     | b. was so important         |
| 3. the flow                                | c. nutrients                |
| 4. Miller explained why the breakthrough   | d. healthy tissues          |
| 5. supply                                  | e. for an organ transplant  |
| 6. wrote about the difficulties            | f. be as a therapy          |
| 7. the new breakthrough will allow medical | g. advanced the possibility |
| 8. breathe more like the                   | h. practices to change      |
| 9. affect how successful it will           | i. use of 3D printing       |
| 10. millions of people waiting             | j. of blood and air         |

# GAP FILL

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

Scientists say they have (1) \_\_\_\_\_ advanced the possibility of being able to reproduce the body's organs (2) \_\_\_\_\_ the use of 3D printing. Replacement organs could be created using a new technique for bio-printing (3) \_\_\_\_\_ tissue. This allows scientists to create networks of thin tubes and vessels, like those used in our body for the (4) \_\_\_\_\_ of blood and air. These are called vascular networks. Bio-engineering professor Jordan Miller explained why the (5) \_\_\_\_\_ was so important. He said: "One of the biggest roadblocks to (6) \_\_\_\_\_ functional tissue replacements has been our inability to print the (7) \_\_\_\_\_ [vascular networks] that can supply nutrients to densely populated (8) \_\_\_\_\_."

*greatly*  
*breakthrough*  
*complex*  
*flow*  
*tissues*  
*via*  
*organic*  
*generating*

Professor Kelly Stevens of the University of Washington wrote about the (9) \_\_\_\_\_ scientists had in recreating a vascular network. She said: "Tissue engineering has struggled with this for a (10) \_\_\_\_\_." She believes the new breakthrough will allow medical (11) \_\_\_\_\_ to change in the future. She asked: "If we can print tissues that look and now even (12) \_\_\_\_\_ more like the healthy tissues in our bodies, will they also then functionally (13) \_\_\_\_\_ more like those tissues?" Professor Stevens said "This is an important (14) \_\_\_\_\_, because how well a bio-printed tissue functions will affect how (15) \_\_\_\_\_ it will be as a therapy." Scientists hope this method will help millions of people waiting for an organ (16) \_\_\_\_\_.

*question*  
*practices*  
*difficulties*  
*transplant*  
*breathe*  
*successful*  
*generation*  
*behave*

# LISTENING – Guess the answers. Listen to check.

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

- 1) being able to reproduce the body's organs \_\_\_\_\_ of 3D
  - a. vile the use
  - b. viva the use
  - c. vie the use
  - d. via the use
- 2) organs could be created using a new technique for bio-printing \_\_\_\_\_
  - a. organ nick tissue
  - b. organically fissure
  - c. organic tissue
  - d. organic fissure
- 3) This allows scientists to create networks of thin \_\_\_\_\_
  - a. tube and vessels
  - b. tubes and vessels
  - c. tube and vessel
  - d. tubes and vessel
- 4) One of the biggest roadblocks to generating \_\_\_\_\_ replacements
  - a. function all tissue
  - b. functional tissue
  - c. function ill tissue
  - d. functioning tissue
- 5) the complex vascular networks that can supply nutrients to \_\_\_\_\_ tissues
  - a. densely populated
  - b. densely populate it
  - c. dense populates it
  - d. densely population
- 6) wrote about the difficulties scientists had in recreating a \_\_\_\_\_
  - a. vascular netted work
  - b. vascular net works
  - c. vascular network
  - d. vascular networks
- 7) She believes the new breakthrough will allow \_\_\_\_\_
  - a. medical practices
  - b. medically practice
  - c. medical practicals
  - d. medi-call practice its
- 8) If we can print tissues that look and now even \_\_\_\_\_
  - a. breathes more
  - b. breath more
  - c. breathe more
  - d. breathing more
- 9) how well a bio-printed tissue functions will affect how successful it will be \_\_\_\_\_
  - a. as a therapeutic
  - b. as a therapist
  - c. as a therapy
  - d. as a therapeutically
- 10) Scientists hope this method will help millions of people waiting \_\_\_\_\_ transplant
  - a. for an organ
  - b. afore an organ
  - c. before an organ
  - d. four an organ

# LISTENING – Listen and fill in the gaps

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

Scientists say they have (1) \_\_\_\_\_ possibility of being able to reproduce the body's (2) \_\_\_\_\_ use of 3D printing. Replacement organs could be created using a new technique for bio-printing organic tissue. This allows scientists to create networks (3) \_\_\_\_\_ and vessels, like those used in our body for the flow of blood and air. These are (4) \_\_\_\_\_. Bio-engineering professor Jordan Miller explained why the breakthrough was so important. He said: "One of the (5) \_\_\_\_\_ generating functional tissue replacements has been our inability to print the complex [vascular networks] that can (6) \_\_\_\_\_ densely populated tissues."

Professor Kelly Stevens of the University of Washington wrote about the difficulties scientists (7) \_\_\_\_\_ a vascular network. She said: "Tissue engineering has (8) \_\_\_\_\_ for a generation." She believes the new breakthrough will (9) \_\_\_\_\_ to change in the future. She asked: "If we can print tissues that look and now even breathe more like the (10) \_\_\_\_\_ our bodies, will they also then functionally behave more like those tissues?" Professor Stevens said "This is (11) \_\_\_\_\_, because how well a bio-printed tissue functions will affect how successful it will be as a therapy." Scientists hope this method will help (12) \_\_\_\_\_ waiting for an organ transplant.



# COMPREHENSION QUESTIONS

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

1. Who said bio-printing could be used to reproduce organs?
2. What would bio-printing create networks of?
3. What are the networks called that scientists can now bio-print?
4. Who is Jordan Miller?
5. What did a professor say could be supplied to densely populated tissues?
6. Where does professor Kelly Stevens work?
7. For how long did Kelly Stevens say tissue engineering had struggled?
8. What did Ms Stevens say the new breakthrough would change?
9. What will affect the success of the new therapy?
10. Who do scientists hope this breakthrough will help?

# MULTIPLE CHOICE - QUIZ

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

- 1) Who said bio-printing could be used to reproduce organs?
  - a) engineers
  - b) doctors
  - c) scientists
  - d) printers
- 2) What would bio-printing create networks of?
  - a) tubes and vessels
  - b) users
  - c) veins and canals
  - d) tubs and vassals
- 3) What are the networks called that scientists can now bio-print?
  - a) cyber networks
  - b) muscular networks
  - c) neural networks
  - d) vascular networks
- 4) Who is Jordan Miller?
  - a) a printing engineer
  - b) a bio-engineering professor
  - c) an expert on robotics
  - d) a patient
- 5) What did a professor say could be supplied to densely populated tissues?
  - a) data
  - b) oxygen
  - c) nutrients
  - d) blood
- 6) Where does professor Kelly Stevens work?
  - a) Tokyo University
  - b) the University of Washington
  - c) Cambridge University
  - d) Cairo University
- 7) For how long did Kelly Stevens say tissue engineering had struggled?
  - a) too long
  - b) decades
  - c) years and years
  - d) a generation
- 8) What did Ms Stevens say the new breakthrough would change?
  - a) doctors
  - b) medical practices
  - c) humanity
  - d) longevity
- 9) What will affect the success of the new therapy?
  - a) how well the tissue is printed
  - b) the health of patients
  - c) the quality of the printer
  - d) genes
- 10) Who do scientists hope this breakthrough will help?
  - a) athletes
  - b) older people
  - c) all of us
  - d) people waiting for an organ transplant

# ROLE PLAY

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

## **Role A – The Wheel**

You think the wheel is the biggest scientific breakthrough. Tell the others three reasons why. Tell them why their breakthroughs aren't as great. Also, tell the others which is the least important of these (and why): water purification, the Internet or electricity.

## **Role B – Water Purification**

You think water purification is the biggest scientific breakthrough. Tell the others three reasons why. Tell them why their breakthroughs aren't as great. Also, tell the others which is the least important of these (and why): the wheel, the Internet or electricity.

## **Role C – The Internet**

You think the Internet is the biggest scientific breakthrough. Tell the others three reasons why. Tell them why their breakthroughs aren't as great. Also, tell the others which is the least important of these (and why): water purification, the wheel or electricity.

## **Role D – Electricity**

You think electricity is the biggest scientific breakthrough. Tell the others three reasons why. Tell them why their breakthroughs aren't as great. Also, tell the others which is the least important of these (and why): water purification, the Internet or the wheel.

# AFTER READING / LISTENING

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

**1. WORD SEARCH:** Look in your dictionary / computer to find collocates, other meanings, information, synonyms ... for the words 'body' and 'organ'.

body	organ

- Share your findings with your partners.
- Make questions using the words you found.
- Ask your partner / group your questions.

**2. ARTICLE QUESTIONS:** Look back at the article and write down some questions you would like to ask the class about the text.

- Share your questions with other classmates / groups.
- Ask your partner / group your questions.

**3. GAP FILL:** In pairs / groups, compare your answers to this exercise. Check your answers. Talk about the words from the activity. Were they new, interesting, worth learning...?

**4. VOCABULARY:** Circle any words you do not understand. In groups, pool unknown words and use dictionaries to find their meanings.

**5. TEST EACH OTHER:** Look at the words below. With your partner, try to recall how they were used in the text:

<ul style="list-style-type: none"><li>• greatly</li><li>• allows</li><li>• called</li><li>• why</li><li>• one</li><li>• supply</li></ul>	<ul style="list-style-type: none"><li>• difficulties</li><li>• generation</li><li>• healthy</li><li>• important</li><li>• well</li><li>• waiting</li></ul>
--	--

# BIO-PRINTING SURVEY

From <https://breakingnewsenglish.com/1905/190507-bioprinting.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.

# BIO-PRINTING DISCUSSION

STUDENT A's QUESTIONS (Do not show these to student B)

1. What did you think when you read the headline?
2. What images are in your mind when you hear the word 'body'?
3. What do you think of the idea of bio-printing?
4. Would you accept a bio-printed organ if you needed one?
5. Is bio-printing a little like Frankenstein?
6. What are the dangers of bio-printing?
7. Would it be possible to bio-print a new brain?
8. Would someone with many bio-printed organs be human?
9. Will scientists be able to bio-print a whole human one day?
10. Is bio-printing body organs like playing God?

*Breakthrough in bio-printing of new body organs – 7th May, 2019*  
Thousands more free lessons at [breakingnewsenglish.com](http://breakingnewsenglish.com)

---

# BIO-PRINTING DISCUSSION

STUDENT B's QUESTIONS (Do not show these to student A)

11. Did you like reading this article? Why/not?
12. What do you think of when you hear the word 'organ'?
13. What do you think about what you read?
14. What ethical issues are there with bio-printing?
15. What would it be like to be a scientist?
16. What will medicine look like in 100 years from now?
17. What three adjectives best describe this story?
18. What do you think of cyborg humans with bio-printed organs?
19. What new medical breakthroughs would you like to see?
20. What questions would you like to ask the researchers?

# DISCUSSION (Write your own questions)

STUDENT A's QUESTIONS (Do not show these to student B)

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_
- 6. \_\_\_\_\_

Copyright © breakingnewsenglish.com 2019

---

# DISCUSSION (Write your own questions)

STUDENT B's QUESTIONS (Do not show these to student A)

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_
- 6. \_\_\_\_\_

# LANGUAGE - CLOZE

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

Scientists say they have greatly (1) \_\_\_\_\_ the possibility of being able to reproduce the body's organs (2) \_\_\_\_\_ the use of 3D printing. Replacement organs could be created (3) \_\_\_\_\_ a new technique for bio-printing organic tissue. This allows scientists to create networks of thin tubes and vessels, like those used in our body for the (4) \_\_\_\_\_ of blood and air. These are called vascular networks. Bio-engineering professor Jordan Miller explained why the breakthrough was so important. He said: "One of the biggest roadblocks (5) \_\_\_\_\_ generating functional tissue replacements has been our inability to print the complex [vascular networks] that can supply nutrients to (6) \_\_\_\_\_ populated tissues."

Professor Kelly Stevens of the University of Washington wrote about the difficulties scientists had (7) \_\_\_\_\_ recreating a vascular network. She said: "Tissue engineering has (8) \_\_\_\_\_ with this for a generation." She believes the new breakthrough will allow medical practices to change in the future. She asked: "If we can print tissues that look and now even (9) \_\_\_\_\_ more like the healthy tissues in our bodies, will they also then (10) \_\_\_\_\_ behave more like those tissues?" Professor Stevens said "This is an important question, because how well a bio-printed tissue functions will (11) \_\_\_\_\_ how successful it will be as a therapy." Scientists hope this method will help millions of people waiting for an organ (12) \_\_\_\_\_.

## Put the correct words from the table below in the above article.

- |     |               |                |                  |                |
|-----|---------------|----------------|------------------|----------------|
| 1.  | (a) advancing | (b) advance    | (c) advances     | (d) advanced   |
| 2.  | (a) vie       | (b) viva       | (c) vile         | (d) via        |
| 3.  | (a) usage     | (b) useful     | (c) using        | (d) uses       |
| 4.  | (a) flue      | (b) flu        | (c) flow         | (d) flaw       |
| 5.  | (a) by        | (b) as         | (c) to           | (d) on         |
| 6.  | (a) densely   | (b) denser     | (c) density      | (d) dens       |
| 7.  | (a) on        | (b) in         | (c) so           | (d) by         |
| 8.  | (a) struggled | (b) straggled  | (c) stricken     | (d) stroked    |
| 9.  | (a) breathy   | (b) breathe    | (c) breath       | (d) breathless |
| 10. | (a) function  | (b) functional | (c) functionally | (d) functions  |
| 11. | (a) reflect   | (b) effect     | (c) affect       | (d) offal      |
| 12. | (a) replant   | (b) complement | (c) implant      | (d) transplant |



# SPELLING

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

## Paragraph 1

1. oprrduece the body's organs
2. using a new ecntqihue
3. networks of thin tubes and essvels
4. omplcex vascular networks
5. supply tneirnuts
6. ensdley populated tissues

## Paragraph 2

7. struggled with this for a enrgtaeion
8. allow medical rcpitaces to change
9. aertbhe more
10. cfotinulanly behave
11. how successful it will be as a rethpay
12. waiting for an organ apnsrlatnt

# PUT THE TEXT BACK TOGETHER

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

**Number these lines in the correct order.**

- ( **1** ) Scientists say they have greatly advanced the possibility of being able to reproduce the body's
- ( ) tissues in our bodies, will they also then functionally behave more like those tissues?" Professor Stevens said "This is an
- ( ) technique for bio-printing organic tissue. This allows scientists to create networks of thin tubes
- ( ) future. She asked: "If we can print tissues that look and now even breathe more like the healthy
- ( ) professor Jordan Miller explained why the breakthrough was so important. He said: "One
- ( ) generation." She believes the new breakthrough will allow medical practices to change in the
- ( ) of the biggest roadblocks to generating functional tissue replacements has been our inability to
- ( ) recreating a vascular network. She said: "Tissue engineering has struggled with this for a
- ( ) print the complex [vascular networks] that can supply nutrients to densely populated tissues."
- ( ) Professor Kelly Stevens of the University of Washington wrote about the difficulties scientists had in
- ( ) be as a therapy." Scientists hope this method will help millions of people waiting for an organ transplant.
- ( ) organs via the use of 3D printing. Replacement organs could be created using a new
- ( ) and vessels, like those used in our body for the flow of blood and air. These are called vascular networks. Bio-engineering
- ( ) important question, because how well a bio-printed tissue functions will affect how successful it will

# PUT THE WORDS IN THE RIGHT ORDER

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

1. the say advanced they greatly Scientists have possibility .
2. 3D via the body's printing . organs Reproduce
3. be Organs could created a using new technique .
4. to functional generating biggest roadblocks tissue . The
5. inability to vascular complex the print networks . Our
6. a recreating network . vascular Difficulties had in scientists
7. a generation . engineering Tissue this with struggled for
8. allow breakthroughs change . medical to will practices New
9. will be a successful How it as therapy .
10. waiting Millions of an people organ transplant . for

# CIRCLE THE CORRECT WORD (20 PAIRS)

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

Scientists say they have *greatness* / *greatly* advanced the possibility of being able to reproduce the body's organs *viva* / *via* the use of 3D printing. Replacement organs could be created *using* / *usage* a new technique for bio-printing organic *tissue* / *issue*. This allows scientists to create networks of thin tubes and vessels, like *them* / *those* used in our body for the flow of blood and air. These are *called* / *naming* vascular networks. Bio-engineering professor Jordan Miller explained *why* / *which* the breakthrough was so important. He said: "One of the biggest roadblocks to *generation* / *generating* functional tissue replacements has been our *unable* / *inability* to print the complex [vascular networks] that can supply *nutritional* / *nutrients* to densely populated tissues."

Professor Kelly Stevens of the University of Washington wrote about the *difficult* / *difficulties* scientists had in recreating a vascular network. She said: "Tissue engineering has *struggled* / *struggle* with this for a generation." She *believes* / *beliefs* the new breakthrough will allow medical *practices* / *practical* to change in the future. She asked: "If we can print tissues *what* / *that* look and now even breathe more like the healthy tissues in our bodies, will they also then *function* / *functionally* behave more like those tissues?" Professor Stevens said "This is an *important* / *importance* question, because how well a bio-printed tissue functions will *effect* / *affect* how successful it will be as a *therapy* / *therapist*." Scientists hope this method will help millions of people waiting for an *organ* / *organism* transplant.

**Talk about the connection between each pair of words in italics, and why the correct word is correct.**

# INSERT THE VOWELS (a, e, i, o, u)

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

Sc\_\_ntsts sy thy hv gr\_\_tly dvncd  
th\_ pss\_b\_lty \_f b\_\_ng \_bl\_ t\_rpr\_dc\_ th\_  
bdy's \_rgns v\_\_ th\_ s\_ \_f 3D prntng.  
Rpl\_c\_mnt \_rgns c\_\_ld b\_ cr\_\_td \_sng \_  
n\_w tchn\_q\_\_ fr b\_\_ - prntng \_rgnc ts  
s\_\_ . Ths llws sc\_\_ntsts t\_cr\_\_t\_n\_twr  
ks \_f th\_n t\_b\_s \_nd vssls, lk\_ ths\_s\_d  
\_n \_\_r bdy fr th\_ flw \_f bl\_\_d \_nd \_\_r.  
Ths\_ \_r\_ cll\_d vsc\_l\_r n\_twrks . B\_\_ -n  
g\_n\_\_rng prf\_ssr Jrdn Mllr \_xpl\_\_nd w  
hy th\_ br\_\_kthr\_\_gh ws s\_\_mp\_rnt . H\_  
s\_\_d : " On\_ \_f th\_ bggst r\_\_dblcks t\_  
g\_n\_r\_tng fnct\_\_n\_l tss\_\_ rpl\_c\_mnts hs  
b\_\_n \_\_r \_nb\_lty t\_prnt th\_ c\_mplx [v\_s  
c\_l\_r n\_twrks] tht cn supply n\_tr\_\_nts  
t\_d\_nsl\_y p\_pl\_t\_d tss\_\_s . "

Prf\_ssr Killy Stvns \_f th\_ Un\_v\_rsty \_f  
Wshngtn wrt\_ \_b\_\_t th\_ dff\_c\_l\_t\_\_s sc\_\_  
ntsts hd \_n rcr\_\_tng \_vsc\_l\_r n\_twrk .  
Sh\_ s\_\_d : " Tss\_\_ \_ng\_n\_\_rng hs strgg  
ld wth ths fr \_g\_n\_r\_t\_\_n . " Sh\_ bl\_\_vs  
th\_ n\_w br\_\_kthr\_\_gh wll llw md\_c\_l p  
rct\_cs t\_chn\_g\_ \_n th\_ ft\_r\_ . Sh\_ sk\_d : "  
If w\_ cn prnt tss\_\_s tht ll\_k \_nd n\_w  
\_v\_n br\_\_th\_ m\_r\_ lk\_ th\_ h\_\_lthy tss\_\_s  
\_n \_\_r b\_d\_\_s , wll th\_y ls\_ th\_n fnct\_\_  
n\_lly bh\_v\_ m\_r\_ lk\_ ths\_ tss\_\_s ? " Prf\_s  
s\_r Stvns s\_\_d " Ths \_s \_n \_mp\_rnt q\_\_s  
t\_\_n , b\_c\_\_s\_ h\_w wll \_ b\_\_ - prnt\_d tss\_\_  
fnct\_\_ns wll \_ffct h\_w s\_cc\_ssf\_l\_t wll  
b\_\_s \_ th\_r\_p\_y . " Sc\_\_ntsts hp\_ ths m\_t  
hd wll hlp mll\_\_ns \_f p\_\_pl\_ w\_\_tng  
fr \_n \_rgn trnsplnt .

# PUNCTUATE THE TEXT AND ADD CAPITALS

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

scientists say they have greatly advanced the possibility of being able to reproduce the bodys organs via the use of 3d printing replacement organs could be created using a new technique for bioprinting organic tissue this allows scientists to create networks of thin tubes and vessels like those used in our body for the flow of blood and air these are called vascular networks bioengineering professor jordan miller explained why the breakthrough was so 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

professor kelly stevens of the university of washington wrote about the difficulties scientists had in recreating a vascular network she said tissue engineering has struggled with this for a generation she believes the new breakthrough will allow medical practices 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 professor stevens said this is an important question because how well a bioprinted tissue functions will affect how successful it will be as a therapy scientists hope this method will help millions of people waiting for an organ transplant.

# PUT A SLASH ( / ) WHERE THE SPACES ARE

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

Scientists say they have greatly advanced the possibility of being able to reproduce the body's organs via the use of 3D printing. Replacement organs could be created using a new technique for bio-printing organic tissue. This allows scientists to create networks of thin tubes and vessels, like those used in our body for the flow of blood and air. These are called vascular networks. Bio-engineering professor Jordan Miller explained why the breakthrough was so 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." Professor Kelly Stevens of the University of Washington wrote about the difficulties scientists had in recreating a vascular network. She said: "Tissue engineering has struggled with this for a generation." She believes the new breakthrough will allow medical practices 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?" Professor Stevens said "This is an important question, because how well bio-printed tissue function will affect how successful it will be as a therapy." Scientists hope this method will help millions of people waiting for an organ transplant.







# HOMWORK

**1. VOCABULARY EXTENSION:** Choose several of the words from the text. Use a dictionary or Google's search field (or another search engine) to build up more associations / collocations of each word.

**2. INTERNET:** Search the Internet and find out more about this news story. Share what you discover with your partner(s) in the next lesson.

**3. BIO-PRINTING:** Make a poster about bio-printing. Show your work to your classmates in the next lesson. Did you all have similar things?

**4. BIO-PRINTED HUMANS:** Write a magazine article about bio-printing humans. Include imaginary interviews with people who are for and against this.

Read what you wrote to your classmates in the next lesson. Write down any new words and expressions you hear from your partner(s).

**5. WHAT HAPPENED NEXT?** Write a newspaper article about the next stage in this news story. Read what you wrote to your classmates in the next lesson. Give each other feedback on your articles.

**6. LETTER:** Write a letter to an expert on bio-printing. Ask him/her three questions about it. Give him/her three of your opinions on bio-printing. Read your letter to your partner(s) in your next lesson. Your partner(s) will answer your questions.

# ANSWERS

## VOCABULARY (p.4)

1. d    2. f    3. b    4. g    5. c    6. e    7. a  
8. n    9. k    10. m    11. h    12. i    13. l    14. j

## TRUE / FALSE (p.5)

- a F    b F    c F    d T    e F    f T    g T    h T

## SYNONYM MATCH (p.5)

- |                 |                  |
|-----------------|------------------|
| 1. greatly      | a. considerably  |
| 2. reproduce    | b. duplicate     |
| 3. via          | c. through       |
| 4. flow         | d. movement      |
| 5. densely      | e. tightly       |
| 6. difficulties | f. complications |
| 7. struggled    | g. wrestled      |
| 8. breakthrough | h. development   |
| 9. question     | i. issue         |
| 10. method      | j. procedure     |

## COMPREHENSION QUESTIONS (p.9)

1. Scientists
2. Thin tubes and vessels
3. Vascular Networks
4. A bio-engineering professor
5. Nutrients
6. The University of Washington
7. A generation
8. Medical practices
9. How well the tissue is printed
10. People waiting for organ transplants

## WORDS IN THE RIGHT ORDER (p.20)

1. Scientists say they have greatly advanced the possibility.
2. Reproduce the body's organs via 3D printing.
3. Organs could be created using a new technique.
4. The biggest roadblocks to generating functional tissue.
5. Our inability to print the complex vascular networks.
6. Difficulties scientists had in recreating a vascular network.
7. Tissue engineering struggled with this for a generation.
8. New breakthroughs will allow medical practices to change.
9. How successful it will be as a therapy.
10. Millions of people waiting for an organ transplant.

## MULTIPLE CHOICE - QUIZ (p.10)

1. c    2. a    3. d    4. b    5. c    6. d    7. b    8. d    9. a    10. d

## ALL OTHER EXERCISES

Please check for yourself by looking at the Article on page 2.  
(It's good for your English ;-)