

## 2. STUDYING CHEMISTRY

### 1. SPEAKING. Grammar revision.

#### a) Underline the correct form of the verb.

*Example: What do you study / are you studying?*

1. Where do you come / are you coming from?
2. Where do you live / are you living at the moment?
3. Why are you studying / do you study chemistry / biochemistry?
4. What languages do you learn / are you learning?
5. How many hours of classes do you have / are you having every week?
6. What do you do / are you doing in your free time?
7. How do you feel / are you feeling right now?
8. Do you go / are you going to the party or to a pub tonight?
9. What do you do / are you doing on Sunday afternoon?
10. What time do you usually get up / are you usually getting up?

#### b) Then work in pairs. Ask and answer these questions.

**Transform these questions, putting in front of them phrases:**

*Dou you know...?/ Can you tell me...?/ I wonder.../ I would like to know...*

### 2. SPEAKING. Life of a student.<sup>1</sup>

#### Vocabulary:

major (adj.+n) – hlavní obor

My major is ... I major in ...

minor (adj.)– vedlejší obor

My minor is .... I minor in ...

with concentration on ... - se zaměřením na

graduate from a university (v.+n.)– absolvovat univerzitu

**Work with your neighbour (A/B). Read a text about a student named Danny Rife.**

**You don't have the same information.**

**Read the text aloud. Ask and answer questions about Danny Rife. Use the right tense.**

*Example: A: He comes from ... (Where?)*

*Where does he come from?*

**B: He was born in Rhode Island.**

**He is studying (Where?) ...**

**A.** Hello. Let me introduce Danny Rife. He comes from.....  
(Where?). Right now, he is studying at California State University. He **majors** in  
..... (What?) and his **minor** is biology with concentration on  
botany. The course started three years ago. He's learning modern languages - English and  
Russian, and he also knows a little Spanish, so he knows ..... languages  
(How many?) At the moment he's living at the halls of residence. After he **graduates from**  
the university, he's planning .....(What?).. He likes  
playing volleyball, softball, and tennis for fun. He is also keen on  
..... (What?).

**B.** Hello. Let me introduce Danny Rife. He comes from Coimra, Portugal. Right now, he is studying..... (Where?). He majors in chemistry and his minor is biology with concentration on botany. The course started..... (When?). He's learning modern languages - English and Russian, and he also knows a little Spanish, so he knows four languages. At the moment he's living..... (Where?). After he graduates from the university, he's planning to teach chemistry at high school. He likes..... (What?). He is also keen on listening to all kinds of music, going to the movies, and hanging out with friends.

**3. Science quiz. Match the sciences to their areas of study.<sup>2</sup>**

1 anthropology	a environment
2 biology	b human mind and behaviour
3 chemistry	c language
4 ecology	d living things
5 economics	e matter and forces
6 linguistics	f money, industry and culture
7 mathematics	g numbers, quantities and shapes
8 meteorology	h people, society and culture
9 physics	i substances and their reactions
10 psychology	j weather

**Now ask and answer questions.**

**Example:**

*A: What is the subject of anthropology? / What does anthropology study?*

*B: The subject of anthropology is to study people, society and culture. / Anthropology is a science which studies people, society and culture.*

**4. How do we call scientists who specialize in these areas of study?**

**Example:** 1 anthropology - anthropologist

2 biology -

3 chemistry -

4 ecology -

5 economics -

6 linguistics -

7 mathematics -

8 meteorology -

9 physics -

10 psychology -

## 5. LISTENING. Lecture: Introduction to Chemistry (MIT Open Courseware).<sup>3</sup>

### Vocabulary:

participate in the class (v+n)	účastnit se vyučování
cover / deal with chemistry topics (v+n)	zabývat se chemickými tématy
graduate from a college (v+n)	absolvovat univerzitu
science (n)	věda
scientist (n)	vědec
scientific (adj)	vědecký
reaction occurs	reakce probíhá
get points in the exam	získat body ve zkoušce
properties of matter (n+prep+n)	vlastnosti hmoty

### a) Listen to the first part of the lecture (0:00-06.05)-answer these questions:

- 1) What college did both the lecturer, professor Cathy Drennen, and the actress Klisa Kudrow attend?
- 2) What did Lisa Kudrow major in at the college?
- 3) What did the lecturer major in?
- 4) Did the lecturer like chemistry at high school?
- 5) Why did the lecturer take freshman (first-year) chemistry at the university?

### b) Watch another part (06.05-8.24).

What topics is this the lecturer covering in the course this semester? Take notes.

### c) Watch the last part (8.24-8.46).

Note down all kinds of chemistry the lecturer mentions.

## 6. READING. How do scientists work?<sup>4</sup>

### a) Form correct questions about the work of a scientist:

1. What instrument / the scientist / use?

Question:

Answer:

2. What / the instrument / good / for?

Q:

A:

3. What / the scientist / want to find out?

Q:

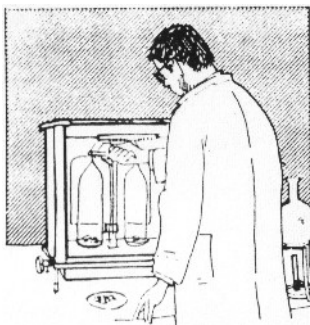
A:

4. What / the scientist / study?

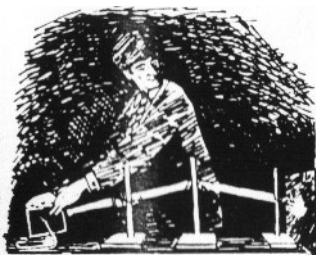
Q:

A:

### b) Now read the text about the work of a chemist (Student A), a physicist (Student B) and a biologist.<sup>3</sup> Underline all words that you don't understand and find them in the dictionary. Then answer these questions. Take notes.



This man is a chemist. He is using a balance to weigh some copper sulphate crystals. Beside him is the apparatus which is used to make the crystals. Copper sulphate ( $\text{CuSO}_4$ ) is composed of three elements – copper, sulphur and oxygen. It is a compound. Compounds are substances which consist of two or more elements. Chemists not only analyse compounds but also combine elements to form compounds.




This man is a physicist. He wants to find out something about the colours in the spectrum. He is using lenses and a prism to produce these colours from a beam of white light. Physicists study not only light but also sound, heat and electricity.



This woman is a biologist. She is using a microscope to examine a blood sample. She wants to find out the number of red blood cells in the sample. She can only see these cells through a microscope because they are so small. A microscope is an instrument which magnifies very small objects. A biologist studies all forms of life and often needs the help of a microscope. Some living things consist of only one cell.

### c) Find partners from the other group (Student A/B/C). Tell them the answers to your questions. From your notes, describe the work of a scientist. Compare the three people. What do they have in common? What are the differences?

## 7. HOMEWORK: PAST SIMPLE AND CONTINUOUS

past simple – minulý čas prostý	past continuous – minulý čas průběhový
<b>Positive and Negative:</b> I/you /he/ we/ they finished yesterday. . didn't finish (did not) <b>Question:</b> When did I/you /he/she/it finish? we/ they <b>Irregular past:</b> He went to school. etc. (go – went – gone)	<b>Positive and Negative:</b> I /he/she/it was working. wasn't (was not) We/you/they were working. weren't (were not) <b>Question:</b> Where was I/he/she/it working? were we/you/they
<b>- děj poběhl v minulosti, ukončené When?</b> When did you graduate from the University? In 1998. When I was young, I had a cat. <b>VÝRAZY: yesterday, last week, in 1998</b> <b>past × present perfect</b> - čas předpřítomný - minulý děj zasahující do přítomnosti Have you ever been to Australia? No, never. During his life, Tom has written five books. <b>How long</b> have you been studying chemistry? <b>For</b> two years. / <b>Since</b> 1998. <b>just, already, yet, ever, never, recently</b>	<b>- déle trvající děj v minulosti, důraz na průběh</b> What were you doing in Tim's room all that time? I was reading to him. <b>- přesně určený okamžik v minulosti</b> At 10 o'clock last night I was playing tennis. <b>at 10 o'clock last night, this time yesterday</b> <b>- právě probíhající děj byl něčím přerušen.</b> We were having supper when the phone rang. having supper 

### a) Choose the correct form of the verbs (past simple / past continuous / present perfect).<sup>5</sup>

- 1) Jane *was waiting* (wait) for me when I *arrived* (arrive).
- 2) What .....(you/do) this time yesterday? I was asleep.
- 3) How fast .....(you/drive) when the accident .....(happen)?
- 6) Yesterday I ..... my keys. (lose)
- 7) I ..... (walk) along the street when suddenly I .....(hear) footsteps behind me. Somebody ..... (follow) me. I was frightened and I .....(start) to run.
- 9) A car ..... (stop) and the man ..... (get) out.
- 10) ..... (you/go) out last night? No, I was too tired.
- 11) During my lifetime I ..... (visit) sixteen countries.
- 12) Is Helen still here? – No, she..... out. (just / go)
- 13) It ..... (rain) since yesterday.

### b) Write questions for these answers. Then form negative sentences.

**Example: A. Where did you grow up?**

**B. I grew up in Perth.**

**We didn't grow up in Perth.**

1. A: When .....this course?  
B: This course? I started five years ago.
2. A: Where ..... when the dog attacked them?  
B: The children were playing in the garden.
3. A: ..... by cheque?  
B. No, I paid by credit card.
4. A. Where .....yesterday?  
B. Tom went to the bank yesterday.

<b>Week 2 – Vocabulary – Studying Chemistry</b>	
My major / field of study is ... I major in ...	Můj studijní obor je ...
major /minor (n)	hlavní/vedlejší obor
with concentration on ...	se zaměřením na ...
I share a flat with another student.	Sdílím byt s jiným studentem.
I'm currently staying at the halls of residence.	V současné době bydlím na koleji.
graduate from a university (v+n)	absolvovat univerzitu
with concentration on ... (n+prep.)	se zaměřením na ...
chemist (n)	chemik
biologist (n)	biolog
physics (n)	fyzika
physicist (n)	fyzik
biochemist (n)	biochemik
mathematics (n)	matematika
matematician (n)	matematik
ecology (n)	ekologie
ecologist (n)	ekolog
participate in the class (v+n)	účastnit se vyučování
cover / deal with chemistry topics (v+n)	zabývat se chemickými tématy
graduate from a college (v+n)	absolvovat univerzitu
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properties of matter (n+prep+n)	vlastnosti hmoty
The subject of chemistry is to study substances and their reactions.	Předmětem chemie je studovat látky a jejich reakce.
Chemistry is a science which studies substances and their reactions.	Chemie je věda, která studuje látky a jejich reakce.

**Adapted from:** <sup>1</sup> John and Liz Soars, Mike Sayer. *New Headway Pre-Intermediate*. OUP 2000.

<sup>2</sup> *Key words in science & technology*. Ed. by Bill Mascull. London : Harper Collins, 1997.

<sup>3</sup> MIT Open Courseware. Available at

<http://ocw.mit.edu/courses/chemistry/5-111-principles-of-chemical-science-fall-2008/video-lectures/lecture-1/>

<sup>4</sup> Bates, Martin and Dudley-Evans, Tony: *Nucleus of General Science*.

<sup>5</sup> Oxeden, Clive. *New English File Teacher's Book Intermediate*. Oxford: OUP, 2006.