

Scheme of Work for an application of Number Level 2 portfolio in the vocational context of Early Years

Objectives

The objective of the assignment is to develop learners' understanding of some areas of Mathematics so that they are able to apply these concepts in a vocational setting.

The scenario of the assignment will be to use Mathematics to plan a day trip for the children in their care setting.

The assignment will link into the main vocational course where planning is being covered.

Mathematics: areas to develop

Area of mathematics	Context	Sessions available
Ratio and proportion	To work out the minimum number of adults needed to accompany the children	24 Finding equivalent fractions N6 Developing proportional reasoning
Money	To work out the cost of the meal, travel and other expenditure within a budget.	8 Using money
Decimals	To assist with money calculations	21 and 22 Adding and subtracting decimals: parts 1 and 2
Averages	To work out the mean cost of the lunches	S4 Understanding mean, median, mode and range
Time	To work out a timetable for the day	7 Converting times
Bar charts	To show the total expenditure	S4 Understanding mean, median, mode and range

Learning Mathematics in context



Other factors

Working within a constraint: a budget of £25 per head.

Problem solving: deciding on the most economical form of transport (based on Malcolm Swan's taxi problem).

Sources of information references in the Key Skills portfolio

1. Pizza menu from Activity 8 – *Using money*, with extra information:
 - children's portions half price
 - drinks 40% off.
2. Graph of the cost of transport for different numbers of passengers (learners to read off a graph posted on the college intranet).

Expected Outcomes

- Identify the class or group the learner is working with as part of the work placement, along with the age. Use the standard ratios to determine how many adults are needed.
- Work out child prices from the 'Pizza' menu, working out the child prices. Cost three child meals and three adult meals using the menus.
- Work out the total cost of the meals for the party using the choices. Use the total cost to work out the average cost.
- Create a timetable using the information given and build in stops. Draw a timeline.
- Use the pricing information about the different types of transport available to work out at least two different transport combinations. Compare the highest and lowest transport costs and work out the percentage difference between highest and lowest costs.
- Calculate the cost per head of the trip. Identify each item separately and draw a compound bar chart.

Scenario (for the learners)

Make a plan to take a party of children on a trip to the zoo, 30 miles from Huddersfield Technical College.

The journey time is 45 minutes and you should allocate at least 45 minutes for lunch.

The zoo has been divided into six separate areas, each of which can be covered in an hour:

Mammals – bears and pandas

Feeding the sea lions and sea-life show

Reptile house

Pets corner

Walk-through aquarium

Chimpanzees and gorillas

Elephants and giraffes

Build a timetable for the day, by choosing three or four areas to visits. Remember to include snack and toilet stops.

You need to work out the cost of the trip as you have a budget limit of £25 per child. This must cover all costs including travel, entrance fees and lunch at The Pizza Parlour.

