

## Scientists find that rats love driving

2nd December 2024



The metaphor "rat race" may soon have a more literal meaning. This is because scientists have been teaching rats to drive a tiny, purpose-built car around a laboratory. Neuroscientist Dr Kelly Lambert from the University of Richmond in the USA has been

working with the car-driving rodents since 2019. Speaking to the online news agency "The Conversation," she explained that the creatures not only learned to rev the engines of their miniature vehicles, they seemed to "get a kick out of it". She said: "Unexpectedly, we found that the rats had an intense motivation for their driving training, often jumping into the car and revving the 'lever engine' before their vehicle hit the road."

Lambert's study was to explore the relationship between rats and their environments. She wanted to find out how their cognition developed, and how they processed new skills. In her tests, she placed one group of lab rats in a space that contained many toys and companions. The other test rodents were put in an area with no toys and fewer friends. Dr Lambert trained the rats to correlate driving with a sweet cereal reward. Those in the more enriched environment learned to drive faster. Dr Lambert concluded her research findings supported the idea that complex environments enhanced neuroplasticity. This is the brain's ability to form and reorganize connections in response to learning.

Sources: [bbc.com](https://www.bbc.com) / [nypost.com](https://www.nypost.com) / [theconversation.com](https://www.theconversation.com)

### Writing

We must end scientific tests that use animals. Discuss.

### Chat

Talk about these words from the article.

rats / metaphors / scientists / cars / laboratories / neuroscientist / rodents / engines / relationships / cognition / new skills / toys / companions / cereal / neuroplasticity

### True / False

- 1) The article says rats in a laboratory had a race. T / F
- 2) Scientists built custom-made cars for rats to drive. T / F
- 3) The rats seemed to like driving. T / F
- 4) Some of the rats crashed their cars when they hit the road. T / F
- 5) Researchers wanted to find out more about how rats developed skills. T / F
- 6) Some rats were given lots of toys, while other rats had no toys. T / F
- 7) Rats were given a reward of cereal if they drove well. T / F
- 8) Neuroplasticity is how the brain responds when we touch plastic. T / F

### Synonym Match

(The words in **bold** are from the news article.)

- |                             |                     |
|-----------------------------|---------------------|
| 1. <b>metaphor</b>          | a. enjoy            |
| 2. <b>literal</b>           | b. shape            |
| 3. <b>tiny</b>              | c. exact            |
| 4. <b>get a kick out of</b> | d. investigate      |
| 5. <b>hit the road</b>      | e. enhanced         |
| 6. <b>explore</b>           | f. reaction         |
| 7. <b>cognition</b>         | g. figure of speech |
| 8. <b>enriched</b>          | h. leave            |
| 9. <b>form</b>              | i. perception       |
| 10. <b>response</b>         | j. miniature        |

### Discussion – Student A

- a) What do you think about what you read?
- b) What do you think of driving?
- c) How good are you at learning new skills?
- d) Do you still like playing with toys?
- e) In what kinds of environments do you learn faster?
- f) What would you like to know about neuroplasticity?
- g) What could we get rats in cars to do?
- h) What questions would you like to ask the scientists?

## Phrase Match

- |                                            |                               |
|--------------------------------------------|-------------------------------|
| 1. The metaphor "rat race" may soon have   | a. the road                   |
| 2. teaching rats to drive a tiny, purpose- | b. the engines                |
| 3. rev                                     | c. test rodents               |
| 4. get a kick                              | d. neuroplasticity            |
| 5. hit                                     | e. a more literal meaning     |
| 6. lab                                     | f. reorganize connections     |
| 7. The other                               | g. out of it                  |
| 8. correlate driving                       | h. rats                       |
| 9. complex environments enhanced           | i. with a sweet cereal reward |
| 10. the brain's ability to form and        | j. built car                  |

## Discussion – Student B

- What do you think of rats?
- Why are rats always used in laboratory tests?
- Are you part of the rat race?
- What do you think of rats racing each other in cars?
- Why do you think rats might like driving?
- What things do you get a kick out of?
- Cars have doors, so why do we 'jump' into them?
- What do you have an intense motivation to do?

## Spelling

- The atmpeohr "rat race"
- ursnecineitost Dr Kelly Lambert
- car-driving oedrnts
- the teacurres not only learned to rev
- rev the engines of their miniature eivlches
- revving the 'yleer engine'
- find out how their gctinioon developed
- toys and mpnacionos
- trained the rats to rerolctae driving
- a sweet recela reward
- the more cedeinrh environment
- enhanced eyrlittacniosup

### Answers – Synonym Match

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

## Role Play

### Role A – Rat Race

You think "rat race" is the best rats idiom. Tell the others three reasons why. Tell them what is wrong with their idioms. Also, tell the others which is the worst of these (and why): "to smell a rat," "to rat on someone" or "Rats!".

### Role B – To Smell a Rat

You think "to smell a rat" is the best rats idiom. Tell the others three reasons why. Tell them what is wrong with their idioms. Also, tell the others which is the worst of these (and why): "rat race," "to rat on someone" or "Rats!".

### Role C – To Rat on Someone

You think "to rat on someone" is the best rats idiom. Tell the others three reasons why. Tell them what is wrong with their idioms. Also, tell the others which is the worst of these (and why): "to smell a rat," "rat race" or "Rats!".

### Role D – Rats!

You think "Rats!" is the best rats idiom. Tell the others three reasons why. Tell them what is wrong with their idioms. Also, tell the others which is the worst of these (and why): "to smell a rat," "to rat on someone" or "rat race".

## Speaking – Rat Idioms

Rank these with your partner. Put the best rat idioms at the top. You may have to research the meanings. Change partners often and share your rankings.

Rats!	To look like a drowned rat
To smell a rat	To rat on someone
Rat race	Like a rat up a drainpipe
You dirty rat	Like rats from a sinking ship

### Answers – True False

1	F	2	T	3	T	4	F	5	T	6	T	7	T	8	F
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Answers to Phrase Match and Spelling are in the text.