

## Student Critical Thinking Questionnaire (Phase Two) - Years 5-12

Welcome to the Developing in Digital Worlds student Critical Thinking questionnaire. Thank you for taking part! We want to find out how you go about using digital devices such as Netbooks, computers and/or tablets for learning. Below you will find two passages and a story. Please read these carefully and choose the **best possible answer** for each question.

### CONFIDENTIALITY & DISCLOSURE STATEMENT

We want to reassure you again that your personal (identifying) information will be kept in a secure location separate from the main questionnaire data. Your answers are completely confidential, and no personal information such as your name or birth date will be shared with any other individual or agency.

#### *Use Of Personal Information Collected*

Any personal information you choose to provide will only be used for the purpose of the research project and will not be shared with other persons or organisation outside the University of Auckland.

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### Your Information

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Your first name: \*

Your last name (or family name): \*

Other names you are known by (if any):

Your school: \*

You are a: \*

Choose one of the following answers

Girl

Boy

**Your date of birth (dd/mm/year): \***

**?** Example: 15 December 2012

**Your classroom name or room number: \***

**?** e.g., Room 3

**Year level: \***

**?** e.g., Year 5; Year 12

### Part One

Fracking is a way of mining for natural gas. Water, sand and chemicals are sprayed with great force into rock underground. When the rock breaks up, gas is freed. Mining companies tell the public fracking is safe for the environment. But some people living close to the wells want it banned. They claim fracking leaks chemicals and oil. For example, Jackie and Steve Snow, North Dakota farmers blame fracking for dogs, cows, and chickens dying. But fracking has been safely used for over 20 years in Taranaki. Scientists have found oil and gas leaks naturally into water sources even without fracking.

**1. Why did animals die on Jackie and Steve's farm? \***

Choose one of the following answers

- a. Because water was poisoned by chemicals as a result of fracking
- b. Because oil and gas naturally leaked into the water source
- c. We cannot decide what caused the animal deaths from the report
- d. Both a and b

**2. We could decide whether fracking caused water pollution, if we knew that \***

Choose one of the following answers

- a. Animals start to die on people's farms
- b. Water was clean before fracking but became oily after fracking started
- c. People start noticing water being polluted
- d. Water pollution occurred where there was no fracking

**3. Based on the information provided, we can say that Jackie and Steve would believe fracking should be banned because \***

Choose one of the following answers

- a. They had first-hand experience suggesting fracking is bad
- b. They do not want to believe big oil and gas companies

- c. They live in North Dakota
- d. They ignore reports of no accidents and natural leaking

**4. Fracking has not caused any major disasters in the Taranaki for the past 20 years; therefore it is completely safe to continue fracking in New Zealand. This statement is \***

Choose one of the following answers

- a. True, because there have been no major disasters
- b. False, because there is always some uncertainty
- c. True, because Taranaki is like the rest of New Zealand
- d. False, because oil and gas leaks occurred

**5. When deciding whether fracking is safe, it is best to consider the evidence provided by \***

Choose one of the following answers

- a. People who have witnessed the damages caused by fracking
- b. Scientists who have expert knowledge and conducted research on fracking safety
- c. The mining companies
- d. Options a and b

## Part Two

Some children have become ill with measles in New Zealand. 1 in 1000 children who get measles will die from it. Doctors strongly advise vaccination for all children, as it prevents them catching the disease. In New Zealand, 93% of 2-year olds have been vaccinated against measles. Vaccination also makes it harder for measles to spread. Some parents are against the vaccine because of the risk of major side effects. Research in the US shows that 1 in 5 children will experience swelling and 1 in 10 will have a mild fever. But a mum from Wellington reported that her son had seizures (or fits) and became disabled after being vaccinated. Vaccines are tested for their safety before being sold. However, some children cannot be vaccinated due to certain health conditions.

**6. Vaccines can be considered safe because \***

Choose one of the following answers

- a. Most children don't get side effects once vaccinated
- b. Only some children get side effects once vaccinated
- c. Vaccinating children reduces others getting measles
- d. All of the above

**7. Based on the information above, which of the following statements is true? \***

Choose one of the following answers

- 7% of parents of 2 years old children in New Zealand do not immunize their children
- 7% of 2 year old children in New Zealand do not experience side effects after getting the measles vaccine
- If more children get immunized, measles will spread more easily
- If fewer children get immunized, there would be fewer people having seizures (fits)

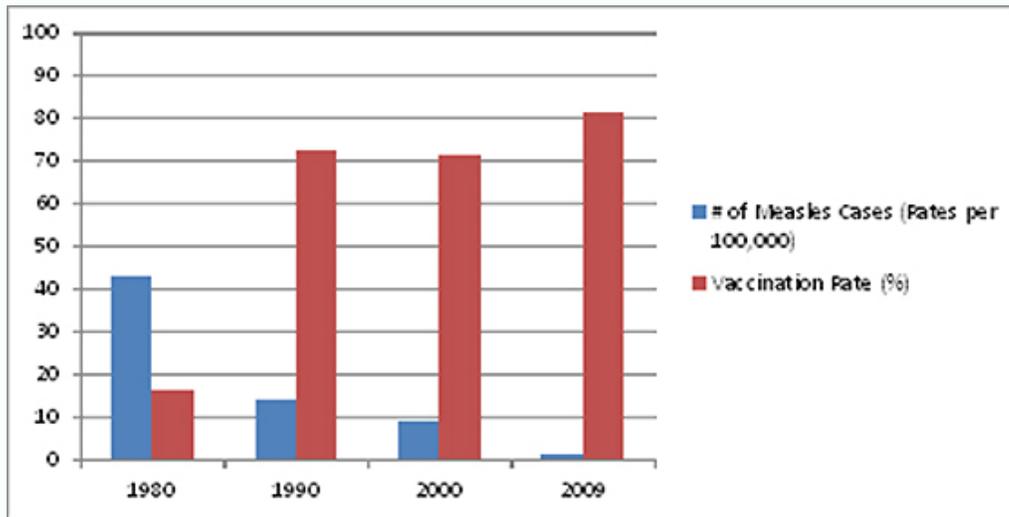


Figure 1. The global number of measles cases and vaccination rates estimated by the World Health Organization (WHO).

8. Figure 1 shows the World Health Organization's (WHO) information on the number of people with measles and the percentage of people who have been vaccinated against measles around the world. Notice that from 1980 to 2010 the vaccination rate has gone up and the rate of getting measles has gone down. Based on the information above, which of the following statements is true? \*

Choose one of the following answers

- a. Vaccination does not protect people from measles
- b. Measles will never die out from the world
- c. Measles still exists even though almost everyone has been vaccinated
- d. There is no need to vaccinate people anymore

9. Based on Figure 1, we know that \*

Choose one of the following answers

- a. Vaccines caused reduction in measles
- b. Vaccines are related to reduction in measles
- c. There is no relationship between vaccines and measles
- d. None of the above

10. Imagine a group of 90 people were exposed to a dangerous disease. 80 had been vaccinated and 20 of them became ill with the disease. 10 people were not vaccinated and all of them became ill with the disease. Which of the following statements is true? \*

Choose one of the following answers

- a. There were no side effects reported by people who were vaccinated
- b. The vaccine did not work as more people got ill from the vaccinated group than those who had not been vaccinated
- c. The vaccine probably worked because 20 of the vaccinated people fell ill, compared with all of those who had not been vaccinated
- d. No conclusion can be made because we don't know if the vaccine was effective for all people

### Part Three

The following story is from the School Journal which goes to all schools in New Zealand. Read it closely and complete the questions below by selecting the best possible answer. The story has been divided into segments. The best answer should be selected from what you have read to that point.

Begin reading here:

Sam shut his eyes and slumped in his seat, cringing. The kids in the front of the bus were laughing, and he had a hunch who they were laughing at. "Look at that old lady's umbrella!" someone said. Sam jerked upright. Oh, no. She hasn't! He looked. She had. This was worse than he'd thought. There at the bus stop was his grandmother with her new umbrella. The jumbo-sized one that was neon pink; the one she'd bought from the shop up the road, exclaiming "Oka, lima tala!" over the bargain price. Sam shook his head in misery. The other kids jostled and shoved to get off. But Sam took his time, dragging each foot.

**11. What is the most likely cause of Sam's misery? \***

Choose one of the following answers

- a. His grandmother's big pink umbrella makes her look silly
- b. Sam is worried about what his friends might think of him
- c. Sam is worried about what his friends think of his grandmother
- d. Sam is worried about what his grandmother thinks of him

It had been three weeks since she'd come to live with them, and in that time, he'd learnt a lot. She insisted on calling him by his Samoan name – all the time. She said it was time her grandchildren spoke Samoan and decided the best way for them to learn was reading the Samoan Bible together – every night. "Samuelu, tapē le TV." Sam never got to watch his favourite programmes any more... And now with her big pink umbrella! "She's ruining my life," Sam finally blurted to his sister. Mele rolled her eyes. "Don't be a brat. Mama's fine."

**12. If Sam's mother heard him telling Mele his grandmother was 'ruining his life', what would his mother think? \***

Choose one of the following answers

- a. Grandmother is being unfair - he should be able to watch his favourite programme and not be embarrassed by her
- b. Sam is being 'a brat' like Mele says - he should be grateful to spend time with his grandmother
- c. Sam should be as good as his sister
- d. Sam has not understood why grandmother is teaching him about the Samoan values

At the end of the story: Sam deliberately misses the bus and walks home with his friend Hunter, to avoid his grandmother. But some older boys who had bullied them before start bullying them again. Grandmother arrives and looks for Sam. She waves her big, pink umbrella. The bullies leave immediately. Hunter tells Sam his grandmother is "awesome". Sam, looks at his Mama, beginning to see her differently and agrees "she is one of a kind". They all walk home together.

**13. What message does the author want us to take from this story? \***

Choose one of the following answers

- a. Sam needs to learn better strategies and not to feel embarrassed by his grandmother
- b. Grandmothers shouldn't use pink umbrellas and Sam should not walk home alone
- c. Sam needs to understand why family members do things and learn why some things are more important than others

d. There will always be bullies and grandmothers are good protectors

**14. The publishers probably included the story of Sam and his grandmother's 'Big Pink Umbrella' in the New Zealand School Journal to: \***

Choose one of the following answers

- a. Help young people understand different cultures in our communities
- b. Promote the richness and variety of Samoan cooking
- c. Persuade young people to learn the Samoan language
- d. Explain how to deal with bullies

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