EDUC 230

EDUC230 TEST 1 **LESSON PLANNING** **25 marks - 25%**

NAME: _____ 23

Topics (choose ONE):

- (•) Primary Maths: Ratios. The idea is to get the kids to express comparative quantities in simple whole-number ratio terms such as 1:1, 1:2 and 2:5. You do not need to worry about getting them to convert those quantities into proportions in this lesson. They should, however, be able to reduce a ratio to its simplest form, e.g. 2:2 goes to 1:1. New vocab: 'ratio'.
- Primary TESOL: Contractions in which 'not' is part of the verb as the suffix 'n't' e.g. can't, don't, haven't. Assume that the kids have already come across the apostrophe in possessives; they now need to learn this other function of the apostrophe. There is no new vocab for this lesson.

LESSON PLANNING

(1) Write three lesson objectives, in learning outcomes format, which apply to both lesson plans.

At the end of this lesson, pupils will be able to

(i) Define the word "ratio".

(ii) Distinguish between the simplest form of a ratio and the non-reduced form.

(iii) Convert ratios to their simplest form.

(3 marks)

(2) Expository LP

(a) Write a Goal Statement for this lesson.

Today we are going to learn about ratios, a new way to compare two quantities. We will also learn how to reduce them into their simplest form.

(1 mark)

OK, but fingers are part of hands - better might be eg. fingers vs hands

(b) Briefly outline your Presentation in the form of 5 or 6 steps:

- ~~Put~~ a picture of a hand. Ask how many hands? How many fingers?
- State 1 hand to 5 fingers, then define ratios and introduce their format (write 1:5)
- Put another picture with 2 hands. Ask how many hands? how many fingers?
- Ask a student to write the ratio on the board. (2:10)
- By referring to picture 1, point out that GCF between 1 and 5 is 1. State that 1:5 is in its simplest form.
- By referring to picture 2, point out that GCF between 2 and 10 is 2 ($\neq 1$). State that we can reduce the ratio by dividing both numbers by GCF.

(3 marks)

(c) Write two exercises that would appear in your Practice task sheet. They must be at Bloom level 3 and be distinctly different.

(i) Match each ratio with its simplest form.

- 2:2
- 3:6
- 4:6
- 3:15
- 9:15

- 1:2
- 1:5
- 3:5
- 2:3
- 1:1

(ii) Write each ratio in its simplest form. Show your work.

18:24 = _____ 3:21 = _____

7:14 = _____ 9:27 = _____

very similar Qs

(4 marks)

(c) Write three 'recap' questions, one for each of your objectives, in order.

(i) Who can tell me the definition of a ratio?

(ii) Is 2:5 in its reduced form? what about 3:9?

(iii) What's the reduced form of 4:4? what about 2:10?

(1½ marks)

(2) Inductive approach

(a) Write a Goal Statement for this lesson.

Today we will discover a new way of comparing two quantities. We will figure out how to reduce it into its simplest form.

(1 mark)

(b) Devise an exercise at Bloom level 4 which will lead the pupils to discover the target rule. Include a 'punchline' in which the pupils arrive at a generalisation

Fruits	Numbers
Apples	24
Bananas	12
Strawberry	7
peach	3

a) Refer to the table above to fill the blanks.

1 - The number of Bananas compared to number of apples is ___ : ___

2 - The number of peaches compared to number of strawberries is ___ : ___

3 - The number of peaches compared to number of apples is ___ : ___

→ b) Find the Greatest common factor (GCF) between each two numbers in part a. What can you conclude? (5 marks)

Write a conclusion with blanks

1 - _____

2 - _____

3 - _____

c) Divide each set of two number by GCF

___ : ___ ___ : ___ ___ : ___

(c) What would be your three main points of focus for the Concept Attainment phase of the lesson?

1) Definition of ratio as a way to compare 2 quantities. and formalize ":" format
2) Reduced form has a GCF of 1
3) Devide by GCF to get the reduced form. (1½ marks)

(d) Point out problems that may arise when teaching this lesson inductively, and how teachers should deal with them.

~~Students may not discover out the~~ ~~like 12:24~~ ~~GCF is 12.~~ ~~Students might think it's 2 or 6.~~

1 – Students may not remember the GCF. Teachers should start the lesson by reminding them of GCF of two numbers.

2 – Students may be confused with fractions when they get the GCF and devide by it. Teachers in this case should focus on the format of ratio's ___ : ___ and compare it to the format of fractions $\frac{\text{numerator}}{\text{denominator}}$ to let the students distinguish between both. also misconception that $x/y = x \div y$ (right, as below)

~~– Students may write the number backwards together. like 24:12 instead of 12:24.~~ Teachers should remind students that we are comparing two quantities so it doesn't matter the order of numbers. Flipping numbers will keep the concept the same.

3 – Students may think that ___ : ___ (numerator / denominator)

Teachers should remind students that we are just comparing two ~~numbers~~ quantities and flipping both numbers keeps the ~~concept~~ idea the same 24:12 or 12:24. (5 marks)

better to avoid fractions altogether in this lesson

24 apples and 12 bananas is similar to 12 bananas and 24 apples.