STIMULI FOR ASSESSMENT

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Researchers have been asking questions about questions for nearly a century. A plethora of papers can be found on the subject of questioning and assessment. In their work with teachers, David A. Shiman and Robert J. Nash have reported that the questions teachers usually ask seem to fall into three broad categories: factual, conceptual and contextual.

> **To conceive an educative question requires thought: to formulate it requires labour; and to pose it, tact.**
>
> *Dillon "Teaching and the Art of Questioning."*

In this article, we wanted to question the common assumption that assessment tools are best designed keeping textual matter as the base. In addition, we wanted to investigate if the text of one subject could lend itself to assessment of another. If this is possible, we felt, the barriers between disciplines would melt away, and the learning outcomes of a lesson in one subject could well span others.

So we set out to design assessment tools, which have been described in the next two pages. Interestingly, these, too, would also fall under the same three categories described by Shiman and Nash, but what we have explored is whether:

- **Textual matter of one subject lends itself to assessment in various other subjects as well**

- **Assessment can be carried out with material other than text.**

The first exploration uses food packets or information on the food cartons to test different **subjects**, and is pitched at class 8 level. Can a food carton lend itself to the learning of subjects like History, Physics, Language and Maths? We think so - and we show some examples here!

The second exercise is based on a paragraph from some EVS content of class 5. We have tried to compose a set of questions that test various **skills** like estimation, measurement, observation, drawing, analytical thinking, etc.

While these are merely illustrative, we submit that it would be an interesting exercise for teachers to either attempt to create such questions or - better still - ask students to come up with various questions on similar content. It is our contention that such an exercise, if sustained, could well bring about a shift in the way that each subject's text is read and everyday materials are viewed by both teachers and students. No doubt, the exercise would demand reading and referencing if one is to do justice to all the questions. But then – isn't that what learning is all about?

Note: The authors do not intend to subscribe to any particular brand here or recommend any processed food. The images used are for the purpose of discussion on assessment, teaching and learning.

Language:

What did you have for breakfast today? Write out a recipe for it.

If you were to advertise it, what kind of a caption would you use for it? (in 3-4 words.)

Write a letter to your friend convincing him/her not to drink Pepsi

History

Trace the history of the food packaging industry.

Talk to your grandparents and find out the methods of food preservation and storage that were adopted by them.

Maths:

Calculate the percentage and ratio of fats, proteins and carbohydrates from the given table and draw a pie chart.

Value for 100 g

Saturated fatty acids	1.2 g
Mono Unsaturated fatty acids	1.0g
Poly Unsaturated fatty acids	0.3 g
Sugar	34.7g
Fibre	5.0g
Other carbohydrates	43.1g
Protein	9.0g
Other components (vitamins, minerals)	5.7g

Compare the surface area of 1 litre Tropicana tetra pack before and after if it is opened out fully.

Biology:

Why do we need Iron and Calcium as a part of our diet?

'Best before 9 months'- Why do you think any food should be consumed before the specified time?

Which of these products come from living creatures?

Which of these products are seeds? Flowers? Fruits?

Physics:

What determines whether a product is sold by weight or by volume?

What is the difference between weight and mass?

Chemistry:

Why are some food substances packed in tin containers?

How would one select the material of construction of a food container?

What are some types of sugars?

Environmental Studies:

Draw up a waste disposal plan for your food packets and suggest these to people in your neighbourhood.

Take two or three packed containers. Find out where they are manufactured. Is this close to your place? If not, think about transportation of food to your place and how that may affect the environment. Can you think of alternative sources of foods that are more readily available in your neighbourhood?

References:

Questioning: Another View   David A. Shiman and Robert J. Nash Peabody Journal of Education, Vol. 51, No. 4, Issues and Trends in American Education (Jul., 1974), pp. 246-253

Drawing Skills:
Draw a langur, a leopard and a tiger.

Comparison & Classification Skill:
• What are the similarities between these animals?
• In what way are they different from each other?
• Group these animals into two groups: LOUD and SOFT
• Again, group these animals into PREY and PREDATOR.

Reading & Referencing Skill:
• Which are the words you don't know the meaning of? List them and look them up in the dictionary.
• Which are the key words in this text? Why do you think these are key words?
• Which of the three animals (langur, tiger and leopard) has the loudest roar?
• Find out the names of as many animals as you can which make loud noises, and which are not heard so loudly.

Language/Writing Skill:
• Observe if insects or your pets behave differently before a rainstorm and note down any differences that you observe.
• Close your eyes and listen carefully to all the sounds around you. Now open your eyes and list them all.
• List the sounds that you heard from the sky.
• List those you heard from the ground.
• List those that you heard from somewhere in between the sky and the ground.
• List the loudest sounds.
• List the softest sounds.

Language/Writing Skill:
• Describe each of the sounds you heard. Use words, sentences or phrases.
• Link your words, sentences or phrases to create a poem.
• Suppose a langur, a tiger and a leopard were stranded on an island. Invent a story about how they learnt to live together on that island.

Sounds send messages

High up on a tree, a langur warns others of dangers like a tiger or leopard. The langur does this by making a special warning call.

Birds also give alarm calls to warn about the danger. Some birds even have different sounds for different kinds of dangers. For example, there is a different warning call if the enemy is coming from the sky or if the enemy is on the ground. When any animal gives the warning call, all the animals in that area understand the danger signal.

Some animals start behaving in a different way when an earthquake or storm is about to come. People who live in forests and can observe such behaviour of animals come to know of the danger.

Source:
Class V EVS Textbook, NCERT

Reasoning Skills:
• Why do you think a tiger or a leopard is a danger to a langur?
• Who or what is a danger to you?

Analytical Skill:
• With which sounds were you able to guess distances well?
• Why do you think it didn't work with other sounds?
• Why do you think some animals start behaving differently when an earthquake or storm is about to come?

Estimation/measurement Skills:
• Stand near your favourite tree. Listen to the calling birds with closed eyes. How far away do you think the bird that you hear is from you? Make a guess.
• Now open your eyes and verify the distance of the calling bird from you. (You can estimate the distance in the number of footsteps it takes you to get to the bird.)
• Practice this exercise with other sounds.

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