Subject	:	Chemistry
Title	:	**Improving Learning Outcomes with Virtual Chemistry Laboratory**
Target Group	:	Teachers of chemistry in the Secondary (French and English)

Domain	:	- Teacher Specialized Professional Practice
Competency	:	- Invests the various resources associated with the subject of specialization in his/her profession practices

Objective : At the end of this training, teachers will be able to design lesson plans by integrating virtual chemistry laboratory

Description : This training module will target using virtual labs as chemistry laboratory is extremely needed in the learning process. Labs are seen as places where students learn and build their knowledge by applying theory, research and scientific development. However, chemistry experiments have some limitations in the real laboratory, such as students using hazardous and relatively expensive tools and chemicals and it takes more time to prepare and conduct experiments.

This training aims to help trainees to:

- develop experimental protocols in line with program objectives to develop understanding of scientific content, problem-solving skills, scientific processes and understanding of the nature of science,

- to differentiate between the types of experiments (demonstrations, practical work done by the students),

- write reports that allow students to identify problems, develop answers and

	Training Center	Date	Timing
54-1	Normal School-Beirut - Bir Hassan	19 , 26 / Oct / 2019 - 25 / Jan / 2020	8:30-13:30
54-2	Normal School-Anout	16 , 23 / Nov / 2019 - 07 / Mar / 2020	8:30-13:30

Trainer : **Samar Zaitoun**

Remarks : Trainees are encouraged to bring their laptops, if available.

Subject	: Chemistry
Title	: **Improving Learning Outcomes with a Virtual Chemistry Laboratory**
Target Group	: Teachers of chemistry in cycle 3 (French and English)

Domain	: - Teacher Specialized Professional Practice

Competency	: - Invests the various resources associated with the subject of specialization in his/her profession practices

Objective	: At the end of this training, trainees will be able to design lesson plans by integrating virtual chemistry laboratory.

Description :	This training module will target using virtual labs as chemistry laboratory is extremely needed in the learning process. Labs are seen as places where students learn and build their knowledge by applying theory, research and scientific development. However, chemistry experiments have some limitations in the real laboratory, such as students using hazardous and relatively expensive tools and chemicals and it takes more time to prepare and conduct experiments. The training module will discuss: - description of virtual laboratories environments - examples of virtual labs environments in several repositories: how to select appropriate experiments based on specific criteria. - how to integrate virtual labs into direct instruction method (preparing lesson plans). - teachers will be asked to prepare several lesson plans by integrating the appropriate virtual chemistry laboratory experiments.

	Training Center	Date	Timing
55-1	Normal School-Beirut - Bir Hassan	2 , 30 / Nov / 2019 - 29 / Feb / 2020	8:30-13:30
55-2	Normal School-Anout	7 , 14 / Dec / 2019 - 01 / Feb / 2020	8:30-13:30

Trainer	: **Samar Zaitoun**

Remarks	: Trainees are encouraged to bring their laptops, if available.

| | | المادّة | : | الكيمياء |

المادّة : الكيمياء

العنوان : **إدماج تكنولوجيا المعلومات والاتصالات في تعليم مادّة الكيمياء**

الفئة المستهدفة : أساتذة مادّة الكيمياء في الحلقة الثالثة والمرحلة الثانوية

المجال	:	- الممارسات المهنية المتخصصة
الكفاية	:	- يوظّف طرائق تعليميّة وتعلّميّة متنوّعة مستندًا إلى نظريّات التّعلّم والتّعليم ومفاهيمها الملائِمة لخصائص المتعلّمين المتنوّعة وإلى مكتسباته التّدريبيّة

| **الهدف** | : | في نهاية هذه الدورة، يصبح المتدرّب قادرًا على إستثمار تكنولوجيا المعلومات والاتصالات لإنتاج أدوات ووسائل إيضاح بهدف رفع نواتج التعلّم في مادّة الكيمياء |

| **التوصيف** | : | سيتعرف أساتذة الكيمياء في خلال هذه الدّورة التّدريبيّة إلى الإمكانات الّتي توفّرها بعض الأدوات والبرمجيّات المرافقة لها واستثمارها في موضوعات متعددة من مادّة الكيمياء بما يزيد من عملية التفاعل بين المعلم والمتعلّمين وبين المتعلّمين أنفسهم، ويسهم في تبادل أسلس للمعلومات والحصول عليها بشكل أسرع ،أسهل ومحبّب أكثر. سيتدرّب المعلّمون في خلال ورشة العمل هذه، على استخدام البرمجيذات الآتية في إغناء عملية التعلّم/التّعليم: |

- Plickers
- Padlets
- Socrative
- Kahoot
- QR codes

التوقيت	التاريخ	مركز التدريب	
8:00-13:00	6, 13 كانون الاول 2019	دار المعلمين والمعلمات في بيروت - بئر حسن	56-1
8:30-13:30	7, 14 كانون الاول 2019	دار المعلمين والمعلمات - عاليه	56-2
8:30-13:30	7, 14 اذار 2020	دار المعلمين والمعلمات بعقلين - المختارة	56-3

المدرب / ة : **ذو الفقار زعيتر**

ملاحظات :