Food for Thought...

SQUAWK SQUAD

Disclaimer: *This Topic Document remains a work in progress as we tweak and grow with teachers! This means some sections remain unfinished. More importantly, this means we welcome your feedback, and can implement new ideas before the Topic is taught.*

Year 1 and 2

Core Objective: Students experience first-hand how much fun growing your own food can be!

Additional lesson outcomes

- Learn about what early explorers ate down in Antarctica
- Explore where different types of imported food come from
- Optional - meet a real-life farmer!

Short Lesson Summary: To give context to where food comes from, students will explore Antarctica in order to gather all their survival rations for an expedition in the snow. Once the imagination portion of class has passed, it's time for real, live FOOD! The class will plant their own seeds to see germination for themselves, while learning about local food systems and the wondrous availability of Farmers markets here in Aotearoa.

Lesson sections and expected times:

- **Introduction Activity - Invite a Farmer/ Antarctic Crash Hunt (10 Minutes)**
- **Grow Your Own Food (30 Minutes)**
  Total ~ 40 Minutes

Curriculum Links

Major Links

- *Science*
  - *Planet Earth and Beyond:*
    - *Earth Systems*
    - *Interacting Systems*
- *Science*
  - *Material World*
    - *Properties and Changes of matter*
    - *Chemistry and Society*
- *Science*
  - *Nature of Science*
    - *Understanding about Sciences*
    - *Participating and contributing*
- *English*
  - *Speaking, Writing and Presenting:*
    - *Purpose and Audience, Structure,*
    - *Language features.*
- *Science*
  - *Living World*
    - *Life processes*

- *Health and Physical Education*
    - *Healthy Communities and Environment*
        - *Community Resources*
        - *Rights, responsibilities, and laws; People and the environment*

Minor Links

- *Mathematics - Numbers and Algebra: Number strategies to know*

Background Teacher Information:

Between land use, water, and carbon emissions, predominantly meat-based diets are having an impact on the planet. Looking forward, environmental champions are taking control of their own food systems. While this often sounds like stepping away from meat (Science Direct Article), we see a positive approach: growing and experiencing our own food!

Luckily, New Zealand is a world leader in school gardens!

Gardens often focus on growing food for students to eat. Many students don't know exactly where food comes from, so watching mint, tomatoes, or kumara grow opens a world of exploration into finding joy and connection with the land. Food deserts challenge industrialised communities around the world, but school gardens offer fresh produce without the need for supermarkets.

"At-risk youth do the planting and hoeing and harvesting. The kids are surprised that the food they harvest is free. They've had to pay for everything they've ever gotten before. They greet fresh carrots, straight from the ground, with suspicion at first, until they eat one. She is passing on the gift, and the transformation is profound."
-Robin Wall-Kimmerer

At Squawk Squad, we want to inspire and partake in change around food systems, and we believe individual choices can lead to institutional shifts. From Meatless Monday pledges to composting food scraps, our team takes steps daily to reduce our own food-based impacts. We're not alone! 1 in 10 NZ-ers consider themselves to be "mostly meat-ess" or vegetarian.

At the University of Otago, PhD Lentz says meat's impact on the environment, " is due to the vast range and severity of impacts tied to the raising of animals for food, including land and water degradation; habitat and biodiversity loss; and contribution to pollution, ocean dead zones, and climate change. No matter the driver for change, whether it be for environmental sustainability; improved public health; or animal welfare; reduced meat consumption would result in a more efficient food system that could feed more people with fewer resources, thereby minimising at least some of the associated environmental impacts that are being seen today." (Citation)

Our world is on a great trajectory. Around 1900, antarctic explorers brought thousands of kilograms of ham and bacon on their expeditions. Antarctica may still have trouble sprouting beans and cucumbers, but our expeditions to the icy continent can be more nutritious. This is all guided by reconnecting ourselves and our whānau with food and soil, enjoy!

Call-to-Action: Eat at least one vegetarian/vegan meal(s) with your whānau this week!

Extra for experts:

- **Start a school veggie patch!** Document students growing their own food right at school, in a new plot or with a new venture in an existing garden!
- OR *Find some local produce at a farmers market to eat the meatless meal; you'll meet a farmer!*

Recommended Resources

Introductory Activity

- FInd and contact a community farmer OR
- Print and cut out images of antarctic survival rations

Grow Your Own Food

- Planting seeds (Peas or beans will germinate quick and easily!)
- Glass jars or wax-lined cardboard cartons
- Windowsill/ sunny location to let plants grow

Pre-preparation needed:

- Pick out your introductory Activity, each will have 1 preparatory action (Contacting a Farmer/ printing out Antarctic "rations"
- Set up as many planting jars as your class will need (2 students per jar is great)
- Find location to leave the budding seeds

Spaces needed:

None

Remember - there's a whole host of awesome extra lesson ideas via the "Extra Activities" section. Find full explanations for all the activities listed below here ! If you have your own ideas for activities or resources you would like to share add them here.

- **An EXPANDED Survival in Antarctica Lesson. Choose to add or modify from the presented plan (60 Minutes)**
- **How much Food do we waste? (Years 6-8, 30 Minutes)**
- **Do the Rot Thing! Compost Activities (10-60 Minutes)**
- **Visualise Food Plates (10 Minutes)**
- **I Can Compost (15 Minutes)**

[Scroll down to for Lesson Activities]

Introductory Activity Options: *Invite a Farmer* or *Antarctic Survival Crash Hunt*

A. Invite a Farmer (10 Minutes)

Materials Required: None.

Teacher Information: With food on the mind, we want to champion farmers. If any parents are farmers, ask them to join class for this session, or invite any grower from the community!
Share with students the types of foods that you buy locally. If any teachers at your school have worked at the Farmers Markets or know farmers well, post a quote about the joy of relating to local farmers.
This will be a question and answer with a real food expert!

- Have the expert share what kind of farmer they are, how long they've been doing it, about the joy and connection they have with the land of Aotearoa.
- Bring up a local map image, point out where farms are located and when Farmers Markets happen.
- Ask students if they could walk or drive to the Market with their whānau, or if they have been there before
- Ask students to try one fruit or vegetable from a Market, garden or orchard (hopefully one that they've only tried in the supermarket). **Have them volunteer food ideas here. Option for them to draw these!**

B. Antarctic Crash Hunt (10 Minutes)

Materials Required: *Printed out antarctic foods (options listed below)*

Teacher Information: For this activity, you'll hide cut-out or printed "foods" from Antarctica.
Food to include in this "Crash Hunt"

- *Tin of Ham*
- *Box of Biscuits*
- *2 Boxes of chocolate*
- *Tin of Bacon*
- *Powdered Vegetables*
- *Muesli*
- *Anything else you'd like to eat!*

Your plane has crashed in Antarctica. The food from your ship is hidden throughout the snow!
You'll need to march around the icy land and find any rations that are still good to eat. This crash hunt is a treasure hunt for survival!
Role play as explorers, wearing your imaginary parkas, snow goggles, and boots. This means your walk is quite clunky.

Once every bit of survival food has been collected, place them together at the front of the classroom.

[Optional] As this is not your typical Aotearoa diet... Each of you draw some food they would want to bring with them on their Antarctic expeditions.

At the end of this activity, then you can tie it into the next activity by including in the role-play/intro activity prompts like:

- **Can we grow food down in Antarctica? Why/why not?**
- **Can we grow food down in Aotearoa? Why/why not?**

Main Lesson Plan

1 Part (~20 Minutes total)

Growing your own food (20 Minutes)

Resources Required

- **Purchase glass jars/collect old jars, or repurpose wax-lined cartons by cutting their tops off**
- **Purchase pea or bean sprouts**
- **Have water and paper towels handy to create environment for germination**

Teacher Information: *If you'd like to use recycled materials, replace new jars with used food jars (second-hand stores are usually filled with them!), or milk/broth cartons (anything with a wax sealant inside can do as well as glass!). Share a little information about the seed they will be planting, if you go with beans.*
See this chart for a general breakdown of seeing options: A Guide to Sprout Seeds!

When students have their jars, seeds, and paper towels, they'll be ready to create their own growing environment!

From here, students will loosely ball up paper towels, place them in the jar with 2-3 seeds each, and rinse the jars under sink water (or a jug). Not that they want paper towels to be damp, without filling the whole jar with water.

Next: Carefully push seeds down into the paper towels around the edge of the jar so they can still be seen. Make sure they are firmly held in place.

Once seeds are planted: Set up a home for the jars on the windowsill, and check in on the plants, with the students, once per week. (We recommended one morning a week for students to point out what has grown out of the seed.)

Option: Put tape or nametags on the jars, and students can either name their plant or try writing a message about growing food!

***See more at* Full Germination Lesson**

On planting day, encourage comments and conversation about how we can all connect to our food system with these questions:

- What foods from the store can we grow at home?
- Have you seen a seed turn into food before?
- Are there any fruit trees in your neighborhood? Are you allowed to pick them?
- How can eating local vegetables help the environment and local economy?
- Do you know any vegetable farmers? Do they talk about the environmental impacts?

Moving forward: What do you see in your seed jar?

- You are looking for a root to pop out of the side.
- Next, you are looking for the root to push down into the soil.
- Then, you are looking for root hairs.
- Next, you are looking for the seed to push up while the root hairs push down.
- Lastly, you are looking for the shoots to come up!

Finisher: Close by playing this video/song about how our food comes from the ground: Dirt Made My Lunch

----------Lesson Ends----------

Don't forget to complete this topic's Call-to-Action and send us in a video with the chance to win cool prizes! 😊😊🎉🎉

Call-to-Action: Call-to-Action: Eat at least one vegetarian/vegan meal(s) with your whānau this week!