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Ready-to-Use English Lessons by Sean Banville

Level 6 – 10th January, 2021

Identical twins are not so identical

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https://breakingnewsenglish.com/2101/210110-identical-twins.html

Contents

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

THE ARTICLE

From https://breakingnewsenglish.com/2101/210110-identical-twins.html

A new study shows that while identical twins can look perfectly alike, it is not a perfect similarity. They are not clones of each other. Scientists at the University of Iceland analyzed the DNA from 387 pairs of identical twins - babies born from a single fertilized egg. The scientists compared the DNA with that of the twins' parents and children. The geneticists looked for mutations in the early stages of development. A mutation is a tiny change in the sequence of the DNA that can occur when a cell divides. This change causes a slight difference in the DNA replication process. A single, tiny change can create differences in height, intelligence, eye colour and even in susceptibility to disease.

The study shows that identical twins do not share totally identical DNA. In about 15 per cent of identical twin pairs, one twin carried a "substantial" number of mutations that the other did not share. The scientists say this difference is important as it sheds light on the "nature versus nurture" debate. This is whether human behaviour is determined by the environment, socialization and upbringing, or by a person's genes. The research shows that this tiny difference, and not environmental factors, could be the reason why one twin develops different behavioural characteristics or medical conditions. Professor Kari Stefansson said a genetic mutation may be the source of a given disease or trait.

Sources: https://www.**theguardian.com**/science/2021/jan/08/identical-twins-are-not-so-identical-study-suggests
https://www.**huffpost.com**/entry/twins-not-perfect-clones-study_n_5ff785b2c5b6fc79f463c60c
https://www.**livescience.com**/identical-twins-dont-share-all-dna.html

WARM-UPS

1. IDENTICAL TWINS: Students walk around the class and talk to other students about identical twins. 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?

> identical / twins / perfect / similarity / clone / parents / geneticists / mutation / height share / scientists / nature / nurture / human behaviour / genes / medical / disease

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

3. DNA: Students A **strongly** believe scientists should amend DNA to make us healthier; Students B **strongly** believe otherwise. Change partners again and talk about your conversations.

4. CHILD: What are the gad and bad things about being one of these? Complete this table with your partner(s). Change partners often and share what you wrote.

	Good Things	Bad Things
An identical twin		
A quadruplet		
An only child		
The eldest sibling		
The youngest sibling		
The middle of 9 children		

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

6. CHARACTERISTICS: Rank these with your partner. Put the best at the top. Change partners often and share your rankings.

- Good looks
- Intelligence
- Sense of humor
- Being tall
- Optimistic
- Energetic
- Hair
- Good skin

VOCABULARY MATCHING

Paragraph 1

1.	alike	a.	A person or thing regarded as identical to another.
2.	clone	b.	The action of copying or reproducing something.
3.	fertilized	c.	Two or more subjects similar to each other.
4.	replication	d.	A particular order in which related events, movements, or things follow each other.
5.	mutation	e.	The action or process of changing or causing to change in form or nature.
6.	sequence	f.	The state or fact of being likely or liable to be influenced or harmed by a particular thing.
7.	susceptibility	g.	Caused an egg, female animal, or plant to develop a new individual by introducing male reproductive material.

Paragraph 2

8.	substantial	h.	A distinguishing quality or characteristic, typically one belonging to a person.
9.	shed light on	i.	The treatment and instruction received by a child from its parents throughout its childhood.
10.	nurture	j.	Unit of information transferred from a parent to child that causes characteristics or behaviours in that child.
11.	upbringing	k.	Of considerable importance, size, or value.
12.	genes	l.	Help to explain something by providing further information about it.
13.	characteristic	m.	A feature or quality belonging typically to a person, place, or thing and serving to identify it.
14.	trait	n.	Care for and encourage the growth or development of.

BEFORE READING / LISTENING

From https://breakingnewsenglish.com/2101/210110-identical-twins.html

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

a. A study suggests identical twins could in fact be clones of each other. **T / F**
b. Scientists looked at data from 387 identical twins. **T / F**
c. Scientists ignored any mutations found in DNA. **T / F**
d. A change in the DNA replication process can affect intelligence. **T / F**
e. About 15% of identical twin pairs had totally identical DNA. **T / F**
f. The research adds understanding to the nature versus nurture debate. **T / F**
g. The research shows DNA mutations makes identical twins less identical. **T / F**
h. A professor said genetic mutations might give rise to a certain trait. **T / F**

2. SYNONYM MATCH:

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

1. perfectly	a. childhood
2. analyzed	b. alteration
3. single	c. helps to explain
4. mutation	d. vulnerability
5. susceptibility	e. examined
6. substantial	f. affected
7. sheds light on	g. considerable
8. determined	h. in every respect
9. upbringing	i. characteristic
10. trait	j. solitary

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

1. identical twins can look	a. number of mutations
2. They are not clones	b. disease
3. babies born from a single	c. or trait
4. mutations in the early stages	d. conditions
5. susceptibility to	e. of each other
6. a substantial	f. of development
7. it sheds light on the nature versus	g. and upbringing
8. the environment, socialization	h. perfectly alike
9. medical	i. nurture debate
10. the source of a given disease	j. fertilized egg

GAP FILL

From https://breakingnewsenglish.com/2101/210110-identical-twins.html

A new study shows that while identical twins can look (1) _____ alike, it is not a perfect (2) _____. They are not clones of each other. Scientists at the University of Iceland analyzed the DNA from 387 pairs of identical twins - babies born from a (3) _____ fertilized egg. The scientists compared the DNA with that of the twins' parents and children. The geneticists looked for (4) _____ in the early stages of development. A mutation is a (5) _____ change in the sequence of the DNA that can occur when a cell (6) _____. This change causes a slight difference in the DNA replication (7) _____. A single, tiny change can create differences in height, intelligence, eye colour and even in (8) _____ to disease.

single

tiny

process

perfectly

susceptibility

similarity

divides

mutations

The study shows that identical twins do not (9) _____ totally identical DNA. In about 15 per cent of identical twin pairs, one twin carried a "(10) _____" number of mutations that the other did not share. The scientists say this difference is important as it (11) _____ light on the "nature versus nurture" (12) _____. This is whether human behaviour is determined by the environment, socialization and upbringing, or by a person's (13) _____. The research shows that this tiny difference, and not environmental factors, could be the (14) _____ why one twin develops different behavioural characteristics or (15) _____ conditions. Professor Kari Stefansson said a genetic mutation may be the (16) _____ of a given disease or trait.

substantial

reason

debate

source

sheds

medical

share

genes

LISTENING – Guess the answers. Listen to check.

From https://breakingnewsenglish.com/2101/210110-identical-twins.html

1) A new study shows that while identical twins can _____
   a. look perfectly as like
   b. look perfect alike
   c. look perfectly alike
   d. look perfectly like
2) it is not a perfect similarity. They are not _____ other
   a. cloze of each
   b. close of each
   c. clones of each
   d. clone of each
3) DNA from 387 pairs of identical twins - babies born from a _____
   a. single fertilized egg
   b. single fertilize egg
   c. singles fertilized egg
   d. singled fertilized egg
4) A mutation is a tiny change in the sequence of the DNA that can _____ cell divides
   a. occur what a
   b. occur while a
   c. occur when a
   d. occur which a
5) differences in height, intelligence, eye colour and even in _____
   a. susceptibility of disease
   b. susceptibility at disease
   c. susceptibility to disease
   d. susceptibility on disease
6) The study shows that identical twins do not share _____
   a. total identical DNA
   b. totally identically DNA
   c. totally identical DNA
   d. totally identically DNA
7) identical twin pairs, one twin carried a "substantial" _____
   a. numbers of mutations
   b. number of mute stations
   c. numb bar of mew stations
   d. number of mutations
8) this difference is important as it sheds light on the "nature _____
   a. versus nature" debate
   b. versus natural" debate
   c. versus venture" debate
   d. versus nurture" debate
9) by the environment, socialization and upbringing, or by _____
   a. ape person's genes
   b. a person's jeans
   c. ape person's jeans
   d. a person's genes
10) a genetic mutation may be the source of a given _____
   a. disease or trait
   b. diseased or strait
   c. disease or straight
   d. disease or taint

LISTENING – Listen and fill in the gaps

From https://breakingnewsenglish.com/2101/210110-identical-twins.html

A new study shows that while identical twins can (1) _____, it is not a perfect similarity. They are not (2) _____ other. Scientists at the University of Iceland analyzed the DNA from 387 pairs of identical twins - babies born from a (3) _____. The scientists compared the DNA with that of the twins' parents and children. The geneticists looked (4) _____ the early stages of development. A mutation is a tiny change in the sequence of the DNA that can occur when a cell divides. This change (5) _____ difference in the DNA replication process. A single, tiny change can create differences in height, intelligence, eye colour and even (6) _____ disease.

The study shows that identical twins do not (7) _____ DNA. In about 15 per cent of identical twin pairs, one twin (8) _____ number of mutations that the other did not share. The scientists say this difference is important as it (9) _____ the "nature versus nurture" debate. This is whether human behaviour is determined by the environment, socialization and upbringing, or by (10) _____. The research shows that this tiny difference, and not environmental factors, could be the reason why (11) _____ different behavioural characteristics or medical conditions. Professor Kari Stefansson said a genetic mutation may be the source of a given (12) _____.

COMPREHENSION QUESTIONS

From https://breakingnewsenglish.com/2101/210110-identical-twins.html

1. What does the article say identical twins are not clones of?

2. How many identical twins did scientists look at the DNA of?

3. Whose DNA did scientists compare the twins' DNA to?

4. What did the scientists look for?

5. What might DNA mutations increase the susceptibility of?

6. What does the DNA show identical twins do not share?

7. What debate does the research shed light on?

8. What might affect our behaviour besides socialization and environment?

9. What might be the reason for differences in medical conditions?

10. What does a professor say may be the source of a disease or trait?

MULTIPLE CHOICE - QUIZ

From https://breakingnewsenglish.com/2101/210110-identical-twins.html

1) What does the article say identical twins are not clones of?
a) robots
b) each other
c) parents
d) grandparents

2) How many identical twins did scientists look at the DNA of?
a) 3,870
b) 387
c) 7,740
d) 774

3) Whose DNA did scientists compare the twins' DNA to?
a) a database
b) ancestors
c) parents and children
d) their own

4) What did the scientists look for?
a) mutations
b) DNA
c) cells
d) twins

5) What might DNA mutations increase the susceptibility of?
a) baldness
b) disease
c) a lack of energy
d) danger

6) What does the DNA show identical twins do not share?
a) totally identical DNA
b) intelligence
c) the same hair colour
d) the same height

7) What debate does the research shed light on?
a) the great debate
b) the debate on life
c) the nature versus nurture debate
d) an economic debate

8) What might affect our behaviour besides socialization and environment?
a) upbringing
b) chemicals
c) drugs
d) money

9) What might be the reason for differences in medical conditions?
a) upbringing
b) money
c) debate
d) a tiny difference in DNA

10) What does a professor say may be the source of a disease or trait?
a) wealth
b) global warming
c) a genetic mutation
d) social media

ROLE PLAY

From https://breakingnewsenglish.com/2101/210110-identical-twins.html

Role A – Good Looks

You think good looks are the best thing to inherit from your parents. Tell the others three reasons why. Tell them why their things aren't as important. Also, tell the others which is the least important of these (and why): a sense of humour, being tall or intelligence.

Role B – Sense of Humour

You think a sense of humour is the best thing to inherit from your parents. Tell the others three reasons why. Tell them why their things aren't as important. Also, tell the others which is the least important of these (and why): good looks, being tall or intelligence.

Role C – Being Tall

You think being tall is the best thing to inherit from your parents. Tell the others three reasons why. Tell them why their things aren't as important. Also, tell the others which is the least important of these (and why): a sense of humour, good looks or intelligence.

Role D – Intelligence

You think intelligence is the best thing to inherit from your parents. Tell the others three reasons why. Tell them why their things aren't as important. Also, tell the others which is the least important of these (and why): a sense of humour, being tall or good looks.

AFTER READING / LISTENING

From https://breakingnewsenglish.com/2101/210110-identical-twins.html

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

identical	**twins**

- 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:

• while • clones • born • early • slight • create	• shows • carried • sheds • genes • reason • trait

IDENTICAL TWINS SURVEY

From https://breakingnewsenglish.com/2101/210110-identical-twins.html

Write five GOOD questions about identical twins 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.

IDENTICAL TWINS 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 'identical'?
3. What do you know about twins?
4. What are the good things abut being an identical twin?
5. What do you think of cloning?
6. What do you know about DNA?
7. How much do you look like your parents or siblings?
8. In what ways do you take after your parents?
9. Would you like to be an identical twin?
10. Would you prefer to be a twin or a quadruplet?

Identical twins are not so identical – 10th January, 2021
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IDENTICAL TWINS 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 'twins'?
13. What do you think about what you read?
14. What are the differences between twins and identical twins?
15. What do you know of the 'nature versus nurture' debate?
16. What parts of your genes would you want to go to your children?
17. Are we born with our personality or does our upbringing make it?
18. What changes would you have wanted made to your DNA?
19. How did your upbringing change you?
20. What questions would you like to ask the scientists?

DISCUSSION (Write your own questions)

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

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

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/2101/210110-identical-twins.html

A new study shows that while identical twins can look perfectly (1) _____, it is not a perfect similarity. They are not (2) _____ of each other. Scientists at the University of Iceland analyzed the DNA from 387 pairs of identical twins - babies born from a (3) _____ fertilized egg. The scientists compared the DNA with (4) _____ of the twins' parents and children. The geneticists looked for mutations in the early stages of development. A mutation is a tiny change in the sequence of the DNA that can occur when a cell divides. This change causes a (5) _____ difference in the DNA replication process. A single, tiny change can create differences in height, intelligence, eye colour and even in susceptibility (6) _____ disease.

The study shows that identical twins do not (7) _____ totally identical DNA. In about 15 per cent of identical twin pairs, one twin carried a "substantial" number of mutations that the (8) _____ did not share. The scientists say this difference is important as it sheds light on the "nature versus (9) _____" debate. This is whether human behaviour is determined (10) _____ the environment, socialization and upbringing, or by a person's genes. The research shows that this tiny difference, and not environmental factors, could (11) _____ the reason why one twin develops different behavioural characteristics or medical conditions. Professor Kari Stefansson said a genetic mutation may be the source of a given disease or (12) _____.

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

1.	(a)	likely	(b)	alike	(c)	liked	(d)	liking
2.	(a)	cloze	(b)	clones	(c)	clothes	(d)	closed
3.	(a)	singled out	(b)	singled	(c)	singles	(d)	single
4.	(a)	them	(b)	that	(c)	this	(d)	those
5.	(a)	blight	(b)	smite	(c)	fright	(d)	slight
6.	(a)	of	(b)	on	(c)	to	(d)	at
7.	(a)	share	(b)	shave	(c)	shade	(d)	shape
8.	(a)	others	(b)	another	(c)	other	(d)	otherly
9.	(a)	naturalistic	(b)	naturism	(c)	natural	(d)	nurture
10.	(a)	by	(b)	of	(c)	on	(d)	at
11.	(a)	be	(b)	do	(c)	have	(d)	pertain
12.	(a)	trait	(b)	trail	(c)	train	(d)	traipse

SPELLING

From https://breakingnewsenglish.com/2101/210110-identical-twins.html

Paragraph 1

1. it is not a perfect aimriilsyt
2. from a single rlzdiietfe egg
3. A tiomaunt is a tiny change
4. the esceuqne of the DNA
5. the DNA nicitoplrae process
6. ipbicsteyltisu to disease

Paragraph 2

7. one twin carried a tsnastibula number
8. the nature versus ruenrut debate
9. the environment, socialization and ibnirgugpn
10. a person's sngee
11. behavioural aiartcerscsthci
12. a given disease or rttai

PUT THE TEXT BACK TOGETHER

From https://breakingnewsenglish.com/2101/210110-identical-twins.html

Number these lines in the correct order.

( ) difference in the DNA replication process. A single, tiny change can create differences

( ) conditions. Professor Kari Stefansson said a genetic mutation may be the source of a given disease or trait.

( ) change in the sequence of the DNA that can occur when a cell divides. This change causes a slight

( ) The study shows that identical twins do not share totally identical DNA. In about 15 per cent of identical twin pairs, one

( ) twin carried a "substantial" number of mutations that the other did not share. The scientists say this difference

( ) and children. The geneticists looked for mutations in the early stages of development. A mutation is a tiny

( ) is important as it sheds light on the "nature versus nurture" debate. This is whether human

( ) genes. The research shows that this tiny difference, and not environmental factors, could

(***1***) A new study shows that while identical twins can look perfectly alike, it is not a perfect similarity. They are not clones

( ) be the reason why one twin develops different behavioural characteristics or medical

( ) behaviour is determined by the environment, socialization and upbringing, or by a person's

( ) born from a single fertilized egg. The scientists compared the DNA with that of the twins' parents

( ) of each other. Scientists at the University of Iceland analyzed the DNA from 387 pairs of identical twins - babies

( ) in height, intelligence, eye colour and even in susceptibility to disease.

PUT THE WORDS IN THE RIGHT ORDER

From https://breakingnewsenglish.com/2101/210110-identical-twins.html

1. of clones are not other . each They

2. egg . single Twin babies from fertilized born a

3. mutations early in stages . for Geneticists the looked

4. the sequence changes the DNA . in of Tiny

5. differences create A can change single in height .

6. share not totally twins DNA . identical do Identical

7. carried substantial twin One mutations . of a number

8. nurture" versus the "nature debate . Shed light on

9. one The why develops reason characteristics . twin different

10. the A source . genetic be may mutation

CIRCLE THE CORRECT WORD (20 PAIRS)

From https://breakingnewsenglish.com/2101/210110-identical-twins.html

A new study shows that while *identically / identical* twins can look perfectly alike, it is not a perfect similarity. They are not *clozes / clones* of each other. Scientists at the University of Iceland analyzed the DNA from 387 pairs of identical twins - babies born from a single *sterilized / fertilized* egg. The scientists compared the DNA with *that / those* of the twins' parents and children. The geneticists looked for mutations in the *fast / early* stages of development. A *mutation / mutant* is a tiny change in the sequence of the DNA that can occur when a cell *shares / divides*. This change causes a *smite / slight* difference in the DNA replication process. A single, tiny change can create differences *in / on* height, intelligence, eye colour and even in *susceptibility / perceptibility* to disease.

The study shows that identical twins do not share *total / totally* identical DNA. In about 15 per cent of identical twin pairs, one twin carried a "*substantial / substantially*" number of mutations that the other did not share. The scientists say this *diffidence / difference* is important as it *shacks / sheds* light on the "nature versus *nurture / naturism*" debate. This is whether human behaviour is determined *of / by* the environment, socialization and upbringing, or by a person's *genes / jeans*. The research shows that this tiny difference, and not environmental *factors / factories*, could be the reason why *once / one* twin develops different behavioural characteristics or medical conditions. Professor Kari Stefansson said a genetic mutation may be the *source / sauce* of a given disease or trait.

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/2101/210110-identical-twins.html

_ n_w st_dy sh_ws th_t wh_l_ _d_nt_c_l tw_ns c_n l__k p_rf_ctly _l_k_, _t _s n_t _ p_rf_ct s_m_l_r_ty. Th_y _r_ n_t cl_n_s _f __ch _th_r. Sc__nt_sts _t th_ _n_v_rs_ty _f _c_l_nd _n_lyz_d th_ DN_ fr_m 387 p__rs _f _d_nt_c_l tw_ns - b_b__s b_rn fr_m _ s_ngl_ f_rt_l_z_d _gg. Th_ sc__nt_sts c_mp_r_d th_ DN_ w_th th_t _f th_ tw_ns' p_r_nts _nd ch_ldr_n. Th_ g_n_t_c_sts l__k_d f_r m_t_t__ns _n th_ __rly st_g_s _f d_v_l_pm_nt. _ m_t_t__n _s _ t_ny ch_ng_ _n th_ s_q__nc_ _f th_ DN_ th_t c_n _cc_r wh_n _ c_ll d_v_d_s. Th_s ch_ng_ c__s_s _ sl_ght d_ff_r_nc_ _n th_ DN_ r_pl_c_t__n pr_c_ss. _ s_ngl_, t_ny ch_ng_ c_n cr__t_ d_ff_r_nc_s _n h__ght, _nt_ll_g_nc_, _y_ c_l__r _nd _v_n _n s_sc_pt_b_l_ty t_ d_s__s_.

Th_ st_dy sh_ws th_t _d_nt_c_l tw_ns d_ n_t sh_r_ t_t_lly _d_nt_c_l DN_. _n _b__t 15 p_r c_nt _f _d_nt_c_l tw_n p__rs, _n_ tw_n c_rr__d _ "s_bst_nt__l" n_mb_r _f m_t_t__ns th_t th_ _th_r d_d n_t sh_r_. Th_ sc__nt_sts s_y th_s d_ff_r_nc_ _s _mp_rt_nt _s _t sh_ds l_ght _n th_ "n_t_r_ v_rs_s n_rt_r_" d_b_t_. Th_s _s wh_th_r h_m_n b_h_v__r _s d_t_rm_n_d by th_ _nv_r_nm_nt, s_c__l_z_t__n _nd _pbr_ng_ng, _r by _ p_rs_n's g_n_s. Th_ r_s__rch sh_ws th_t th_s t_ny d_ff_r_nc_, _nd n_t _nv_r_nm_nt_l f_ct_rs, c__ld b_ th_ r__s_n why _n_ tw_n d_v_l_ps d_ff_r_nt b_h_v___r_l ch_r_ct_r_st_cs _r m_d_c_l c_nd_t__ns. Pr_f_ss_r K_r_ St_f_nss_n s__d _ g_n_t_c m_t_t__n m_y b_ th_ s__rc_ _f _ g_v_n d_s__s_ _r tr__t.

PUNCTUATE THE TEXT AND ADD CAPITALS

From https://breakingnewsenglish.com/2101/210110-identical-twins.html

a new study shows that while identical twins can look perfectly alike it is not a perfect similarity they are not clones of each other scientists at the university of iceland analyzed the dna from 387 pairs of identical twins babies born from a single fertilized egg the scientists compared the dna with that of the twins parents and children the geneticists looked for mutations in the early stages of development a mutation is a tiny change in the sequence of the dna that can occur when a cell divides this change causes a slight difference in the dna replication process a single tiny change can create differences in height intelligence eye colour and even in susceptibility to disease

the study shows that identical twins do not share totally identical dna in about 15 per cent of identical twin pairs one twin carried a substantial number of mutations that the other did not share the scientists say this difference is important as it sheds light on the nature versus nurture debate this is whether human behavior is determined by the environment socialization and upbringing or by a persons genes the research shows that this tiny difference and not environmental factors could be the reason why one twin develops different behavioural characteristics or medical conditions professor kari stefansson said a genetic mutation may be the source of a given disease or trait

PUT A SLASH (/) WHERE THE SPACES ARE

From https://breakingnewsenglish.com/2101/210110-identical-twins.html

Anewstudyshowsthatwhileidenticaltwinscanlookperfectlyalike,itisn
otaperfectsimilarity.Theyarenotclonesofeachother.ScientistsattheU
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FREE WRITING

From https://breakingnewsenglish.com/2101/210110-identical-twins.html

Write about **identical twins** for 10 minutes. Comment on your partner's paper.

ACADEMIC WRITING

From https://breakingnewsenglish.com/2101/210110-identical-twins.html

It is important we all understand the nature versus nurture debate. Discuss.

HOMEWORK

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. IDENTICAL TWINS: Make a poster about identical twins. Show your work to your classmates in the next lesson. Did you all have similar things?

4. DNA: Write a magazine article about governments spending a lot more money of researching DNA. 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 identical twins. Ask him/her three questions about them. Give him/her three of your ideas the advantages and disadvantages of being an identical twin. Read your letter to your partner(s) in your next lesson. Your partner(s) will answer your questions.

ANSWERS

VOCABULARY (p.4)

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

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. h	2. e	3. j	4. b	5. d
6. g	7. c	8. f	9. a	10. i

COMPREHENSION QUESTIONS (p.9)

1. Each other
2. 774
3. Parents and children
4. Mutations
5. Disease
6. Totally identical DNA
7. The nature vs. nurture debate
8. Upbringing
9. A tiny difference in DNA
10. A genetic mutation

WORDS IN THE RIGHT ORDER (p.20)

1. They are not clones of each other.
2. Twin babies born from a single fertilized egg.
3. Geneticists looked for mutations in the early stages.
4. Tiny changes in the sequence of the DNA.
5. A single change can create differences in height.
6. Identical twins do not share totally identical DNA.
7. One twin carried a substantial number of mutations.
8. Shed light on the "nature versus nurture" debate.
9. The reason why one twin develops different characteristics.
10. A genetic mutation may be the source.

MULTIPLE CHOICE - QUIZ (p.10)

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

ALL OTHER EXERCISES

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