Home Learning TV - Middle Literacy 

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| **Segment lesson planning details** |  |
| Title for segment: | Spectacular Inventions |
| Year levels *(e.g., Yrs1 – 3)*: | Year 5-8 - Middle Literacy |
| NZC learning areas:  | Social Sciences - Level 4* Understand that events have causes and effects

English - Level 3 and 4* Creates a range of texts by integrating sources of information and processing strategies with increasing confidence
* Organises and sequences ideas and information for a particular purpose or effect

Technology - Level 3* Characteristics of technology:
	+ Understand how society and environments impact on and are influenced by technology in historical and contemporary contexts
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| Purpose of lesson:(What learners will learn) | **Learners will:*** Build on our knowledge of cause and effect to aid thinking
* Identify and record a relationship between two things
* identify cause and effect when applied to innovation and enterprise
* use a graphic organiser as a tool to record and organise ideas
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| Success Criteria – students will be able to:(how they will know when they have learnt it) | **Learners will be able to:*** Understand how cause and effect helps understanding
* Demonstrate how cause and effect are interrelated concepts
* use a graphic organiser to record and organise ideas
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| **Segment content/context details *(as appropriate)*** |
| Māori specific content i.e. the learning draws on Mātauranga Māori: | ***waka hourua, waka taua, tangihanga, mana*** | Pacific specific content i.e. the learning is focused on Pacific knowledge: |  |
| **Segment production details** |
| Equipment requirements: | Whiteboard, Whiteboard pens, TV screen for projecting slideshow |
| Copyright requirements:Please be specific: Source: (*Seven Sizzling Sausages* by Sam Smith –url link to the source), intended use (to demonstrate alliteration), Length (timings for video clips) | School Journal L2, 2018, Painted Hoe by Steve Gibbs <https://instructionalseries.tki.org.nz/><https://www.gettyimages.co.nz/><https://thenounproject.com/>  |
| **Segment links and attachments *(list all links to recordings or attachments, the source and confirm that copyright permissions are granted)*** |
| Links to recordings /resources | Slideshow Presentation - <https://docs.google.com/presentation/d/1z_7mzGeu9wRDA1Bo_Lf_2Ip_zTgvaKAXJHuOb2WAyec/edit?usp=sharing>  |
| Attachments  |  |
| **Segment plan content** |
|  | Teaching and learning activities linked to purpose | High level script (key points/questions)  |
| **Activate**: Activating prior learning, knowledge of contexts and relationships | ***SLIDE 2*****Learners will:*** Build on our knowledge of cause and effect to aid thinking
* Identify and record a relationship between two things

***SLIDE 3******SLIDE 4******SLIDE 5******SLIDE 6*** | ***(\*\*\*ON CAMERA\*\*\*)*** *Kia ora, talofa, malo e lelei, hello.**It's great to see you - welcome to our learning time.**Today we are going to talk about cause and effect in relation to a some very important inventions. What are cause and effect? (pause) Let’s start with a very simple example* ***(\*\*\*POWERPOINT FF\*\*\*) SLIDE 2****Cause and effect describe why things happen, or how one thing leads to another. In this example, the cause here is the hot sun. What is happening as a result of the sun? (pause) You got it: a melting ice cream - Ka pai.****(\*\*\*POWERPOINT FF\*\*\*) SLIDE 3*** *Sometimes, one event or cause can trigger a whole series of effects. This is like a* ***domino effect*** *or a* ***chain reaction****. Look at these two images. What do you think is going to happen when the metal ball swings and hits the rest of the balls? (pause).* ***(\*\*\*ADLIB\*\*\*)******(\*\*\*POWERPOINT FF\*\*\*) SLIDE 4*** *Let’s take a look at another example of a chair reaction or domino effect. In the old story and song about the old woman who keeps eating animals, the old lady swallowed a fly, then a spider to catch the fly, then a bird to catch the spider and so on and so on until eventually she swallowed a horse. Of course, this did not end well!* ***(\*\*\*POWERPOINT FF\*\*\*)******SLIDE 5****. Sometimes there are multiple effects from a cause. The cause here is rain and two effects of this are… you got it… having to use an umbrella and plants growing. Can you think of any another effects? (pause)* ***(\*\*\*ADLIB\*\*\*)******(\*\*\*POWERPOINT FF\*\*\*) SLIDE 6*** *Let’s give this another go. Remember talking about how sometimes there are multiple effects? Let’s look at the* ***waka hourua*** *(voyaging canoe). The two effects here are that Polynesians could fish and journey to other lands more effectively. Can you think of another effect that resulted from the invention of different kinds of* ***waka?*** *(pause). You can see that there are two waka. The* ***waka hourua,*** *which is a large seagoing waka, and a* ***waka taua,*** *which could hold up to two hundred people. Did you come up with a third effect? (pause). In fact, the* ***waka taua*** *were used to carry war parties and to transport large groups of people to ceremonies such as* ***tangihanga****. They were also symbols of* ***mana.*** *They showed the power and importance of an* ***iwi.*** *These are three more effects or consequences of the* ***waka taua;*** *to carry war parties, to transport people, and to demonstrate* ***mana****.**Did you get any of those effects? Can you think of any others? (pause)* |
| **Learn**: Introducing learningReinforce routines, provide multiple exposure to concepts, and strategies. Scaffolding learning  | ***SLIDE 7******SLIDE 8******SLIDE 9*****Learners will:*** Identify and record a relationship between two things
* identify cause and effect when applied to innovation and enterprise
* use a graphic organiser as a tool to record and organise ideas

***SLIDE 10*****WHITEBOARD DRAWING - ONE****PRE-THINKING POST-THINKING** | ***(\*\*\*ON CAMERA\*\*\*)*** *Now, let’s use these ideas of cause and effect when looking at inventions through time.**Look around you. (pause) What is one invention that you couldn’t do without? (pause). What have you chosen? (pause). Why did you choose that? (pause) If that object hadn’t been invented, how do you think you would feel? (pause). For me, I would really struggle if I didn’t have a phone. I wonder how I would connect with my family, who live all over Aotearoa. I guess I could write a letter but, would it be the same? (pause).**Sometimes people invent something to solve a problem or to make a job easier.. At other times a person can invent something by accident.* ***(\*\*\*POWERPOINT FF\*\*\*)******SLIDE 7.***  *Let’s look at two examples. Do you think they were created to solve a problem, or by accident?**I think it may be fairly obvious which of these two inventions was created to solve a problem. Yes, you got it - the wheel. On the other hand, the potato chip was probably invented by accident in 1853 by a cook called George Crum. One evening while working in a restaurant, someone kept sending back his fried potatoes because they were too thick. George Crum cut them thinner and thinner each time, but he couldn’t satisfy his customer. Finally, George became so angry that he cut the potatoes as thin as he could and fried them to a crisp, thinking that this would really upset the disagreeable diner. However, the thin-sliced crunchy potatoes were a hit, and the customer came to congratulate the cook. So, an argument way back in 1853 was responsible for the invention of one of the world’s favourite snack foods!****(\*\*\*POWERPOINT FF\*\*\*) SLIDE 8*** *Let’s look at some inventions from the last hundred years that have changed the world. How many of these do you have in your house? (pause)****(\*\*\*POWERPOINT FF\*\*\*) SLIDE 9*** *We can use something called a Cause-and-Effect graphic organiser to help identify and write about cause and effect (pause). Please copy the graphic organizer on the right of your screen.**I am going to give you some time to make your cause-and-effect graphic organiser now while I draw up mine on the whiteboard.* ***(\*\*\*ON CAMERA\*\*\*) (\*\*\*WHITEBOARD\*\*\*) [****Presenter to draw up a 3 box cause and effect graphic organiser on the whiteboard].* ***WHITEBOARD DRAWINGS*** *(****PRE-THINKING)******(\*\*\*POWERPOINT FF\*\*\*) SLIDE 10*** *Let’s draw these inventions in the first column or, if you would prefer, write their name. Ka pai**While you do this at home, I am going to write down why I think this happened or, what the effect of this invention is.****(\*\*\*ON CAMERA\*\*\*) (\*\*\*WHITEBOARD\*\*\*)*** *Presenter to write in three effects on whiteboard graphic organiser* ***WHITEBOARD DRAWING*** *-* ***ONE*** *(****POST-THINKING)****Here are some of the things I think happened as a consequence of these inventions. (Presenter to read to out the right-hand column on the post-thinking whiteboard drawing) How did you get on at home organising your ideas?* ***(pause)*** *This tool has helped me to organise my thoughts. I can clearly see the relationship between the invention and the effect it has on peoples’ lives.*  |
| **Respond**: Providing opportunities to use and practice  | ***SLIDE 11******WHITEBOARD DRAWING*** *-* ***TWO***

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| ***Invention*** | ***What would happen if it wasn’t invented?*** |
| ***Stopwatch*** | ***confusion when determining who won a race*** |
| ***Smoke Alarm*** | ***no warning of fire which could potentially lead to injury or death*** |

**Learners will:*** Identify and record a relationship between two things
* identify cause and effect when applied to innovation and enterprise
* use a graphic organiser as a tool to record and organise ideas

***WHITEBOARD DRAWING*** *-* ***THREE****If the stopwatch wasn’t invented then there would be confusion when determining who won a race.**If smoke alarms weren’t invented this would result in people having no warning if a fire broke out in their house which could potentially lead to injury or death.*  | *Now let’s get a bit tricky and flip these ideas around.****(\*\*\*POWERPOINT FF\*\*\*) SLIDE 11*** *I wonder what the consequences would be if some things weren’t invented? (Presenter to emphasise the underlined words in this sentence) The words Consequences and Effect can be interchangeable because they have a similar meaning. (pause) Here are some inventions from the last hundred years. The Stopwatch, which was invented in 1916. The Smoke Alarm, which was invented in 1902 and the Gaming Console, which was invented in 1968. Firstly, let’s think about the Stopwatch. I wonder what would have happened if this wasn’t invented? (pause). I watched the Tokyo Olympics and Paralympics on television recently. There were some very close finishes in some of the athletics and swimming events. Just by watching these, I really couldn’t tell who won the race but, by using a digital stopwatch the officials were able to determine who won. Phew, that solved a lot of confusion!**I am going to give you some time to make your cause-and-effect graphic organiser now while I draw mine on the whiteboard.* ***(\*\*\*ON CAMERA\*\*\*) (\*\*\*WHITEBOARD\*\*\*) [****Presenter to draw up a 3 box cause and effect graphic organiser on the whiteboard]**Let’s draw these inventions in the first column or, if you would prefer, write their name, Stopwatch, Smoke Alarm and Gaming Console. Ka pai!**While you do this at home I am going to write down what I think the effect may have been if it hadn't been invented.* ***(\*\*\*ON CAMERA\*\*\*) (\*\*\*WHITEBOARD\*\*\*) (****Presenter to write up first two consequences* ***WHITEBOARD DRAWING*** *-* ***TWO)*** *How did you get on at home? (pause). You can see that I have written up consequences for two of the inventions. Let’s read them together. (Presenter to read consequences). Take some time now to record the consequences for the* ***gaming console*** *not being invented. You may like to talk to your whānau about this (pause). I am sure everyone has something to say about this topic!****(\*\*\*ON CAMERA\*\*\*) (\*\*\*WHITEBOARD\*\*\*)*** *Now, let’s put these ideas into sentences. If the stopwatch wasn’t invented, then there could be confusion when determining who won a race. (Presenter to write this on whiteboard). Let’s try the next sentence. If smoke alarms weren’t invented this would result in people having no warning if a fire broke out in their house, which could potentially lead to injury or death. (Presenter to write this on whiteboard). How did you get on when you wrote a sentence about what was one consequence of the gaming console not being invented? (pause) ka pai!**I found it fairly simple to write these sentences because all my thinking and organisation had already been done. I used my cause-and-effect graphic organiser as a planner. I hope you see that it is important to go through this process because it makes our writing easier.*  |
| **Share**: Learner and parent reflection on learning and engagement and what they can do next | ***SLIDE 12*** | ***(\*\*\*ON CAMERA\*\*\*)*** *Well done everyone, you have done some really good learning today. Do you feel confident that you know more about cause and effect? (pause). Let’s remember what we have learnt today. Firstly, we are able to identify cause and effect when looking at inventions over the years and the relationship between these two things. Remember the melting ice cream? (pause) Was this the cause and effect? (pause). Great recall everyone, the melting ice cream was the* ***effect****, the sun was the* ***cause****. Secondly, we learnt that by using a graphic organiser we are able to organise and record our thinking, which makes it much easier to write sentences. We used this tool as a planner for writing. Ka pai! Also, one thing I am never going to forget about this learning is that the man who invented the potato chip was called CRUM!**Now it is your turn to do some mahi. Here are some ideas that you might like to try at home.* ***(\*\*\*POWERPOINT FF\*\*\*) SLIDE 12 (Presenter to read slide)****Don’t forget to share your learning with your whānau.* *Mā te wā* |