Home Learning TV: Junior Project

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| **Segment lesson planning details** |  |
| Title for segment: | Weather |
| Year levels *(e.g. Yrs1 – 3)*: | Yr 2-6. Science/design technology |
| NZC learning areas:  | Technology |
| Purpose of lesson:(What learners will learn) | Students will learn to:* identify different aspects of weather
* understand different indicators of weather
* understand how weather can create a sense of belonging and impacts on our food production
* make parts of a weather station
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| Success Criteria – students will be able to:(how they will know when they have learnt it) | * be able to talk about some instruments for measuring weather
* explain the importance of predicting weather
* appreciate different cultures have traditional ways of predicting weather
* understand how talking about traditional weather indications helps us have a sense of belonging
* understand how measuring weather helps us to grow food, which creates a sense of belonging (links to food lessons previously and turangawaewae lesson to follow, land)
* follow instructions to make parts of a weather station
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| **Segment content/context details *(as appropriate)*** |
| Māori specific content i.e. the learning draws on Mātauranga Māori: | Handing down traditional weather observations and sharing with whānau | Pacific specific content i.e. the learning is focused on Pacific knowledge: | Cyclone season and natural occurring weather predictors |
| **Segment production details** |
| Equipment requirements: |  |
| Copyright requirements:Please be specific: Source(*Seven Sizzling Sausages* by Sam Smith –url link to the source), intended use (to demonstrate alliteration), and length (timings for video clips) | All images in PowerPoint are Getty |
| **Segment links and attachments *(list all links to recordings or attachments, the source and confirm that copyright permissions are granted)*** |
| Links to recordings /resources | Thermometer, rain gauge, barometer, weather vane, anemometer (or pictures) Ruler (or paper/cardboard), jar, permanent marker (if you have one), sticky tape,  |
| 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 | *Familiarisation with topic – purpose of learning**Recall of previous learning – linking to this lesson**Building resilience**Modelling thinking and mistakes*Teacher gives them one minute to get materials and shows powerpoint slide is shown during that time.  | Welcome back to Junior Project. Greet everyone with a variety of greetings.This is our time to think about how we live in the world how we belong in the world, how we use our hands, our thinking, our head to connect all of our thinking together. How we ***belong***and how we use knowledge passed on to us from different generationsWe recently looked at the growing of taro and kumara. Anyone who is growing crops like taro and kumara need to be aware of weather patterns. Cyclones in the pacific can cause problems for crops, droughts (like we have had this summer in New Zealand) can affect kumara growing.Today we are going to learn a little bit more about measuring different aspects of weather. We are also going to use the skills we used when following instructions (when we made bread, drew a comic, ...)I am going to need you to gather some material for today’s session. Can you find: a ruler (if you don’t have one, that’s fine we can use some card off a box and make some marks on it), jar, pencil with eraser (or a straight stick), paper, tape (or something to help stick straws together), pin or small nail. Please ask someone help you get these items. I’ll give you one minute and, in the meantime,, here is a photo of weather instruments. Can you name these? Write them down. Can you think of any other instruments? (I will tell what these are called when you get back).Ask someone else who is watching this with you.Do they know?If you don’t have these items handy right now, no problem, maybe you could just watch what we are doing and write key words down or draw pictures to remind you what we did. |
| **Learn**: Introducing learningReinforce routines, provide multiple exposure to concepts, and strategies. Scaffolding learning  | *Introduces new knowledge or skills in way that build on learners existing knowledge* *Front loads for activity**Visualisation**Cultural connections – reinforcing belonging**Collaboration to support thinking**Context to support activity**Key vocabulary to support learning**Demonstration for learning - and link back to learning intention**Powerpoint with pictures. Teachers shares slides**Success criteria* understand how talking about traditional weather indications helps us have a sense of belonging*Teacher shows slide* *Consolidating connections and responsive practice**Teacher shows slide 9**Indicators of weather is one of the learning intentions.* | What do you think of when you hear the word ‘weather’? We have heard quite a bit about weather recently – there is a shortage of water in many areas around New Zealand. We need more rain. Last year there were some floods in parts of New Zealand. Do you live somewhere where this is plenty of rain, or somewhere that there isn’t enough?Look out your window today – what do you see? Is it sunny, windy, raining, foggy? Weather is the day-to-day state of the atmosphere, varying from minute to weeks (i.e., what you see out of the window each day and over the next few days). There are lots of different instruments that can measure the weather. Can you name any? Show the ones in the studio (or pictures).That’s right, we can see a rain gauge, a thermometer, a wind vane, and a barometer. Do you have anything like this at home or at school?Remember when we looked at starch in a recent episode? There are plenty of plants that have starch which are then used to provide food. You may recall some of these: kumara, yams, potato, maize, wheat, rice, peas, taro and barley. Sometimes weather conditions can affect these crops, like storms, tropical cyclones, strong winds, drought etc. We therefore need to have instruments to measure and sometimes predict what is going to happen.Why do you think we need them?That’s right, so we can plan ahead. Then we can PREDICT what is going to happen.Predict is the key word here – we don’t always know for sure, but we can try and make ourselves, our animals and our crops ready – to protect them from frost, for example. It’s a little bit cooler now that it has been. What do we use to measure the temperature? A thermometer – that's right. Hold up a thermometer or show a picture. This is just one instrument – they are many more.Before we start looking at other instruments, I’d like to share some history about weather. Cultures around the world use a range of natural occurring events to predict the weather, as they didn’t have access to the instruments we have today. By learning and understanding how these traditions are passed down is an important part of **belonging** to our culture. Various iwi in New Zealand have different indicators. Here are a few examples:* Pūkeko running to higher ground is a sign of a storm or flooding photo
* Tī kouka (cabbage tree) flowering early means along hot summer ahead. photo

In the Pacific Islands some weather indicators include: * early fruiting of mango and breadfruit indicates a rainy season ahead,
* screeching kingfishers (photo) signifying imminent rain and an active cyclone season, and
* just before a tsunami all the birds and close sea life disappear.

Ask members of your family if they know of other weather predictions. So, there are plenty of indicators of weather – some traditional (which are generally passed down to us adding to our sense of **belonging**) others are manmade. Luckily today we have lots of instruments that measure the weather accurately and can predict future weather accurately – this helps us to be able to successfully grow healthy food crops, so we can share kai with our whānau and friends.  |
| **Respond**: Providing opportunities to use and practice  | *Presenter demonstrates how to make the instruments***Reinforce the need to follow instructions carefully, missing a step will have problems (like when I made my sandwich without any filling!)***Consolidating collaboration/ referencing thematic response to belonging when making instruments together***Once again reinforce the need to follow instructions carefully, missing a step will have problems – another success criteria***Directly relevant to learning intention**Involves student participation and collaboration* | We are going to make our own weather station today. Earlier we talked about using a thermometer to measure the temperature. Examples of a few weather instruments are:* Rain gauge for amount of rain
* Weathervane for wind direction
* Hygrometer for humidity
* Barometer for air pressure

We won’t have time to make all of these today but let’s see if we can make a rain gauge. That will give us a great start for our own weather station. Remember to get someone to help – there are a few tricky bits and we often need other people to help us – that’s what collaboration and belonging are all about.Let’s get started. We will use the jar and ruler. All we need to do is tape the ruler to the jar, or make markings up the side of the jar, from the ruler. You could also use a large measuring cup with the measurements already printed on it. Make sure the rain gauge is sheltered from the wind.Remember how important it is to **follow instructions**.1. Take the lid off your jar (if it has one)
2. Peel the label off your jar (if it has one)
3. If you have a permanent marker, you can use it to make your measurements directly on the side of the jar – hole the ruler beside the jar and make marks to show how much rain water will be collected in your jar
4. If you want to, you can tape your ruler onto the jar and use this to read how much rain water you have collected
5. Find some where suitable outside to put your rain gauge – think about making sure you don’t put it under a tree or anything that will stop the rain getting into it

How did you get on with those instructions?Do you think you can find someone at home who could help you make this? – I reckon you could.Now wait for it to rain!So now we already have one instrument in our weather station. We can now measure how much rain we will get (hopefully that will help our drought-stricken farmers in various places around the country).For our older viewers, you might want to design your own weather station – you could draw a fantastic design for a weather robot, or come up with other new and imaginative ways to be prepared for the weather we have in the Pacific.I’d love to see do some photos of your weather station!So, let’s make sure you **followed the instruction**s well. Did you miss any steps or did your instruments look similar to mine? Did you remember to ask for help?If not, can you think of a step you missed? Maybe you could go back now and change it. Great. Ka pai e hoa.If you didn’t get a chance to make these instruments with us today, hopefully you might get a chance to make them later (remember these episodes are available on demand so you can watch them again). Remember **following instructions** is so important. Also, if you can make them together at home, that really helps you have that wonderful feeling of **belonging**. I hope you keep remembering to ask for help when you are working on projects like this – everyone at home can join in. And remember, scientists often work as a team. |
| **Share**: Learner and parent reflection on learning and engagement and what they can do next | *Debrief prompts student’s reflection on learning outcomes and progress towards meeting success criteria**Reiterates theme of* ***belonging****Includes opportunity to share learning or learn together with whānau, HLTV or others* * *Reiterates the task if done outside of the lesson*
* *Introduces ‘independent learning’ through a provocation*
 | Let’s look back at what we learned today:We learned:* that there are lots of different parts to weather and different instruments to measure the weather
* Predicting weather is important in many cultures as we need crops for food
* that looking pack how our ancestors forecasted weather helps our sense of ***belonging***
* making things together like weather stations can also give us a sense of ***belonging***

When we were making instruments, we followed instructions, but just like we have when making other creations in previous episodes, just as important is the feeling of ***belonging*** when we do things together.When you have finished making some parts of your weather station you could take measurements every day, and record these. What patterns could you notice? Have fun using them! Remember to share your photos/drawing with me by emailing *:* *info@hltv.co.nz* *or take a photo and text it to: 5811, use the key word “weather”.* |