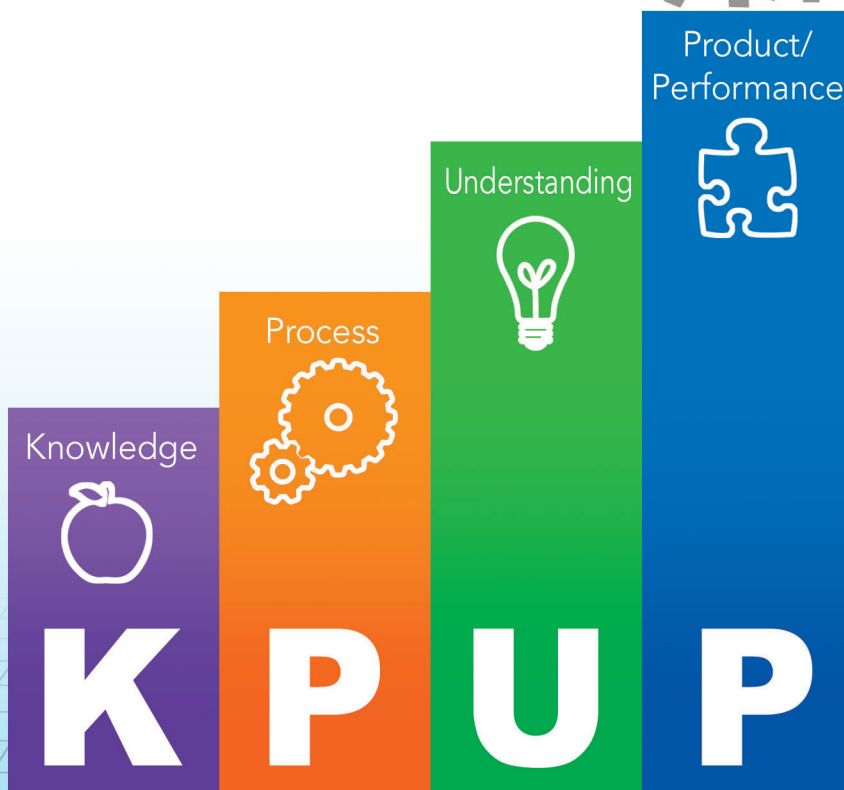


# K<sup>TO</sup>12 POINTERS

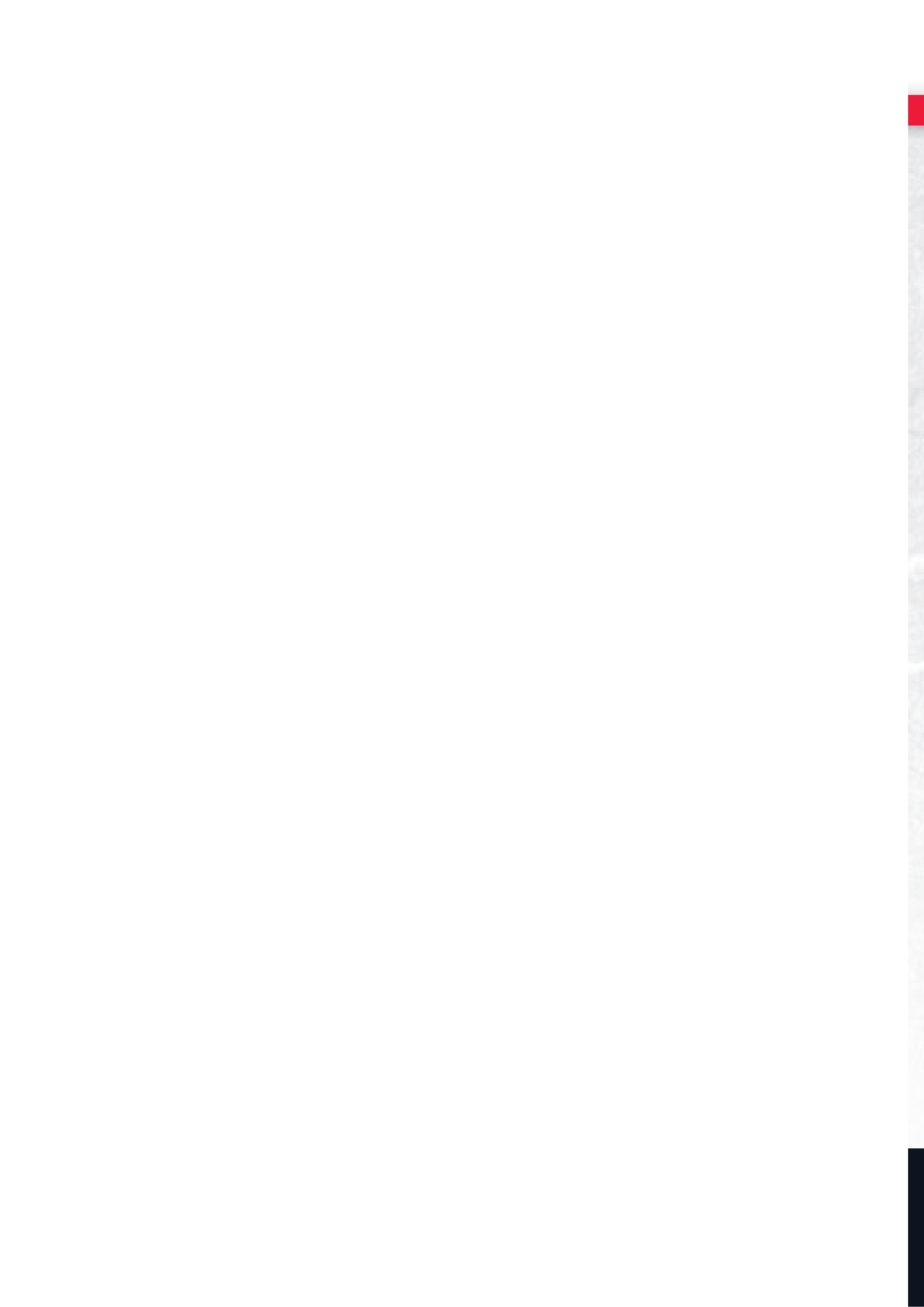


**HIGH SCHOOL**

**VOL. 2 NO. 1 AUGUST 2014**



**REX** The online educational portal  
for teachers, students, and parents  
**i** **INTERACTIVE**



## Contents

About Rex K to 12 Pointers on KPUP.....	4
Publisher’s Note.....	5
Standards-based Assessment .....	6
A Guide in Assessing KPUP.....	8
A Closer Look on How to Develop Assessment Questions and Activities .....	14
Examples of Clustered KPUP.....	18

## About Rex K to 12 Pointers on KPUP

**Dear Partners in Education,**

Greetings of peace!

Part of the Department of Education's implementation of the K to 12 Standards-based Education program is a mandate on Assessment (DepEd Order No. 73, s. 2012 – Guidelines on the Assessments and Rating of Learning Outcomes Under K-12 Basic Education Curriculum <http://www.gov.ph/downloads/2012/09sep/20120905-DepEd-DO-0073-BSA.pdf>), which includes a provision presenting the four levels of assessment popularly known as KPUP.

Assessment of students' learning outcomes may come in the form of exercise questions and projects. Formulating appropriate exercise questions and projects aligned to the level of learning outcomes and that will bring out or reveal these learning outcomes is where teachers say they sometimes face challenges and uncertainties.

There is a clamor from teachers for clarifications on how to properly implement KPUP in their classrooms. In light of this, Rex Book Store has endeavored to develop this additional teachers resource to shed light on KPUP – the K to 12 Pointers on KPUP. This reference material on KPUP will guide teachers on how to formulate questions following KPUP (KNOWLEDGE, PROCESS, UNDERSTANDING, PRODUCT/PERFORMANCE). This material also shows KPUP as found in Rex worktexts, per subject and per level. The full material may be accessed in the Rex Interactive website via [www.rexinteractive.com](http://www.rexinteractive.com).

We hope that through this thorough identification of KPUP in Rex worktexts that this new resource material offers, you would gain confidence and peace of mind that you need in becoming effective educators. We are one with you in aspiring toward a successful implementation of the K to 12 basic education program for the benefit of our students. May our concerted efforts be the light to others as well as the mirror that reflects it.

**Sincerely,**

**Rex Book Store**

Various online tools which make teaching and learning richer and more meaningful are just a few clicks away!

Log on to [www.rexinteractive.com](http://www.rexinteractive.com)

## Publisher's Note

A lot has been said on how the Philippine education system has deteriorated. But the fact is, schools are doing a much better job than they've ever done before. The difference is that the jobs that people need to do these days require much higher levels of numeracy, literacy, and critical thinking than the jobs that were available decades ago. This is where the disconnect comes from. So how do schools face up to this challenge? How do schools raise the level of achievement of students so that when the students leave school they will have the necessary knowledge and skills to be productive individuals?

Dylan Wiliam posits that schools can start by setting the learning goals and criteria for success for its students. Schools should be able to engineer effective classroom discussions, questions, and tasks that elicit evidence of learning and then provide feedback that moves learners forward. Schools and teachers should realize that they should activate students as instructional resources for each other, and activate students as owners of their own learning. All these strategies point to the use of assessment for learning or formative assessment as well as assessment of learning. Assessment for Learning is a type of assessment that *monitors student learning* to provide ongoing feedback that can be used by teachers to improve their teaching and by students to improve their learning. On the other hand, assessment of learning is when we *evaluate student learning* at the end of an instructional unit by comparing it against some standard or benchmark.

This issue will discuss assessment in a holistic view starting from formative to summative and to the National testing. Rex will provide examples of these different type of assessments in relation to the DepEd's KPUP levels of assessment. This issue will also contain examples of clustered KPUP in the five major subjects – Science, Math, English, Filipino, and Social Studies.

Through this issue of the Rex Pointers, I hope that Rex is able to help, even in a small way, by shedding light on KPUP and the assessment system as a whole.



**Don Timothy I. Buhain**  
Chief Operating Officer

## Standards-based Assessment

### Aligning Classroom Assessment to the National Testing

by Ester Talam  
Faculty, La Consolacion College

National testing, or sometimes called high-stakes end of the year assessment, is the assessment that measures student achievement of state standards, in our case the DepEd standards. This is just one of the tests that a student takes for the entire year. Other tests would be the day-to-day classroom assessment which could be considered formative and the periodic exams, also called summative assessment, which measure understanding for a particular period or topic. All these assessments should be measuring the same competencies. Unfortunately however, confusion may arise because the observed knowledge, skills, and processes measured by these assessments may vary. Admittedly, there are substantive differences in how the National Testing is developed versus how the classroom assessments are made. The challenge, therefore, is to align Classroom Testing to the National Testing without losing sight of the role and value of the classroom or formative assessment.

According to Schneider, Egan, and Julian (2013), to maximize student achievement, teachers and large-scale assessment developers need to: (1) have the same interpretation of standards, (2) identify the same types of student achievement as evidence of mastery of the standards, and (3) collect evidence using the same types of robust practices when building assessment. Clearly, one of the most important parts of developing assessment is the teacher's understanding of the learning competencies. In some cases, teachers and schools should be able to "unpack" the standards or learning competencies to properly grasp what knowledge or skills the curriculum developers or content experts want to develop in the competency. More importantly, schools and teachers should have the same interpretation of the results (scores) as the State. This is where feedback is not only necessary but crucial in the development of the assessment. Lastly, standards-based assessment necessitates different types of formative assessments.

#### **Purpose of Classroom Assessment:**

Teachers use classroom assessment to determine what students know and can do with regard to the DepEd standards and learning competencies. Summative assessment answers the question, "How well is the student performing on what the student should know?" With summative classroom assessment, the teachers usually base the evidence of student's knowledge with the correct answers the student makes then the teacher will transfer to a grading scale to show the depth of the student's knowledge or skill.

In designing classroom assessment, Ruiz-Primo et al. (2010) maintain that teachers need robust content knowledge and pedagogy skills as prerequisites in creating effective classroom assessments. Teachers who have limited content knowledge, pedagogy skills, or both are unable to build their assessments to understand gaps in student's understanding.

Various online tools which make teaching and learning richer  
and more meaningful are just a few clicks away!

Log on to [www.rexinteractive.com](http://www.rexinteractive.com)

### **Relationships Among Assessment Sources:**

Although the different assessment sources can have different intended sources, all should measure the understanding of the DepEd standards. The teachers should be able to triangulate the information to consistently show the real status of the student's proficiency. The knowledge, skills, and process measured by the classroom assessment will overlap with that of the periodic and the National testings. However, the classroom assessment should be able to cover these knowledge, skills, and process with more depth than the other two tests.

Teachers must understand the exit goals of the students in each grade level and key stages. Given the results of the formative and summative assessments, teachers should be able to predict how the students will perform in the National Testing. If and when the teacher's prediction is disconfirmed, then the teacher should investigate the source of the discrepancy.

### **Steps to Investigate Performance Difference Between Classroom and National Testing:**

Step 1: Compare What Is Being Measured

Step 2: Compare How Items Are Aligned to the DepEd Standards

Step 3: Review Student Work from Classroom Assessment

Finally, according to the USA National Board for Professional Teaching Standards (NBPTS) (as cited by Egan et al.) (2003), an accomplished teacher is one who is well versed in the uses and purposes of a variety of assessment tools, shares grading criteria with students prior to assessment, interprets assessment data accurately, and uses data gathered from varied sources of assessment to inform instruction. Central to these attributes are the teacher's ability to interconnect the standards, curriculum, instruction, and assessment.

## A Guide in Assessing Knowledge, Process, Understanding, and Performance/Product

by Carlo Magno, PhD  
Faculty, De La Salle University-Manila

Education in the Philippines has reformed to the K to 12 Enhanced Basic Education. Part of this reform is the development in the process of assessing student learning. The skills that need to be assessed in the classrooms are presented in a nomenclature on knowledge, process, understanding, and performance/product. This nomenclature was proposed in order to develop the necessary skills of schoolchildren. In the past curriculum, educators used different taxonomies that guided their assessment of students' learning such as the revised Bloom's Taxonomy, Gagne's Taxonomy, Stiggins and Conklin's Taxonomy, Marzano's Dimensions of Learning, DeBono's Six Thinking Skills, and others. The new curriculum provides standards and a mechanism how to assess appropriately these standards.

At present, the Department of Education proposed that students need to be assessed on the domains of knowledge, process, understanding, and product/process (DepEd Order No. 31, s. 2012). This nomenclature were made in order for the students to reach the content and performance standards of the curriculum. The assessment system is described to be "holistic" where teachers use both formative assessment and summative assessment. Formative assessment involves students accomplishing a bank of items accompanied by a series of feedback. It is non-threatening and provides students a series of practice for the mastery of the lesson; it reinforces students understanding and interest in the subject matter (Black & William, 2003; Gonzales & Birch, 2000). Kulik and Kulik (1998) explained that the best assessment practice incorporates several assessment and feedback that enhances students' learning. The nature of formative assessment provides a more authentic nature of student learning because it is a combination of what the students know and how to monitor their progress. On the other hand, summative assessment is given when students have mastered the lesson, to determine the learners' achievement on a unit or course. Formative assessment is emphasized in the new assessment system in order to help students reach the standards. Through a series and multiple assessments, the teacher is able to see the immediate evidence of what students have learned and, therefore, be able to design and adjust the instruction based on their needs.

Assessment in the K to 12 becomes more useful to help students learn better. This brings in mind the idea of assessment "for" learning. According to Stiggins (2001), "when we assess for learning, teachers use the classroom assessment process and the continuous flow of information about student achievement that it provides in order to advance, not merely check on, student learning" (p. 5). This process requires teachers to become assessment literate where they should have the ability to transform their expectations into assessment activities and utilize the assessment results to further improve their instruction and eventually student learning.

Various online tools which make teaching and learning richer  
and more meaningful are just a few clicks away!

Log on to [www.rexinteractive.com](http://www.rexinteractive.com)



A more contemporary viewpoint of assessment is also introduced. Through formative assessment, the process of assessment becomes closely integrated with instruction and becomes instruction itself. Teachers may provide activities through games, small groups, exercises that immediately provide information on how the teacher begins his/her instruction. The teacher, after teaching some small bits of skills, follow through with immediate assessment to determine if the lesson will be repeated or who among the students need further help. The actual activities in the classroom such as games can provide information to the teacher about what the students can and cannot do.

### Assessing Knowledge

Knowledge was defined by the Department of Education as facts and information that students need to acquire. The knowledge domain contains similar skills with Bloom's Taxonomy that includes defining, describing, identifying, labeling, enumerating, matching, outlining, selecting, stating, naming, and reproducing. Examples of questions to assess the knowledge domain would include the following examples:

**Table 1**  
*Examples of Questions for Knowledge*

Learning Areas	Performance Standards	Assessment Questions
English	Note specific details of the text listened to.	Who is the main character in the story?
Mathematics	Order sets from least to greatest and vice versa.	Arrange the following numbers from highest to lowest value: 8, 6, 9, 4, 3, 7.
Science	Label the external parts of the human body.	Point where the eyes are in the illustration of the human body.
Araling Panlipunan	Nailalarawan ang mga anyong lupa.	Natutukoy ang iba't ibang anyong lupa.
Filipino	Natutukoy ang ginamit na unlapi sa bawat salita.	Guhitan ang unlapi sa bawat salita.

### Assessing Process

Process was defined by the Department of Education as a cognitive operation that the student performs on facts and information for the purpose of constructing meanings and understanding. Cognitive operations are specific procedures, tasks, heuristics, strategies, techniques, and mental processes that learners use in order to arrive with an answer. It is concerned with what individuals will do, think about, and go through in order to derive with an answer. Cognitive operations are manifested when students answer word problems in mathematics and show the teacher the strategy they used to arrive with their answer. After students explain the concept of electricity in science, the teacher may ask how they learned the concept. An English teacher can ask students their techniques on how they identify adjectives and adverbs in a sentence.

**Table 2**  
*Examples of Questions for Process*

Learning Areas	Assessment Questions	Cognitive Operations
English	What strategy did you use to identify the topic sentence in the paragraph?	Strategic thinking
Math	Prove that $2 \times 10^2 = 100 + 100$ .	Proving answers
Science	How did you learn the information that plants make their own food?	Techniques in generating knowledge
Araling Panlipunan	Paano mo mapatutunayan na tinulungan ng mga Amerikano ang mga Pilipino noong Ikalawang Digmaang Pandaigdig?	Proving answers, data gathering
Filipino	Paano mo malalaman kung ang isang lupon ng mga salita ay parirala o pangungusap?	Strategic thinking

The cognitive operations involve the use of metacognition, self-regulation, and learning strategies. Metacognition is thinking about one's thinking. According to Winn and Snyder (1998), metacognition is a mental process that involves monitoring the progress in learning and making changes and adapting one's strategies if one perceives he is not doing well. On the other hand, process skills are also manifested through self-regulation. Self-regulation is defined by Zimmerman (2002) as self-generated thoughts, feelings, and actions that are oriented to attaining goals. Learners who are academically self-regulated are independent in their studies, diligent in listening inside the classroom, focused on doing their task inside the classroom, gets high scores in tests, able to recall teacher's instruction and facts lectured in class, and submits quality work (Magno, 2009). The idea now is that teachers do not only teach the content but also teach and assess these processes among students.

**Table 3**  
*Examples of Tasks for the Metacognitive Process*

Metacognitive Factor	Activity
Declarative Knowledge	Knowing what is needed to be solved Understanding one's intellectual strengths and weaknesses in solving math problems
Procedural Knowledge	Being aware of what strategies to use when solving math problems Having a specific purpose of each strategy to use
Conditional Knowledge	Solving better if the case is relevant Using different learning strategies depending on the type of problem
Planning	Pacing oneself when solving in order to have enough time Thinking about what really needs to be solved before beginning a task

Various online tools which make teaching and learning richer and more meaningful are just a few clicks away!

Log on to [www.rexinteractive.com](http://www.rexinteractive.com)

Information Management Strategies	Focusing attention to important information Slowing down when important information is encountered
Monitoring	Considering alternatives to a problem before solving Pausing regularly to check for comprehension
Debugging Strategies	Asking help from others when one doesn't understand Stopping and going over if it is not clear
Evaluation of Learning	Rechecking after solving Finding easier ways to do things

### Assessing Understanding

Understanding was defined by the Department of Education as the enduring big ideas principles and generalizations inherent to the discipline which may be assessed using the facets of understanding. The perspective of understanding by Wiggins and McTighe (2005) is used. The big idea is “a concept, theme, or issue that gives meaning and connection to discrete facts and skills” (p. 5). Understanding is to make connections and bind together our knowledge into something that makes sense of things. Wiggins and McTighe (2005) further elaborated that understanding involves “doing” and not just a “mental act” and thus includes application. Understanding is classified into six facets: explain, interpret, apply, have perspective, empathize, and have self-knowledge.

**Table 4**  
*Six Facets of Understanding*

Explain	Provide thorough and justifiable accounts of phenomena, facts, and data.	Why is it that fruits that are in season have cheaper prices?
Interpret	Tell meaningful stories, offer apt translations, provide a revealing historical or personal dimension to ideas and events; make subjects personal or accessible through images, anecdotes, analogies, and models.	What trend can be described in the graph shown? What is the meaning of the statement “an eye for an eye, a tooth for a tooth”?
Apply	Effectively use and adapt what they know in diverse contexts.	Which of the following situations use the first law of motion?
Have perspective	See and hear points of view through critical eyes and ears; see the big picture.	How will you classify insects if you are a frog? What will be the stand of the religious groups on the RH Bill?
Empathize	Find value in what others might find odd, unknown, unfamiliar, or implausible; perceive sensitively on the basis of prior indirect experience.	Why did Lapulapu immediately decided to fight Magellan when they were asked to pay taxes?
Have self-knowledge	Perceive the personal style, prejudices, projections, and habits of mind that both shape and impede our own understanding; they are aware of what they do not understand and why understanding is so hard.	If the long method of multiplication is difficult for you, what other methods can you use to perform the same task? Why is the long method procedure difficult for you?

## Assessing Products/Performances

Product and performance was defined by the Department of Education as real-life application of understanding as evidenced by the students' performance of authentic tasks. This technique assesses what it is that students know and can do with the emphasis on doing. Students perform, create, construct, produce, or do something. Tasks that are authentic have a high degree of realism about them. Performance and product assessment involve activities for which there is no correct answers, continuous over an extended period of time, and involves self-evaluation of performances. Likely, use open-ended tasks aimed at assessing integrated higher level cognitive skills. The product and procedure shown and demonstrated by the students is marked using checklists, rubrics, and scales.

**Table 5**  
*Examples of Performance and Product Assessment*

English	Compose a letter informing your school principal about your intention to run in the student council. Provide all the necessary parts of a letter.
Mathematics	Construct a poster illustrating the flight path of a basketball in a parabola. Estimate the vertex and roots. Students after computing will demonstrate the maximum height the ball bounced and total distance the ball traveled.
Science	Conduct an experiment to demonstrate the effect of a pollutant on the photosynthetic process of a leaf.
Filipino	Sumulat ng isang tula tungkol sa iyong paboritong pagkain.
Social Studies	Create a presentation to promote tourist spots in the Philippines. Include at least 10 pictures and provide a caption for each.

## References:

- Black, P., & Wiliam, D. (2003). In praise of educational research: formative assessment. *British Educational Research Journal*, 29(5), 623–637.
- DepEd Order No. 31, s. 2012 (2012). *Policy guidelines in the implementation of grades 1 to 10 of the K to 12 basic education curriculum (BEC) effective school year 2012-2013*. Department of Education.
- Gonzalez, G. M., & Birch, M. A. (2000). Evaluating the instructional efficacy of computer-mediated interactive media: Comparing three elementary statistics tutorial modules. *Journal of Educational Computing Research*, 22, 411–436.
- Kulik, J. A., & Kulik, C. C. (1988). Timing of feedback and verbal learning. *Review of Educational Research*, 58, 79–97.
- Magno, C. (2009). Assessing and developing self-regulated learning. *The Assessment Handbook*, 1, 26–42.
- Wiggins, G., & McTighe, J. (2005). *Understanding by design*. Alexandria, Virginia: Association for Supervision and Curriculum Development.
- Winn, W., & Snyder, D. (1996). Cognitive perspectives in psychology. In D. H. Jonassen (ed.), *Handbook of Research for Educational Communication and Technology* (pp. 112–142). New York: Simon & Schuster MacMillan.
- Stiggins, R. J. (2001). The unfulfilled promise of classroom assessment. *Educational Measurement: Issues and Practice*, 20(3), 5–15.
- Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice*, 41, 64–72.

## A Closer Look on How to Develop Assessment Questions and Activities

by Carlo Magno, PhD

One of the most important competency of teachers is their ability to conduct proper assessment of student learning. This is even espoused by the American Federation of Teachers (AFT), National Council on Measurement and Evaluation (NCME), and National Education Association (NEA) in the United States. In the Philippines, the Department of Education (DepEd) has developed the National Competency Based Teaching Standards. Part of this standard is the fifth domain on **“Planning, Assessing, and Reporting.”** This competency refers to the alignment of assessment and planning activities. The dimension focuses on the use of assessment data to plan and revise teaching-learning plans; integration of assessment procedures in the plan and implementation of teaching-learning activities, and reporting of the learners’ actual achievement and behavior. The subdomains include:

- The teacher communicates promptly and clearly the learners’ progress to parents, superiors, and to learners themselves.
- The teacher develops and uses a variety of appropriate assessment strategies to monitor and evaluate learning.
- The teacher monitors regularly and provides feedback on learners’ understanding of content.

The assessment competencies developed by the AFT, NCME, and NEA provides a comprehensive set of standards on how teachers should practice assessment. This set of standards was developed in order to fully realize the benefits of student assessment and address the problem of inadequate training of student assessment. There were seven principles drawn in the standards (AFT, NCME, & NEA, pp. 1–2):

1. Teachers should be skilled in choosing assessment methods appropriate for instructional decisions.
2. Teachers should be skilled in developing assessment methods appropriate for instructional decisions.
3. Teachers should be skilled in administering, scoring, and interpreting the results of both externally-produced and teacher-produced assessment methods.
4. Teachers should be skilled in using assessment results when making decisions about individual students, planning teaching, developing curriculum, and school improvement.
5. Teachers should be skilled in developing valid student grading procedures which use student assessments.

6. Teachers should be skilled in communicating assessment results to students, parents, other lay audiences, and other educators.
7. Teachers should be skilled in recognizing unethical, illegal, and otherwise inappropriate assessment methods and uses of assessment information.

The teachers need to keep in mind some of the principles in the assessment of student learning. These principles help the teachers integrate assessment close with instruction, and use assessment results to help students learn better.

**Principle 1: Assessment should be well aligned with students’ objectives, competencies, and educational standards.** How should teachers decide what to assess? They need to go back on what is espoused in the objectives found in the lesson plan, syllabus, and national competencies. It is very important for teachers to have knowledge on the content of the curriculum. This guides them where to bring the students, and the outcome they need to expect from their students. If the objective indicates “demonstrate how to sew using running stitch,” then students should be presenting in front of the class and demonstrating how sewing is done using running stitch. In this case, students should not be assessed by enumerating the type of stitches but should be focused on what the students can perform. If the competency requires students to draw, illustrate, and design the actual performance, these behaviors should be shown by the students. The teacher is guided by the competencies in the curriculum in order to decide on the appropriate assessment.

**Principle 2: Assessment should become more like instruction.** A contemporary perspective on assessment is that it is part of instruction. In the traditional perspective, assessment takes a different time and is separated with instruction. This practice makes assessment disjointed with instruction and the target competencies. The contemporary perspective where instruction and assessment are integrated allows the teachers to determine at an early stage the evidence of student learning, hence, instruction is well tailored for the learners. Through formative assessment, students are provided with immediate feedback, practice on the skill, and consequently reach mastery. Teachers teach skills into smaller chunks in order to build mastery. When instruction is immediately followed by assessment, the teachers are signaled on how to make adjustments in the instruction. The integration between assessment and instruction can be shown in the following examples:

- Asking critical questions to build on the lesson
- Giving activities to survey students’ prior knowledge before starting a new topic
- Giving feedback that is specific to the students’ work to engage them in doing exercises (e.g. essay writing)
- Providing board works after a series of teaching episodes
- Posing guide questions to students in case studies/analysis exercises
- Providing corrections on misconceptions during instruction

**Principle 3: Assessment results are needed to be used by teachers to help students learn better.**

The utility value of assessment should be regarded as an important skill of teachers. How do teachers make use of assessment results to help students learn better? The primary purpose of assessment is not to arrive with marking and rank ordering students, but rather to help students learn better. Drills and exercises are given to diagnose the learning needs of students. These needs, as a result of the assessment, are addressed by the teachers. The outcome of assessment should be used by the teachers to design better instruction for the students. The instruction considers activities suited for beginners, proficient, and advance learners. The teachers should be skilled how to make meaning and resource for designing the instruction. For example, after a teacher identifies that 75% of the students could not yet divide a 2-digit number with a 1-digit number, the teacher provides for remediation, re-teaching, more exercises with worked out solutions, and more techniques how to divide. The remaining 25% of the students are provided with advance work. Careful planning of instruction needs to consider previous assessment results to determine what the students need. For example, previous instruction where group work was used resulted to low levels of student mastery signalling the teacher to shift instruction or improve the implementation of group work.

**Principle 4: Assessment is NOT used to threaten and intimidate students.**

Giving quizzes and surprise tests when students are noisy is a misconception of assessment. Students who miss assignments are punished with a difficult test is a misconception of assessment. Intentionally asking difficult questions to misbehaving students is also a misconception of assessment. Giving a failing student a special project is also a misconception. The problems with noise can be handled with proper classroom management skills of the teacher. Students who miss assignments should be properly motivated. Questions are asked to all students to demonstrate their ability to think. If a special project is given to one student, all students should also be given the chance to increase their grades. The conduct of assessment is meant to help students and not as a consequence of misbehavior.

**Principle 5: Teachers should encourage the learning community to engage in assessment.**

Teachers are not the only ones who conduct assessment. Students also assess their own work through self-assessment. As classmates, they are also given a chance to assess each others' work through peer assessment. A 360° assessment allows the entire learning community to build a culture of professionalism, improvement, and adherence to standards. Capacitating the entire community on the assessment competency builds a professional learning community. The ASCD has developed three big ideas about the professional learning community. These big ideas are explained through assessment. A professional learning community ensures that students learn. The intention of assessment is to help students improve their learning and targets the first big idea. A professional learning community builds a culture of collaboration. If all teachers, students, and administrators agree on the standards to be reached by their students, then this act of collaboration builds excellence. Collaboration is done for school improvement and removing barriers to success. Professional learning communities are keen on focusing on results of efforts. The teachers make themselves conscious of the results of students' achievement and use them to improve students' learning.

Various online tools which make teaching and learning richer and more meaningful are just a few clicks away!



**Principle 6: Assessment is a technical competency.** Teachers realize that assessment is not an ordinary skill, but a technical skill that requires training, experience, practice, and study in order to be developed. Teachers should be able to conduct analysis of assessment results by determining which items are easy and difficult, which items can discriminate abilities and which could not. Part of this technical competency is the ability of the teachers to use assessment data to determine if the assessment is valid and reliable. The teachers can use some statistical tools in order to determine the internal consistency and temporal stability of the test items. They ask a reviewer to content validate the items in their test together with the table of specifications they constructed. They use results of a test to determine if the test is correlated with other criterion such as students' grades, other standardized tests, and other measures. When teachers are provided with the results, they are literate about the position of the students by looking at the percentile rank. The teachers know how to interpret the standard scores and in any way they are converted.

The principles provided imply that the teaching profession, especially in the conduct of assessment is not a simple task. It would require teachers to reflect, study, and allow feedback from others in order to improve. As part of the reflection and assessment process, teachers at the end of the day assess whether what their students have learned and how they can make this learning develop further.

**Dr. Carlo Magno** has taught from basic education to higher education. He taught courses on measurement, evaluation, assessment of student learning, research methods, scaling theory, and advance psychometric theory. He published more than 85 articles in scientific and refereed journals. He is the 2011 Outstanding Young Scientist by the National Academy of Science and Technology and the 2012 Global Young Scientist by the Global Science Academy. He has also received several awards for his excellence in teaching in De La Salle University, Manila. Dr. Magno has conducted various trainings to teachers and students in the field of education.

## Examples of Clustered KPUP

### Science Grade 7 1st Quarter

#### Knowledge

Complete the parallel phrases. Choices are provided inside the box.

Carbohydrate	Nonmetal	Sodium Hydroxide
Vinegar	Mixture	Metalloid

1. *Halo-halo*: Heterogeneous Mixture while \_\_\_\_\_: Homogeneous Mixture
2. Pure Substance: Iron while \_\_\_\_\_: Steel
3. Soft Drink: Solution while \_\_\_\_\_: Compound
4. Calcium: Metal while Silicon: \_\_\_\_\_
5. Ascorbic acid: Red Litmus Paper while \_\_\_\_\_: Blue Litmus Paper

#### Process

Mark Kelvin was determined to test a solution using a litmus paper. He observed that the red litmus paper turned into blue. This observation indicates that the solution is \_\_\_\_\_.

- |            |            |
|------------|------------|
| a. Neutral | c. Acidic  |
| b. Basic   | d. Organic |

#### Understanding

Which observation is NOT expressed in quantitative form?

- a. Five seeds were germinated on the second day.
- b. Bubbles were formed on the surface.
- c. The soil weighs 10 grams.
- d. Seven milligrams of salt was left in the dish after the sea water evaporated.

#### Performance/Product

Make a poem with at least two stanzas about the difference of PURE SUBSTANCE and MIXTURE.

**Rubric for Writing Poetry  
(Pure Substance and Mixture)**

<b>5</b>	<p>Shows a very high degree of knowledge and command of the following:</p> <ul style="list-style-type: none"> <li>• Clear and well-developed ideas about the difference of mixture and pure substance</li> <li>• Rhythm and flow of language in each line</li> <li>• Mechanics of writing, spelling, capitalization, punctuation, and poetry format</li> <li>• Clear and neat handwriting</li> </ul>
<b>4</b>	<p>Shows a considerable knowledge and command of the following:</p> <ul style="list-style-type: none"> <li>• Clear and well-developed ideas about the difference of mixture and pure substance</li> <li>• Rhythm and flow of language in each line</li> <li>• Mechanics of writing, spelling, capitalization, punctuation, and poetry format</li> <li>• Clear and neat handwriting</li> </ul>
<b>3</b>	<p>Shows a moderate degree of knowledge and command of the following:</p> <ul style="list-style-type: none"> <li>• Clear and well-developed ideas about the difference of mixture and pure substance</li> <li>• Rhythm and flow of language in each line</li> <li>• Mechanics of writing, spelling, capitalization, punctuation, and poetry format</li> <li>• Clear and neat handwriting</li> </ul>
<b>2</b>	<p>Shows a passable degree of knowledge and command of the following:</p> <ul style="list-style-type: none"> <li>• Clear and well-developed ideas about the difference of mixture and pure substance</li> <li>• Rhythm and flow of language in each line</li> <li>• Mechanics of writing, spelling, capitalization, punctuation, and poetry format</li> <li>• Clear and neat handwriting</li> </ul>
<b>1</b>	<p>Shows insufficient degree of knowledge and command of the following:</p> <ul style="list-style-type: none"> <li>• Clear and well-developed ideas about the difference of mixture and pure substance</li> <li>• Rhythm and flow of language in each line</li> <li>• Mechanics of writing, spelling, capitalization, punctuation, and poetry format</li> <li>• Clear and neat handwriting</li> </ul>

## Math Grade 7 1st Quarter

### Knowledge

List all the elements of each of the following sets:

- (a)  $A = \{\text{vowels in the word 'MATHEMATICS'}\}$
- (b)  $B = \{\text{months of the year beginning with the letter 'J'}\}$
- (c)  $C = \{\text{days of the week beginning with the letter 'T'}\}$
- (d)  $D = \{\text{months of the year with exactly 30 days}\}$

### Process

Draw labeled Venn diagrams to illustrate the following sets, placing the elements in the appropriate regions, and in each case, find  $A \cup B$ .

$$\xi = \{1, 2, 3, \dots, 9\}$$

- (a)  $A = \{1, 2, 3, 4\}$ ,  $B = \{3, 5, 7, 9\}$
- (b)  $A = \{1, 3, 5, 7, 9\}$ ,  $B = \{2, 4, 6, 8\}$
- (c)  $A = \{4, 8\}$ ,  $B = \{2, 4, 6, 8\}$

### Understanding

Do subtraction and division of real numbers obey the commutative law? Explain your answer.

### Product/Performance

Find a recipe in cookbooks or use your favorite recipe. Be sure the recipe includes measurements that are fractions. List all the ingredients in an index card.

1. If you do not alter the recipe, how many servings can be made?
2. How much of each ingredient would you need if you want to make it twice as many servings?
3. How much of each ingredient would you need if you want to make enough servings for your family?

Prepare a financial statement of the expenses you incurred. Be ready to present this to class.

Your work will be checked in terms of planning strategies and steps, mathematical prowess and accuracy, and verbal and written communication.

### English Grade 7 1st Quarter

Knowledge	Process	Understanding	Product/ Performance
What are the different reading styles? Define each.	Listen to a sample conversation. How do the speakers feel? What helped you determine the feelings of the speakers? (Note the changes in volume, projection, pitch, stress, and intonation)	What reading style will you use when you are looking up a name in a phonebook? When you're going through a newspaper or a magazine to get the gist of the articles? When you're reading every word, and work to learn from the text?	Write a paragraph about the information presented in a diagram/chart/ table/ graph.

### Rubric on Paragraph Writing

CRITERIA	1	2	3	4
<b>Topic Sentence/Main Idea</b> Communicates and expresses main idea with considerable effectiveness				
<b>Supporting Detail Sentences</b> Consistent, specific, relevant to text, complex, often insightful, and closely related to the main idea				
<b>Conclusion/Closing Sentence</b> Closing sentence is very strong, very clearly restated in the topic sentence and the main idea, and is successful in resolving/summarizing text				
<b>Use of Conventions</b> Uses conventions, vocabulary, and terminology of the discipline with a high degree of effectiveness				

## Filipino Baitang 7 Unang Markahan

### Knowledge/Pangkaalaman na Tanong

**Paksa:** Pahayag na nagpapakita ng posibilidad

Basahin ang bawat pangungusap at salungguhitan ang salitang nagpapakita ng posibilidad.

1. Pwedeng magkatotoo ang sinabi ng manghuhula.
2. Kung talagang ayaw mo, maaari namang bumili ka na lang ng bago.

### Process/Pangkasanayang Tanong

**Paksa:** Sanhi at Bunga/Pang-ugnay ng Sanhi at Bunga

Dugtungan ang pahayag A ng angkop na parirala o pangungusap upang mabuo ang diwa.

Pahayag A	Pang-ugnay	Pahayag B
1. Si Alex ang naging Top 1 ng klase...	dahil sa	
2. Bumaha sa buong Metro Manila...	dulot ng	

### Understanding/Pang-unawang Tanong

**Paksa:** Prinsipe Bantugan (Epiko ng Mindanao)

Ikatlong Salaysay ng Darangan

Bigyan ng kahulugan ang sumusunod na mga simbolo batay sa pagkakasalaysay sa epiko na may pamagat na "Prinsipe Bantugan" at iugnay din ang simbolo sa kasalukuyang pangyayari.

1. Kaharian ng lupang nasa pagitan ng dalawang dagat – (epiko) \_\_\_\_\_; (lipunan) \_\_\_\_\_

**Product/Performance/Pagganap**

**Paksa:** Pabula (Ang Mataba at Payat na Usa)

Ibuod ang pabula na “Ang Mataba at Payat na Usa” batay sa mga mahahalagang pangyayari nito.

**Rubric sa Pagsulat ng Buod ng Sanaysay**

	<b>Kailangan ng Ibayong Husay</b> 1	<b>Papunta sa Pagiging Mahusay</b> 2	<b>Mahusay</b> 3	<b>Napakahusay</b> 4
<b>Layunin ng Pagbubuod</b>	Hindi makikitaan ng pangunahing paksa ang mga pangungusap.  Hindi malinaw ang mga pansuportang ideya sa pagpapalutang ng paksa.  Hindi kumpleto ang buod na nabuo.	Makikitaan ng pangunahing paksa ang mga pangungusap ngunit may kalabuan ang paghahanay ng ideya.  Ang pagbubuod ay masyadong mahaba/maikli upang maging epektibo.	Mahusay ang buod na binuo dahil masasalamin ng mambabasa ang orihinal na teksto.  Makikitaan ng mga ideyang nakapaloob sa orihinal na teksto.  Nagtataglay ng mga pangungusap at talata.	Ang buod na nabuo ay nagpapakita nang matatag na pagbuo ng ideya na makikita sa orihinal na teksto.  Ang pangunahin at pansuportang detalye ay mahusay na nailatag katulad ng orihinal.  Ang haba ng buod ay tamang-tama lamang.  Maayos na nabuo ang talata para sa buod.

<p><b>Organisasyon</b></p>	<p>Walang malinaw na simula, katawan, at wakas.</p> <p>Hindi gumamit ng <i>transitional devices</i> sa pagtatalata.</p>	<p>Hindi gaanong malinaw ang simula, katawan, at wakas.</p> <p>Gumamit ng mga <i>transitional devices</i> ngunit hindi naging malinaw ang paglilipat diwa ng pangungusap.</p>	<p>Maayos ang simula, katawan, at wakas.</p> <p>Maayos ang mga <i>transitional devices</i> na ginamit upang mailipat ang diwa ng mga pangungusap sa bawat talata.</p>	<p>Napakahusay ng pagbuo ng simula, katawan, at wakas na makikita sa orihinal na teksto.</p> <p>Gumamit ng mga <i>transitional devices</i> na makatutulong sa kalinawan ng buod.</p> <p>Nailipat nang maayos ang diwa sa bawat talata.</p>
<p><b>Istilo</b></p>	<p>Hindi makikitaan ng pananaw na obhetibo ang buod.</p> <p>Ang mga talasalitaan ay napakasimple.</p>	<p>Kakikitaan ng pananaw na obhetibo at istilo ng orihinal na awtor.</p> <p>Ang mga talasalitaang ginamit ay makikita sa orihinal na teksto.</p>	<p>Ang paraan ng pagsulat ng buod ay obhetibo at walang pagkiling mula sa awtor.</p> <p>Ang mga talasalitaan ay sapat at angkop.</p> <p>Gumamit ng iba't ibang barayti ng pangungusap.</p>	<p>Napakahusay ng tinig na ginamit upang maging obhetibo at natural ang ideyang nakapaloob sa buod tulad ng sa orihinal.</p> <p>Ang talasalitaang ginamit ay angkop na angkop upang ipakita ang orihinal na ideya ng teksto.</p> <p>Nakatulong nang malaki ang barayti ng mga pangungusap upang lumutang ang pangunahing ideya ng buod.</p>



<b>Mekaniks at Pagbabaybay</b>	Napakaraming kamalian sa balarila at pagbaybay.	Maraming kamalian sa balarila at pagbaybay na naging dahilan ng pagkalito ng mga mambabasa.	Ang buod ay kinakitaan ng pag-edit.  Hindi gaanong kakikitaan ng mga pagkakamali sa balarila at baybay.	Walang kamalian sa balarila at sa pagbabaybay.
--------------------------------	---	---	---	--

## Social Studies Grade 7 1st Quarter

### Knowledge

Basahing mabuti ang mga pangungusap at piliin ang titik ng tamang sagot.

- Timog Asya: Hinduism :: Kanlurang Asya: \_\_\_\_\_
  - Jainism
  - Islam
  - Taoism
  - Buddhism
- Philippines: Timog Silangang Asya :: \_\_\_\_\_: Gitnang Asya
  - Afghanistan
  - Indonesia
  - Mongolia
  - South Korea

### Process/Skill

Sagutin ang mga tanong gamit ang datos na ipinapakita ng talahanayan.

**2010 Environment Performance Index (EPI)  
Country Rankings and Performance Measures (for Selected Countries)**

Rank	Country	EPI	Environmental Health Objective	Ecosystem Vitality Objective
1	Iceland	93.5	95.1	91.9
2	Switzerland	89.1	92.3	85.9
3	Costa Rica	86.4	82.2	90.5
4	Sweden	86.0	92.8	79.3
5	Norway	81.1	90.7	71.5
6	Mauritius	80.6	83.7	77.5
7	France	78.2	90.7	65.7

8	Austria	78.1	89.5	66.8
9	Cuba	78.1	84.3	71.9
10	Colombia	76.8	74.6	78.9
11	Malta	76.3	92.1	60.6
12	Finland	74.7	90.7	56.7
13	Slovakia	74.5	84.5	64.4
14	UK	74.2	89.8	58.7
15	New Zealand	73.4	90.7	55.7
16	Chile	73.3	81.3	65.4
17	Germany	73.2	90.7	56.0
18	Italy	73.1	90.9	55.2
19	Portugal	73.0	87.6	58.4
20	Japan	72.5	90.5	54.9
21	Latvia	72.5	75.1	70.0
22	Czech Republic	71.6	86.9	56.4
23	Albania	71.4	69.9	72.9
24	Panama	71.4	71.7	71.0
25	Spain	70.6	88.7	52.5
28	Singapore	69.6	89.2	50.1
32	Denmark	69.2	89.8	48.5
33	Hungary	69.1	82.7	55.6
38	Nepal	68.2	41.4	95.1

43	Mexico	67.3	76.6	58.1
46	Canada	66.4	92.8	40.1
47	Netherlands	66.4	89.3	43.4
51	Australia	65.7	91.7	39.6
61	U.S.	63.5	88.3	38.6
62	Brazil	62.2	65.6	58.7
67	Thailand	62.2	65.6	58.7
69	Russia	61.2	68.6	53.8
77	Turkey	60.4	74.5	46.3
94	South Korea	57.0	80.2	33.9
108	Kenya	51.4	32.2	70.6
120	Madagascar	49.2	21.6	76.8
121	China	49.0	58.7	39.3
123	India	48.3	41.6	55.1
125	Pakistan	48.0	42.8	53.1
134	Indonesia	44.6	44.6	44.6
141	Ethiopia	43.1	11.0	75.2
145	Bahrain	42.0	83.7	0.2
152	U.A.E.	40.7	81.3	0.1
155	Haiti	39.5	28.1	50.9

\***Environmental Health** ay tumutukoy sa kung paano nakaaapekto sa kalagayang pangkalusugan ang mga salik tulad ng kakulangan sa tubig at polusyon.

\*\***Ecosystem Vitality** ay tumutukoy sa pagsukat ng kalusugan ng kapaligiran ng isang bansa sa pamamagitan ng pagtingin sa mga salik tulad ng sa agrikultura, *biodiversity* at panahanan, *climate change*, pangisdaan, at kagubatan.

1. Ilan ang mga bansang nakapasok mula sa Silangang Asya? Ano-anong bansa ang mga ito?

---

---

---

---

2. Ilan ang mga bansang nakapasok mula sa Kanlurang Asya? Ano-anong bansa ang mga ito?

---

---

---

---

3. Anong bansa sa Asya ang may pinakamataas na antas? Kapag ang bansa ay nasa mataas na antas, ano ang ipinahihiwatig nito?

---

---

---

---

4. Ano-anong mga bansa sa Asya ang may mababang antas? Kapag ang bansa ay nasa mababang antas, ano ang ipinahihiwatig nito?

---

---

---

---

5. Maunlad ba ang mga bansang nasa mataas na antas? Ano ang kaugnayan ng protektadong kalikasan sa kaunlaran ng isang bansa?

---

---

---

---

### Understanding

Sa papaanong paraan nagbago at nagbabago ang ating klima at panahon? May kaugnayan ba ito sa kaunlaran ng isang bansa? Ipaliwanag sa loob ng anim hanggang walong pangungusap ang iyong sagot.

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

## Performance/Product

Naglunsad ang ASEAN ng isang *photo-essay* contest para sa mga mag-aaral ng ikapitong baitang sa buong Asya na may temang “Pagkakaisa sa Pagkakaiba.” Sa *photo-essay* na ito, ipakikita ng mga kalahok ang pagnanais ng mga bansang Asyano na magkaisa sa kabila ng pagkakaiba ang komposisyong etno-lingguwistiko. Ikaw ang napiling kinatawan ng Pilipinas sa nasabing paligsahan. Ang iyong *photo-essay* ay maaring ipasa bilang PowerPoint *presentation* o *movie format* na naglalaman ng lima hanggang sampung larawan na may tig-iisang pangungusap bilang paglalarawan. Ang *photo-essay* ay inaasahang malinaw, maayos, at may koneksyon sa temang nabanggit.

### Rubrik

Pamantayan	Katangi-tangi	Mahusay	Kailangan pa ng pagsasanay
<i>Linaw ng interpretasyon</i>	Malinaw at maayos ang mga interpretasyon ng mga dahilan na ipinapakita sa <i>photo-essay</i> .	Malinaw ang mga interpretasyon ng mga dahilan na ipinapakita sa <i>photo-essay</i> .	Hindi gaanong malinaw ang mga interpretasyon ng mga dahilan na ipinapakita sa <i>photo-essay</i> .
<i>Nilalaman ng impormasyon</i>	Limang batayang impormasyon tungkol sa komposisyong etno-lingguwistiko ng bansang kinakatawan.	Apat batayang impormasyon tungkol sa komposisyong etno-lingguwistiko ng bansang kinakatawan.	Tatlong batayang impormasyon tungkol sa komposisyong etno-lingguwistiko ng bansang kinakatawan.
<i>Dating sa mga tumitingin (audience)</i>	Napakaganda ng dating sa manonood dahil sa linaw ng mensahe nito. Napakaayos ng pagkakasulat ng mga paglalarawan.	Maganda ang dating sa manonood dahil sa linaw ng mensahe nito. Maayos ang pagkakasulat ng mga paglalarawan.	Hindi gaanong maganda ang dating sa manonood dahil sa linaw ng mensahe nito. Hindi rin maayos ang pagkakasulat ng mga paglalarawan.
<i>Kalinisan at pagkamalikhain</i>	Ang <i>photo-essay</i> ay napakalinis tingnan at kakikitaan ng magandang balanse ng mga larawan.	Ang <i>photo-essay</i> ay malinis tingnan at kakikitaan ng balanse ng mga larawan.	Hindi gaanong malinis tingnan ang <i>photo-essay</i> at hindi gaanong kakikitaan ng magandang balanse ng mga larawan.

# REX The online educational portal for teachers, students, and parents iNTERACTIVE

Various online tools which make teaching and learning richer and more meaningful are just a few clicks away!

Log on to [www.rexinteractive.com](http://www.rexinteractive.com)

[register](#) | [login](#) | [faqs](#)



## REX iNTERACTIVE

[home](#)

[about us](#)

[student's space](#)

[teacher's tab](#)

[parent's page](#)

[admin's corner](#)

### Welcome to REX iNTERACTIVE

Welcome to Rex Interactive, the online educational portal for teachers, students, parents, and school administrators! Get the best of the **Total Rex Learning Package** with innovative and easy-to-use tools and materials, all specially designed to cater to the needs of today's learners.

#### Interactive Materials



##### Visual Presentations

Under the basic education titles, carefully planned and visually appealing presentations are available in this section. Selections range from digital storybooks, PowerPoint presentations, short movies, video presentations, and Flash movies.

[View Sample](#)

#### Member Login

Username

Password

Forgot your [password](#)?  
Not yet a member? [Register here](#)

[Login](#)

#### Book: IMs



English Encounters  
Language 3

Develops oral and written proficiency....

[Download IMs](#)

## Instructional Materials



Visual  
Presentations



Ready-to-Print  
Activity Sheets



Audio  
Companions



Answer  
Keys

IMs available  
for Grade School and  
High School



For REX assistance, email [wecare@rexpublishing.com.ph](mailto:wecare@rexpublishing.com.ph) or call 857-7717 (Rex Book Store Marketing Group)