Dear Teacher

I hope that the following lesson description will help to improve your teaching strategy in your classroom. It was particularly designed with you the teacher in mind. The methods used are fun, easy and cost effective. I hope you will find it useful and apply the methodology with a positive and enthusiastic approach.

Before we can begin any lesson we must understand the following:

WHAT IS MATHEMATICS?
Mathematics is a language that makes use of symbols and notations for describing numerical, geometric and graphical relationships. It is a human activity that involves observing, representing and investigating patterns and qualitative relationships in physical and social phenomena and between mathematical objects themselves. It helps to develop mental processes that enhance logical and critical thinking, accuracy and problem-solving that will contribute to decision-making. (quoted from the CAPS document)

Every Mathematics lesson should be **1 hour 24 minutes per day for Grades 1 to 3**.

SPECIFIC SKILLS
To develop essential mathematical skills the learner should:

- develop the correct use of the language of Mathematics;
- develop number vocabulary, number concept and calculation and application skills;
- learn to listen, communicate, think, reason logically and apply the mathematical knowledge gained;
- learn to investigate, analyse, represent and interpret information (quoted from the CAPS document)

---

### LESSON PLAN: FRACTIONS

<table>
<thead>
<tr>
<th>Subject</th>
<th>Mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content Area</td>
<td>Numbers, operations and relationships</td>
</tr>
<tr>
<td>Topic</td>
<td>Sharing leading to fractions</td>
</tr>
<tr>
<td>Concept</td>
<td>Solves and explain solutions to practical problems that involve equal sharing leading to solutions that include unitary and non-unitary fractions 1/2, 1/4, 3/4, 2/5</td>
</tr>
<tr>
<td>Educator</td>
<td>Lucrezia Williams</td>
</tr>
<tr>
<td>School</td>
<td>Irene Primary School</td>
</tr>
<tr>
<td>Grade</td>
<td>3</td>
</tr>
</tbody>
</table>
## Weighing of Content Areas in Foundation Phase

<table>
<thead>
<tr>
<th>Weighting of Content Area</th>
<th>Grade 1</th>
<th>Grade 2</th>
<th>Grade 3</th>
<th>Time per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numbers, Operations and Relationships*</td>
<td>65%</td>
<td>60%</td>
<td>58%</td>
<td>120 minutes</td>
</tr>
<tr>
<td>Patterns, Functions and Algebra</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>80 minutes</td>
</tr>
<tr>
<td>Space and Shape (Geometry)</td>
<td>11%</td>
<td>13%</td>
<td>13%</td>
<td>80 minutes</td>
</tr>
<tr>
<td>Measurement</td>
<td>9%</td>
<td>12%</td>
<td>14%</td>
<td>80 minutes</td>
</tr>
<tr>
<td>Data Handling (Statistics)</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>60 minutes</td>
</tr>
</tbody>
</table>

**Note:** This lesson plan is only part of an entire daily Mathematics lesson.

You should include as part of this lesson plan:

- Counting
- Mental Mathematics
- Consolidation of concepts
- Problem Solving
- Group work
- Independent Activities

<table>
<thead>
<tr>
<th>Content Area</th>
<th>Topic</th>
<th>Concept and skills for the year Grade 1</th>
<th>Concept and skills for the year Grade 2</th>
<th>Concept and skills for the year Grade 3</th>
</tr>
</thead>
</table>
| Numbers, Operations and Relationships       | Fractions   | N/A                                    | • Use and name unitary fractions in familiar contexts including halves, quarters, thirds and fifths  
|                                             |             |                                        | • Recognise fractions in diagrammatic form  
|                                             |             |                                        | • Write fractions as ½ half  
|                                             |             |                                        | • Use and name unitary and non-unitary fractions in familiar contexts including halves, quarters, thirds, sixths, fifths.  
|                                             |             |                                        | • Recognise fractions in diagrammatic form  
|                                             |             |                                        | • Begin to recognise that two halves or three thirds make one whole and that one half and two quarters are equivalent |
### Apparatus
- Liquorish
- Rulers
- Diagrams of fractions
- Fraction strips
- Activity Sheet

### Definition
A fraction is a part of a whole

**Slice a pizza, and you will have fractions:**

- \( \frac{1}{2} \) (One-Half)
- \( \frac{1}{4} \) (One-Quarter)
- \( \frac{3}{8} \) (Three-Eighths)

- The Numerator is the top number. It indicates the number of parts you have.
- The denominator is the bottom number. It indicates the number of parts the whole is divided into.
Teaching Methods

Discuss Fractions with the class. Ask a few questions to introduce the lesson.

- Do you like Liquorish?
- Is it healthy or unhealthy?
- What is it made from?
- Why do you think I chose Liquorish for a fractions lesson?
- How do we share it equally?
- How will we share the liquorish equally so that each person in the group gets the same size?
- What would you use to measure the liquorish so that you could share it equally?

Divide numbers with answers as fractions.

- Hold up the’ Hocus Pocus’ (fun bag) and children must guess what’s inside. They will each find a piece of Liquorish.
- Divide the children into groups of 3, 4, 5 or 6.
- Ask how many pieces each child received. The answer should be 1 piece each.
- Then the teacher will hand out 1 more pieces for the group to share.
- Each group should receive one for themselves and a remaining (extra) one.
- The learners must answer how they will share the extra piece amongst themselves in groups. The remaining piece of liquorice must be divided so that each child gets a piece.

- The teacher will work this out on the board using magnetic fractions similar to the shape and size of the liquorice explaining why the answer should be 1 and ¼; ½; ⅙; ⅓; ⅕; ⅛ etc... NOT 1 and a small piece.

- These diagrams below shows how the extra piece of liquorice will be divided by the learners so that it can be shared as a fraction amongst the groups. Each learner will receive their own piece of liquorice plus a fraction of the extra piece.

A group of 3 will receive 1 ⅓ pieces of liquorice

| ⅓ | ⅓ | ⅓ |

A group of 4 will receive 1 ¼ of liquorice

| ¼ | ¼ | ¼ | ¼ |

A group of 6 will receive 1 ⅙ of liquorice

| ⅙ | ⅙ | ⅙ | ⅙ | ⅙ | ⅙ |

- End this lesson by allowing the learners to eat the liquorice and then do the written activity.

Note: You can replace the liquorice with strips of paper measured out ahead of time.
REFERENCES:

www.mathsisfun.com
www.superteacherworksheets.com
www.primaryresources.co.uk
www.sparklebox.co.uk/sa
Worksheet 4.3: Fractions (fraction shapes)

1. What fraction is shaded and what fraction is not?

<table>
<thead>
<tr>
<th>Shaded: Not shaded</th>
<th>Shaded: Not shaded</th>
<th>Shaded: Not shaded</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Colour the following:

One half
Two thirds
One half
One half
Four fifths
One half
One half

What do you notice?
<table>
<thead>
<tr>
<th>Fraction</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\frac{1}{3}$</td>
<td></td>
</tr>
<tr>
<td>$\frac{1}{4}$</td>
<td></td>
</tr>
<tr>
<td>$\frac{1}{5}$</td>
<td></td>
</tr>
<tr>
<td>$\frac{1}{6}$</td>
<td></td>
</tr>
<tr>
<td>$\frac{1}{7}$</td>
<td></td>
</tr>
<tr>
<td>$\frac{1}{8}$</td>
<td></td>
</tr>
</tbody>
</table>