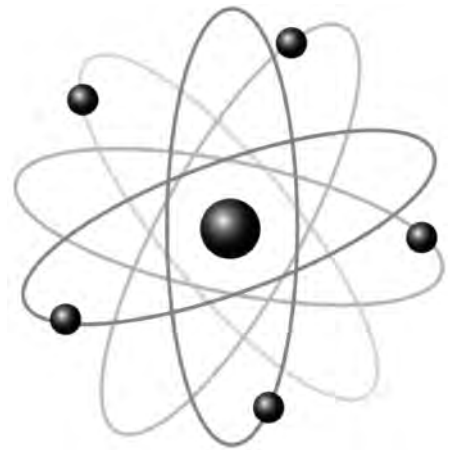


Test your knowledge in experimental sciences!

With the following questions you can test your knowledge of facts concerning experimental physics. What you have learned during the entire school year will help you. If you are able to answer the questions, you will get a certificate, the EDDL!

Anhand der folgenden Fragen kannst du am Ende des Schuljahres testen, ob du dir das Wichtigste aus der Experimentalwissenschaft Physik gemerkt hast! Wenn du alle Fragen richtig beantwortest, bekommst du ein Zertifikat, das EDDL!



EDDL:

Experimental Desk
Driving Licence

Chapter 1: Electromagnets and electric motors

- 1) How does electromagnetism develop?
- 2) Which uses of electromagnets do you know?
- 3) How does an electric motor work?
- 4) What special function does the commutator have?

Chapter 2: Power generation

- 1) How does a dynamo work?
- 2) How is electricity generated in power plants?
- 3) How can electricity be changed?
- 4) Name and describe the application of a transformer!

Chapter 3: Electrical engineering

- 1) What electrical equipment does your favourite band use?
- 2) What are circuit breakers and fuses for?
- 3) Describe electronic components you know!
- 4) How does an electronic time switch work?

Chapter 4: From micro to nano

- 1) How do computers "think"?
- 2) Name and explain logic gates!
- 3) Are robots really intelligent?
- 4) What opportunities does nanotechnology offer?

Chapter 5: Light and Shadow

- 1) How do I recognize that light spreads in straight lines?
- 2) How does a solar eclipse develop?
- 3) Name the characteristics of a mirror!
- 4) Why does a spoon seem to be bent in a glass of water?

Chapter 6: Optics in nature and technology

- 1) Why are the characteristics of a concave mirror and a convex lens similar?
- 2) What is a convex mirror for?
- 3) How do you get a correctly exposed, sharp picture?
- 4) How is a simple telescope built?

Chapter 7: Physics with the rainbow

- 1) Why does an object look green for instance?
- 2) How does a TV-set with a picture tube make all colours out of red, green and blue?
- 3) Name different electromagnetic waves and their use!
- 4) What are photons?

Chapter 8: Rollercoaster

- 1) When you go on a rollercoaster, why do you sometimes feel as if you were flying?
- 2) Describe the ideas of acceleration and deceleration!
- 3) What is the formula of the centripetal force?
- 4) Who developed the formula $F = m \cdot a$ in 1680?

Chapter 9: Voyage to space

- 1) What is a black hole?
- 2) Who discovered gravity?
- 3) How high is the escape velocity on Earth?
- 4) What planets are there in our solar system?

Chapter 10: "Radiant" physics

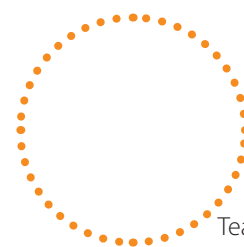
- 1) How does an atomic power plant produce electricity?
- 2) What are the isotopes of hydrogen called?
- 3) Who discovered nuclear fission?
- 4) Which towns were hit by atomic bombs in 1945?

Vocabulary

acceleration	<i>Beschleunigung</i>	formula	<i>Gleichung</i>
application	<i>Anwendung</i>	fuse	<i>Sicherung</i>
atomic bomb	<i>Atombombe</i>	gate	<i>Gatter</i>
atomic power plant	<i>Atomkraftwerk</i>	gravity	<i>Gravitation</i>
to bend	<i>biegen</i>	to hit	<i>schlagen, einschlagen</i>
black hole	<i>schwarzes Loch</i>	hydrogen	<i>Wasserstoff</i>
characteristics	<i>Eigenschaften</i>	idea	<i>Idee, Begriff, Vorstellung</i>
centripetal force	<i>Zentripetalkraft</i>	isotope	<i>Isotop</i>
circuit breaker	<i>Schutzschalter</i>	nanotechnology	<i>Nanotechnologie</i>
concave mirror	<i>Hohlspiegel</i>	photon	<i>Photon</i>
convex lens	<i>Sammellinse</i>	picture tube	<i>Bildröhre</i>
convex mirror	<i>Wölbspiegel</i>	power plant	<i>Kraftwerk</i>
deceleration	<i>Verzögerung</i>	robot	<i>Roboter</i>
to develop	<i>entstehen</i>	rollercoaster	<i>Achterbahn</i>
dynamo	<i>Dynamo, Fahrraddynamo</i>	solar eclipse	<i>Sonnenfinsternis</i>
electrical engineering	<i>Elektrotechnik</i>	solar system	<i>Sonnensystem</i>
electromagnetism	<i>Elektromagnetismus</i>	in straight lines	<i>geradlinig</i>
escape velocity	<i>Fluchtgeschwindigkeit</i>	telescope	<i>Fernrohr, Teleskop</i>
to expose	<i>aussetzen, belichten</i>	time switch	<i>Zeitschaltuhr</i>
correctly exposed	<i>richtig belichtet</i>	transformer	<i>Transformator</i>
fission	<i>Spaltung</i>	TV-set	<i>Fernseher</i>
nuclear fission	<i>Kernspaltung</i>	wave	<i>Welle</i>

The student _____ has achieved the Certificate EDDL.
(name)

Date: _____ Teacher's signature: _____



Teacher's stamp