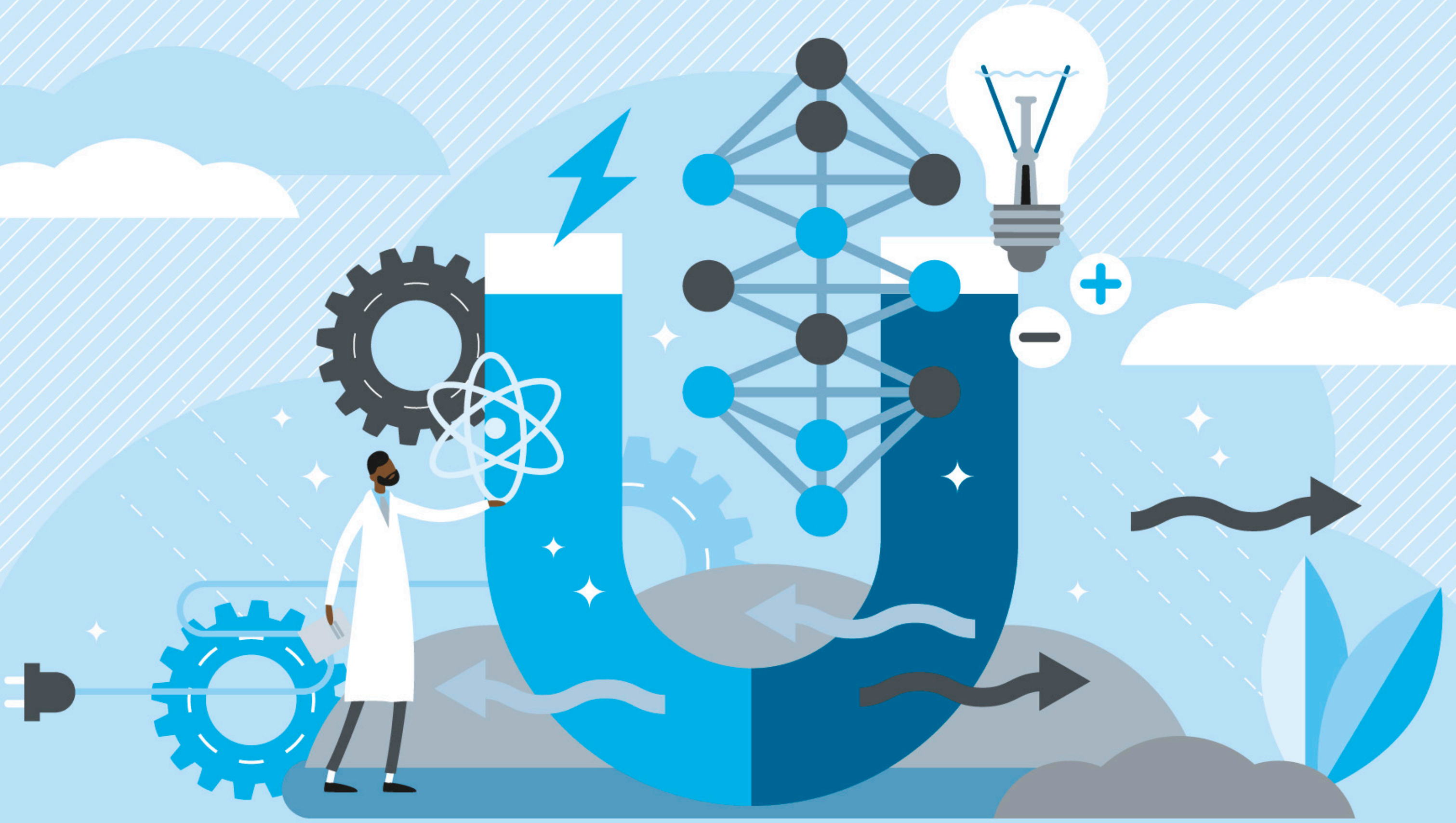
RESOURCE HANDOUT

2019 TRAINING WORKSHOP NO.2

PHYSICAL SCIENCES



GRADES 10-12

PILO

IMPROVING LEARNER PERFORMANCE

education

Department: Education
PROVINCE OF KWAZULU-NATAL

FET

Just-in-Time Training Workshop

2019: No. 2

Pre & Post - workshop activity

Physical Sciences

Endorsed by:

Jika iMfundo
what I do matters

education

Department:
Education
PROVINCE OF KWAZULU-NATAL

Physical Sciences: JIT Workshop 2 of 2019

Pre- & Post workshop activity

This activity consists of 4 questions. They all target some aspect of conceptual thinking. Answer the questions as fully as you can before the workshop in the time given. The most important part of this activity is the process of reflection that we will engage in after the workshop.

Question 1

An object falls from a certain height and reaches a velocity of **v** $m.s^{-1}$. At this point the kinetic energy of the object is $\mathbf{E_k}$ J. What will happen to the kinetic energy if the velocity increases to **3v** $m.s^{-1}$?

Answer before workshop

After workshop:

1.1. Check the answer you gave before the workshop. If you want to change your answer write your new response below:

1.2. What concept is the above question focusing on?

Question 2

An object falls from a certain height and reaches a velocity of **v** m.s^{-1}. At this exact moment in time a learner begins to measure the position of the object , **y** and the time **t**. She plots a graph of the position (**y**) with respect to time squared (**t^2**). Sketch the graph she plotted.

Answer before workshop

After workshop:

2.1. Check the answer you gave before the workshop. If you want to change your answer write your new response below:

2.2. What does the gradient of the line represent? Explain your answer by referring to a relevant equation.

Question 3

A $50cm^3$ solution of 1 $mol.dm^{-3}$ HCℓ is poured into a beaker. Draw a diagram that accurately represents the particles present in the solution.

Answer before workshop

After workshop:

3.1. Check the answer you gave before the workshop. If you want to change your answer write your new response below:

3.2. How would your answer differ if the solution was a 1 $mol.dm^{-3}$ solution of ethanoic acid with the same volume?

Question 4
What effect would the addition of Pb^{2+} ions have on the equilibrium position of the auto-ionisation reaction of water? Explain your reasoning

Answer before workshop

After workshop:

4.1. Check the answer you gave before the workshop. If you want to change your answer write your new response below:

4.2. How would your answer differ if you added ammonium chloride to beaker of distilled water?