

This resource is intended to be read in conjunction with the case study on the project led by Derby College

This is what this resource is	A series of lesson plans which shows how the tutors structured a PBL episode, including their reflections following each PBL lesson
-------------------------------	---

This is what it is for	To demonstrate how lesson plans can be used to support PBL
------------------------	--

This is how it could be used	To deliver this PBL learning episode or adapted for a different PBL episode
------------------------------	---

# OUTSTANDING TEACHING, LEARNING AND ASSESSMENT TECHNICAL SKILLS NATIONAL PROGRAMME

## **PBL Brief 3: Backflow**

**Created by: Richard Hodgett and Mark Hudson (Stamford College) in partnership with Anglian Water**

**Output 11**

Managed by



In partnership with

**emfec**



Session 1

Date 2/10/17

Time 10:45 – 12:30

Richard Hodgett & Mark Hudson

Welcome

Today session is on **Problem Based Learning**.

We have been working closely with one of our employers Anglian Water (Water Safe); we have already had a Presentations and demonstration from the employer and the launch of their competition.

Our Problem that we would like you to solve, is the contamination of water supplies within your homes.

The class is split into five learners in each group: Learners have access to textbooks/Internet/VLE/Water regulations/Brochures/Coloured pens flip chart paper/

- What is back flow prevention?
- What can be put into practice?
- Why it is so important (is it important)?
- What is the reason (the bigger picture) for having the systems in place?

After every session, class discussions of learners/group findings, then each member of the group will fill in a log of achievement and what they have learnt from each session.

#### **Reflection on session.**

The first session was conducted with a group of Level 1 students who had only been at New College Stamford for 3 weeks, we found this style of learning was a little challenging to these students having not experience this method of learning previously. However, we recognise this and are involving students from a Level 2 group who have embraced their first session.

The session by Anglian Water on the 27<sup>th</sup> September was delivered over a 3 hour session, students embraced this first session via questioning & answers, some had previously researched the company, and some even asked about employment at this early stage.

Session 2

Date 2/10/17

Time 1:00 4:30

Richard Hodgett & Mark Hudson

Welcome

Today session is on **Problem Based Learning.**

We have been working closely with one of our employers Anglian Water (Water Safe); we have already had Presentations and demonstrations from the employer and the launch of their competition.

The Problem that we would like you to solve, is the contamination of water supplies within your homes.

The class is split into five learners in each group: Learners have access to textbooks/Internet/VLE/Water regulations/Brochures/Coloured pens flip chart paper/

- All these appliances have backflow prevention. What are they?
  - Basin
  - WC
  - Sink
  - Bidet
  - Cattle trough
  - Hose union bib tap
  - CWSC Cold water storage cistern
- List & explain the fluid categories
- List & explain the Auk Air gap and how many are there

After every session, class discussions of learners/group findings, then each member of the group will fill in a log of participation and what they have learnt from each session.

### **Reflection on session**

Some improvements have been noticed with the Level 1 students in their second session, they took more ownership, group work and responsibilities were much improved. The tasks undertaken by these students were of a good standard and in some cases exceeded expectations. This new group of students respond well to the practical aspects of the tasks rather than the theory at this stage.

The Level 2 Group exceeded both our expectations of coming up with some very strong ideas of the 'how, what why and when' they had a number of very good brain storming sessions in the classroom. There are a number of photographs including in the report which show students working well and working on tasks to a given time.

Session 3

Date 3/10/17

Time 9:00 - 11:00 / 13:45-15:15

Richard Hodgett & Mark Hudson

Welcome

Today session is on **Problem Based Learning.**

We have been working closely with one of our employers Anglian Water (Water Safe); we have already had Presentations and demonstrations from the employer and the launch of their competition.

The Problem that we would like you to solve, is the contamination of water supplies within your homes.

The class is split into five learners in each group: Learners have access to textbooks/Internet/VLE/Water regulations/Brochures/Coloured pens flip chart paper/

- Working within your teams
- Create a power point & poster
- Designing your rig
- Getting x3 Quotes from separate suppliers

After every session, class discussions of learners/group findings, then each member of the group will fill in a log of participation and what they have learnt from each session.

### **Reflection on session**

The creative aspect of this task seemed to really motivate our students, we saw a change in their performance and can do attitude. We noticed significantly that certain team members grew in their teams and became stronger and more independent students, this created natural team leaders per group, this allowed some groups to respond well to which gave stronger structured sessions.

Level 2 students took autonomy about their learning they adopted a driven can do attitude and were easily able to complete task whilst enjoying their learning.

It was noticed in the third session that all students were responding well to the independent style of learning.

Session 4

Date 10/10/17

Time 9:00 - 11:00 / 13:45-15:15

Richard Hodgett & Mark Hudson

Welcome

Today session is on **Problem Based Learning.**

We have been working closely with one of our employers Anglian Water (Water Safe); we have already had Presentations and demonstrations from the employer and the launch of their competition.

The Problem that we would like you to solve, is the contamination of water supplies within your homes.

The class is split into five learners in each group: Learners have access to textbooks/Internet/VLE/Water regulations/Brochures/Coloured pens flip chart paper/

Working within your teams

- Continue working on poster.
- Continue working on PowerPoint.
- Produce material list for building of your rig. (Deadline 3pm).

After every session, class discussions of learners/group findings, then each member of the group will fill in a log of participation and what they have learnt from each session.

### **Reflection on session**

On reflection students continue to work well, however we continue to emphasis on time constraints so materials could be ordered and the construction of the rigs could started.

Problems experience at this stage were a small of Level 1 students who were losing focus at times and needed tutor input to keep them back on target to achieve in the time. Level 2 were at all times enthusiastic, inquisitive and always pro-active in their engagement.

Session 5

Date 19/10/17

Time 11:15 – 12:45 – 13:45 15:30

Richard Hodgett & Mark Hudson

Welcome

Today session is on **Problem Based Learning.**

We have been working closely with one of our employers Anglian Water (Water Safe); we have already had Presentations and demonstrations from the employer and the launch of their competition.

The Problem that we would like you to solve, is the contamination of water supplies within your homes.

The class is split into five learners in each group: Learners have access to textbooks/Internet/VLE/Water regulations/Brochures/Coloured pens flip chart paper/

Working within your teams

- Complete the power point and email your tutor
- Presentation of power point & Poster
- Start to make the rig from your design

After every session, class discussions of learners/group findings, then each member of the group will fill in a log of participation and what they have learnt from each session.

### **Reflection on session**

The Level 1 & 2 students presentations were of a good standard for a level group, this gave use the opportunity to provide verbal feedback to each group which will improved their presentation skills for the future.

We notice at this stage of the project that students who were less academic seem to show more interest about the practical aspects of the tasks.