



Lesson Plan: Construction and the Built Environment

Time required for this lesson

60 minutes

Aim of the lesson

To introduce students to the Construction and Built Environment occupational sector.

Learning outcomes

By the end of this lesson students should:

- have a greater understanding of the range of jobs in the Construction and Built Environment occupational sector
- be more aware of the different skills and qualities required to work in Construction and the Built Environment
- have thought about what impact the 2012 Olympic Games will have on the Construction and Built Environment Industry
- have a greater awareness of what is happening nationally and locally in the area of Construction and the Built Environment

Resources required for this lesson

- 'Working in Essex, Southend and Thurrock – Construction and the Built Environment' leaflet obtained from www.stepon.org.
- Who Am I? Worksheet
- A Tall Tower Worksheet
- Construction and the Built Environment Quiz and Answer Sheet

Introduction

Explain to the students that this collection of labour market leaflets has been produced by Connexions and the Learning and Skills Council. It is intended to be used as an information, advice and guidance resource to help them understand more about the trends in the labour market in Essex and to support the introduction of the new 14-19 Diplomas. Its ultimate aim is to help students with their decision-making regarding their future career plans. This lesson is all about the occupational area of Construction and the Built Environment and can support students who are thinking about doing the Diploma in Construction and the Built Environment.



Activity 1

Who am I? (10 minutes)
Worksheet: Who am I?

Ask for six volunteers from the class. Give each of the volunteers one of the Who Am I? Jobs. These are all jobs that you would find in the Construction and Built Environment sector. Each volunteer has to read out one line of the job that they are at a time. After each line has been read out ask the class if they can guess the job that is being read out. Keep repeating this, reading out one line at a time until somebody has guessed the correct job.

End this session by explaining that these are just some examples of jobs in Construction and the Built Environment occupational area.

Activity 2

A Tall Tower! (20 minutes)
Worksheet: A Tall Tower

To undertake this activity you will need about 200 straws and 8 reels of sellotape, a packet of smarties (or any other sweets).

Divide the class into groups of three or four people. Give each group a copy of 'A Tall Tower Worksheet'. Each group has to use the straws and sellotape to build a tower. The winner is the tallest tower that can hold a sweet.

After all the towers have been built and the winner has been announced get feedback from the class on how they found this exercise. For example talk about what skills were used to complete the tower (e.g. design skills, teamwork, problem solving, construction skills); did different people in the group display different skills; did they think that these skills would be required for working in this industry.

Finally, ask the class what other skills they think are important and useful for jobs in the area of Construction and the Built Environment.

Activity 3

The 2012 Olympic Games (10 minutes)

Working in the same groups of three or four people ask each group to discuss and write down all of the different Construction and Built Environment jobs that will be needed to get ready for the 2012 Olympic Games. Try to get the class to think widely about this and not just list the trades but also the construction

management jobs that will be required such as Surveyors, Architects and Estimators.

When they have finished go round each group getting them to feedback just one of the jobs they have written down. Keep going round the groups until you have exhausted the list of jobs.

Explain to the class that there are skills gaps and shortages in the construction industry with their currently being 300,000 workers short of what it needs. Discuss the impact that this skills shortage could have on the preparation for the Olympic Games.

Activity 4

Construction and the Built Environment Quiz (15 minutes)

Worksheet: Construction and the Built Environment Quiz and Answer Sheet

Pupils will need a copy of the 'Working in Essex, Southend and Thurrock – Construction and the Built Environment' leaflet to be able to find the answers to the quiz.

The pupils can work on their own or in pairs to complete the quiz.

Give the pupils 10 minutes to complete the quiz and then spend the last five minutes going through the answers.

Plenary (5 minutes)

Working in pairs get each person to discuss with their partner what they have learnt about the area of Construction and the Built Environment in this session. Go round the class and ask everybody to feedback one of the things the person that they are working with has learnt from this session.

End the session by going back over the aims and learning outcomes of the lesson with the students and asking them if they have any questions about anything that they have done.

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Activity 1

Who am I? – Worksheet

Plumber

- I mend leaks, clear drains and fix drainpipes and gutters.
- I use techniques such as welding and soldering. I cut shapes and join piping and fittings made of different materials, such as copper and plastic.
- I also fit hot and cold supplies for baths, toilets and showers.
- I install and repair water and waste pipes, as well as central heating and air conditioning systems, in houses, offices, hospitals and factories.

Architect

- I make visits to building sites to inspect the work.
- I aim to design buildings which look attractive and give value for money.
- I prepare architectural drawings, often using computer-aided design.
- I plan alterations and extensions to existing buildings.
- I design a wide range of buildings.

Electrician

- I often follow wiring diagrams from architects.
- I install appliances such as cookers, as well as meters and fuse boxes.
- If there is a fault in the wiring I find where it is and repair it.
- In old houses, I strip out the old wiring and put in new cables.
- I wire houses, install power points, and connect up lights and water heaters.
- I put in and repair electrical wiring and fittings in homes, businesses, on building sites and other places, such as oil/gas rigs.

Building Surveyor

- I maintain records of each visit, and issue a completion certificate after the final satisfactory inspection.
- I check all over the building, including the loft, roof, foundations, drainage system, walls and ceilings.
- I provide a written report explaining any suggestions for alteration to the building.
- I give advice to clients on health and safety, planning law and building regulations.
- I am involved in property extensions and conversions to existing buildings.
- I ensure that building regulations are observed at the planning and construction stages of any new building.

Estate Agent

- I sort out the legal and financial side of the sale with solicitors, banks and building societies.
- I arrange viewing times and may take potential buyers to look at properties.
- I put together photographs and a description of the property, and advertise it in newspapers and on websites.
- I give the customer advice on the market price of their land or property.
- I arrange the buying, selling and leasing of land and property, such as houses and offices.

Bricklayer

- I may do decorative features in some jobs.
- I may help restore old buildings as well as working on new ones.
- I use different types of bricks, breeze blocks, concrete and mortar.
- I build and repair the walls of houses, office blocks, bridges, chimneys, tunnels etc.
- I spread the mortar and lay bricks with a pointing trowel, making sure they are straight with a level.

Activity 2

A Tall Tower Worksheet

In this activity, you are going to try to make as big a structure as you can, using straws. But that is not all. It has also got to be strong enough to carry the weight of a sweet.

You will need:

25 straws, some sellotape, a sweet.

Using the straws and sellotape, make a tower strong enough to hold the weight of a sweet.

Try to make it as tall as you can.

You might have to change your design a few times before you are happy with your structure.

Construction:

Think about the shape of your tower, how strong will it be and will it stand up by itself?

Judging:

The winning tower will be the tallest, free-standing structure.

Activity 4

Construction and the Built Environment Quiz - Worksheet

Using the 'Working in Essex, Southend and Thurrock Construction and the Built Environment' leaflet have a go at answering the questions below.

1. What percentage of the UK's total workforce is employed in the Construction and Built Environment sector?

2. How many jobs were created in the Construction and Built Environment industry between 1998 and 2005?

3. How many people are employed in the Construction and Built Environment industry in Essex?

4. What is the average annual salary for a plasterer?

5. How many new jobs will the Olympic Games create in the Construction industry?

6. What are some of the skills and qualities that would be useful for a career in the Construction and Built Environment industry?

7. How many year 11 school leavers started full-time employment or work based training in the Construction and Built Environment trades sector in 2006?

8. What is the website address for Apprenticeships in this sector?

Activity 4

Construction and the Built Environment Quiz - Answer Sheet

Using the 'Working in Essex, Southend and Thurrock Construction and the Built Environment' leaflet have a go at answering the questions below.

1. What percentage of the UK's total workforce is employed in the Construction and Built Environment sector?

5.7%

2. How many jobs were created in the Construction and Built Environment industry between 1998 and 2005?

131,100

3. How many people are employed in the Construction and Built Environment industry in Essex?

32,200

4. What is the average annual salary for a plasterer?

£21,545

5. How many new jobs will the Olympic Games create in the Construction industry?

5,000

6. What are some of the skills and qualities that would be useful for a career in the Construction and Built Environment industry?

Attention to detail, like practical work and being outdoors, good communicator, good team worker, don't mind working in noisy, dusty, dirty or wet areas

7. How many year 11 school leavers started full-time employment or work based training in the Construction and Built Environment trades sector in 2006?

381

8. What is the website address for Apprenticeships in this sector?

www.apprenticeships.org.uk

Notes

A large, empty rectangular area with a light beige background, intended for taking notes. The area is framed by a dark red border.