

**Assessment Schedule – 2014**

**Home Economics: Evaluate conflicting nutritional information relevant to well-being in New Zealand society (91470)**

**Evidence Statement**

*Note: For sample answer material, see **Appendix A**.*

Questions Parts (a), (b), and (c)		
<b>Not Achieved</b>	<b>N0</b>	No response, no relevant evidence.
	<b>N1</b>	Little evidence of discrimination between valid / invalid information. No nutritional knowledge of their own provided.
	<b>N2</b>	Demonstrates some understanding but does not analyse (some nutritional knowledge).
<b>Achievement</b>	<b>A3</b>	Analyses enough information / evidence to draw an appropriate conclusion (one tool) relating to well-being.
	<b>A4</b>	Analyses most of the information to draw an appropriate conclusion (more than one tool) relevant to well-being.
<b>Merit</b>	<b>M5</b>	Analyses and evaluates, in depth, some intentions / motivation of the information presented. A conclusion regarding the credibility of the information is drawn.
	<b>M6</b>	Analyses and evaluates, in depth, a broad range of intentions / motivations of the information presented. A conclusion regarding the credibility of all of the information is drawn.
<b>Excellence</b>	<b>E7</b>	Justifies their position about the dietary advice and challenges at least ONE inherent assumption.
	<b>E8</b>	Fully justifies their position about the dietary advice and challenges at least TWO inherent assumptions.

**Cut Scores**

	<b>Not Achieved</b>	<b>Achievement</b>	<b>Achievement with Merit</b>	<b>Achievement with Excellence</b>
<b>Score range</b>	0 – 2	3 – 4	5 – 6	7 – 8

**Appendix A – Question Parts (a), (b), and (c): sample answer material (partial answer only)****(a) Analyse the possible impacts on well-being for New Zealand society of the conflicting nutritional information presented in the resource booklet.**

Doctor Greene’s multivitamin pills and advice may seem to parents to be a quick solution to a common problem many face when attempting to get their children to eat a healthy diet. Parents who believe they have a “fussy eater” and who want to avoid unpleasantness at family meal times may be persuaded to use a vitamin supplement as an insurance policy. Parents may not understand that it is normal for toddlers and young children to be fussy. This is a part of gaining independence and an effective tool for upsetting and controlling adults. However, children will not willingly starve themselves, and fussy eating is unlikely to lead to long-term growth or nutritional problems. Parents are vulnerable when it comes to their children’s well-being and so are easily persuaded to spend money on supplements their child in all likelihood doesn’t need. Research shows that people who take dietary supplements in New Zealand tend to have better diets than people who don’t take them. Another issue is that picky children can turn into picky adults, if they are only ever served foods they like. Parents who serve quick, easy-to-cook, low-nutrition value foods that their children enjoy, and then use vitamin supplements to make up for poor food choices, are not setting their children up with healthy eating habits for life. As a result, their children may suffer nutritionally and become increasingly socially disadvantaged as they get older; for example, they are not able to eat in other people’s homes, or on school camps. For these reasons, mineral and vitamin supplements should not be used as a safety net for a poor diet. Supplements are generally expensive, and money spent on them would in most cases be better spent on purchasing fresh vegetables and preparing them in ways children will eat and enjoy, so they carry these practices on into adult life and reduce the risk of getting lifestyle diseases normally associated with a poor eating pattern.

**(b) Analyse the underlying intentions of the advice relating to mineral and vitamin supplements presented in the resource booklet, drawing conclusions about the credibility of the advice and the credibility of those presenting it.**

Doctor Greene appears at first to be a credible source of advice for parents who are seeking information about vitamin supplements for their children. He is a practicing pediatrician, and this, along with the other credentials listed, makes him seem reliable and trustworthy. Although the information was written in 1999, it appears to have been updated and peer reviewed. This also adds to Doctor Greene’s credibility and to the credibility of the advice he is giving. However, what is missing is the credentials of the people who have reviewed his advice. It is not obvious what relationship exists between Doctor Greene and these people. We don’t know if they are fellow pediatricians, or partners in his business.

Doctor Greene includes just enough conventional advice to appear credible and sound plausible. Much of his advice agrees with the advice from the other contributors in the resource. For example, The New Zealand Nutrition Foundation states:

*“If you eat a healthy, balanced diet, this should cover all your mineral and vitamin needs. The beauty of food is that it contains many other compounds, which work together with the vitamins and minerals for health – compounds such as antioxidants, fibre, and phytochemicals.”*

Doctor Greene gives similar advice in this statement:

*“By eating whole foods (fresh vegetables, fresh fruit, whole grains, etc), your child can get the necessary vitamins in the healthiest way. Vitamins occur in foods in forms that are the easiest for the body to use, and accompanied by important related compounds. One of the challenges of parenting is to make eating these whole foods as pleasant an experience as possible.”*

But he then goes on to say:

*“We live in an age of highly processed foods. Even when we get kids to eat the fruits and vegetables we want them to, conventional produce is often grown using agricultural techniques that minimise the mineral and vitamin contents.”*

This statement would immediately cast doubt in many parents' minds about the nutritional quality of the fruit and vegetables their children are eating. There is no source for this evidence, so the reader cannot determine whether this is in fact true, or is just Dr Greene's opinion. Using credible information alongside opinion makes the opinion credible and blurs the line between the two. A parent reading this would be inclined to believe both pieces of information.

Dr Green's advice about the use of vitamin supplements is confusing. On the one hand, he advises parents to add a vitamin supplement to a child's diet at their first birthday. However, further down the page, in a note to parents, he warns them not to use supplements as an insurance policy. The mixed message makes him appear less credible.

In addition to offering medical advice, Doctor Greene uses this site to advertise and sell his range of multivitamin products. Because he is using it as a business site, we can't be sure of his motives. The question needs to be asked: does he genuinely believe that children from 12 months of age need a vitamin supplement, or is this just an opportunity for him to sell his product? For this reason, Doctor Greene seems less credible than the other contributors in the resource. The New Zealand Nutrition Foundation is the most credible because it is widely known as a non-profit organisation. Rose Carr is a well-known dietitian who would have received money for her article; however, she is not trying to sell anything.

The information provided by Bioglan® Serious Health uses nutritional information in an attempt to appear credible. While the information about the nutritional value of vitamins is accurate, a statement advising parents that supplements should be given to children only in consultation with the family GP, has not been included. The information provided by Bioglan® is nothing more than advertising and should not be considered as a credible source.

The health benefits of mineral and vitamin supplements and their use in preventing illness or enhancing well-being, is an area of science in which research is ongoing. The media frequently report that what was thought to be true about vitamins and minerals shifts and changes, as studies bring new evidence to light. As a result of this shifting and changing, conventional advice such as that provided by The New Zealand Nutrition Foundation can seem outdated and less trustworthy. This distrust of conventional wisdom may lead parents to be more open to other points of view like that of Doctor Greene's. Parents who read Doctor Greene's web page may choose to ignore the conventional wisdom of someone like Rose Carr and opt instead for the insurance policy they believe a multivitamin pill can provide their child.

**(c) Evaluate the various positions taken in relation to mineral and vitamin supplements, and well-being in New Zealand, in the resource booklet.**

**Draw a conclusion using reasoned arguments from your own nutritional knowledge and understanding.**

Doctor Greene's position is that all children from 12 months onwards should be given a vitamin and mineral supplement as an insurance policy. He relies on the commonly held perception that “you can't have too much of a good thing” to support his position (this is despite stating “more is not better” in a note at the bottom of the page). The word vitamin implies “good”; so the average person can't imagine that vitamins are something you can have too much of. However, this is not true, as with some vitamins there is a risk of overdosing. Fat-soluble vitamins, if taken in excess, will accumulate in the liver. An excessive intake of Vitamin A for example can cause nausea, irritability, vomiting, blurry vision, headaches. In adults, mega-dosing of Vitamin A over a prolonged period of time has been shown to increase the risk of cancer or heart disease. Because the supplement industry in New Zealand is unregulated, the food labelling laws applied to all food and drink sold in New Zealand, do not apply to mineral and vitamin supplements in the same way. Therefore, any warning or health risks associated with consuming more than the recommended daily

intake of a vitamin or mineral, is information unlikely to be found on the label of a mineral or vitamin supplement. Organic mineral and vitamin supplements pose an even greater risk to health. Words like natural or organic, commonly used in the promotion of organic products, further support the perception that these products are safe. However, products made from 'natural' ingredients may contain more than the RDA of a given vitamin or mineral in one dose, and because natural ingredients used in the making of these products can vary in their chemical composition, any nutritional information on the label may not accurately reflect what a pill really contains. A parent can't really know how much of a particular vitamin or mineral they are giving their child. They can't measure it in their child's food, and they can't be sure information on the labels of natural supplements is accurate. Too much of a good thing can in fact be dangerous, and parents should not use supplements as an insurance policy in the way Doctor Greene is suggesting.