

LO1 STEM in Action
“MY BEST” - STEM LESSON

We are not looking for detailed lesson plans – just great ideas, lessons that go well (with why) and unusual ideas and approaches. The idea is to inspire others.

Lesson Plans

Lesson Title	Mobile applications PhotoMath in mathematics
STEM Topic	Science – Technology – Engineering – Maths – STEM (ALL) (Circle as appropriate)
Aims of the Session (Links to curriculum and qualifications?)	The use of mobile applications in mathematics, knowledge of the interactive environment PhotoMath The idea of this lesson is that students were able to use the application Photomath for the treatment of simple mathematical expressions, especially in the examples that he can not resolve itself. The advantage of this application to see especially for help with homework.
Group and Age	15 – 17
Lesson Description - Key ideas and/or novel approaches	Students will broaden their knowledge with the use of IT technology Students begin to use more mobile applications in mathematics homework. The example in the textbook take photos using PhotoMath and instantly have access to not only the correct result, but in particular a detailed process solutions. Students work in groups, preferably in pairs.
What do you like about this session?	The mobile application is uninteresting and diversification in abstract mathematics teaching. Students have favoured the involvement of IT technologies into any teaching and learning that happens to them engaging and interesting.
How does this Lesson cater for women or students from a minority ethnic background	Mobile applications are attractive to the general public, a minority ethnic group is neutral. Some underprivileged students may have trouble purchasing expensive so-called. "Smart" mobile phones or tablets.
Any other comments or suggestions	Students can use this application even when using the tablet. Applications currently handles basic mathematical operations and editing simple expressions, solve simple linear and quadratic equations, simple set of equations, and equations and inequalities with absolute value. In the future they accrue additional features. Mathematics is just through the application PhotoMath often becomes a hobby for students.

Attachment: Example of solving application **PhotoMaph:**

< Solving steps

$$\frac{9a^6b^{-5}}{c^{-3}} \div \left(\frac{3^{-1}b^3}{a^2c^{-4}} \right)^{-2}$$

STEP 1

$$\frac{9a^6b^{-5}}{c^{-3}} \div \left(\frac{a^2c^{-4}}{3^{-1}b^3} \right)^2$$

STEP 2

$$\frac{9a^6b^{-5}}{c^{-3}} \div \frac{(a^2c^{-4})^2}{(3^{-1}b^3)^2}$$

STEP 3

$$\frac{9a^6b^{-5}}{c^{-3}} \div \frac{(a^2)^2 \times (c^{-4})^2}{(3^{-1}b^3)^2}$$

< Solving steps

STEP 4

$$\frac{9a^6b^{-5}}{c^{-3}} \div \frac{a^{2 \times 2} \times (c^{-4})^2}{(3^{-1}b^3)^2}$$

STEP 5

$$\frac{9a^6b^{-5}}{c^{-3}} \div \frac{a^4 \times (c^{-4})^2}{(3^{-1}b^3)^2}$$

STEP 6

$$\frac{9a^6b^{-5}}{c^{-3}} \div \frac{a^4 \times c^{-4 \times 2}}{(3^{-1}b^3)^2}$$

STEP 7

$$\frac{9a^6b^{-5}}{c^{-3}} \div \frac{a^4 \times c^{-8}}{(3^{-1}b^3)^2}$$

STEP 8

$$\frac{9a^6b^{-5}}{c^{-3}} \div \frac{a^4c^{-8}}{(3^{-1}b^3)^2}$$

<p>STEP 9</p> $\frac{9a^6b^{-5}}{c^{-3}} \div \frac{a^4c^{-8}}{(3^{-1})^2 \times (b^3)^2}$	<p>STEP 26</p> $\frac{a^2b}{c^{-11}}$
<p>STEP 10</p> $\frac{9a^6b^{-5}}{c^{-3}} \div \frac{a^4c^{-8}}{3^{-1 \times 2} \times (b^3)^2}$	<p>STEP 27</p> $\frac{a^2b}{1 \times c^{11}}$
<p>STEP 11</p> $\frac{9a^6b^{-5}}{c^{-3}} \div \frac{a^4c^{-8}}{3^{-2} \times (b^3)^2}$	<p>STEP 28</p> $\frac{a^2b \times c^{11}}{1}$
<p>STEP 12</p> $\frac{9a^6b^{-5}}{c^{-3}} \div \frac{a^4c^{-8}}{3^{-2} \times b^{3 \times 2}}$	<p>STEP 29</p> $a^2b \times c^{11}$
<p>RESULT</p> a^2bc^{11}	<p>RESULT</p> a^2bc^{11}