

# Welcome to the MASTERCLASSES QUIZ!

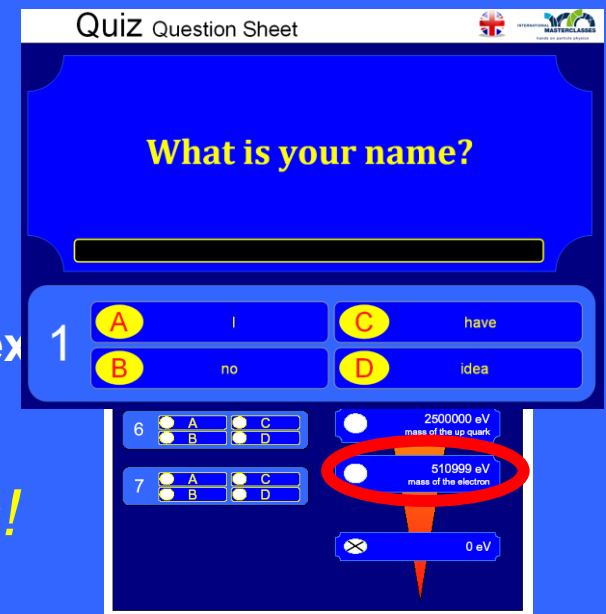
## Rules of the Game

- 7 questions, 4 answers to choose (A,B,C,D)
- **mark your answer on your answer sheet before the timer ends!**
- moderators will then reveal the correct answer
- if you have answered correctly, you may **tick off the next energy level**

*Let's check which energy level you can reach!*

*Please note:*

- *this quiz is for fun, not for competition!*
- *we won't compare results*



The screenshot shows the 'Quiz Question Sheet' interface. At the top, it says 'Quiz Question Sheet' and has logos for the UK flag and 'INTERNATIONAL MASTERCLASSES hands on particle physics'. The main question is 'What is your name?' with a text input field below it. Below the question are four answer options: A: I, B: no, C: have, and D: idea. Below the answer options are three question cards. The first card is for question 6, 'mass of the up quark', with options A, B, C, and D. The second card is for question 7, 'mass of the electron', with options A, B, C, and D. The third card is for question 8, '0 eV', with a radio button and a '0 eV' label. A red circle highlights the radio button for question 7, and a red arrow points to the '0 eV' label.



**Welcome to the  
MASTERCLASSES QUIZ!**

**Ready?**

# Quiz Question Sheet





## Which particle is the mediator of the Strong Force?



1

A

Neutralino

C

Gluon

B

Snail

D

Pigsino

# Quiz Question Sheet





**What percentage  
of all the matter and energy  
in our Universe do we know  
almost nothing about?**



2

A

13%

C

100%

B

96%

D

32.8%

# Quiz Question Sheet





**Which of the following is an experiment at the LHC?**



3

A

ALICE

C

OPAL

B

KATE

D

FLUFFY



# Quiz Question Sheet





**Which two people won the Nobel Prize for Physics in 2013?**



4

**A**

Stephen Hawking & Marie Curie

**C**

Francois Englert & Albert Einstein

**B**

Peter Higgs & Stephen Hawking

**D**

Peter Higgs & Francois Englert

# Quiz Question Sheet





**Which of the following technological innovations was invented at CERN?**



5

**A**

The Teleporter

**C**

4G mobile phones

**B**

The World Wide Web

**D**

Sharks with lasers on their heads

# Quiz Question Sheet





**During a long run, where the proton beams might circulate for up to 10 hours, how far will these protons have travelled?  
(if they have not interacted of course)**



6

**A**

The distance from CERN to the sun and back

**C**

The distance from CERN to Neptune and back

**B**

The distance from CERN to the center of Geneva

**D**

The distance around the circumference of the Earth

# Quiz Question Sheet





## FINAL QUESTION:

Which elementary particle is most common in your body?



7

A

Up Quark

C

Electron

B

Down Quark

D

Bottom Quark



## End of Quiz

*What's your energy level?*

*We hope you had fun!*