

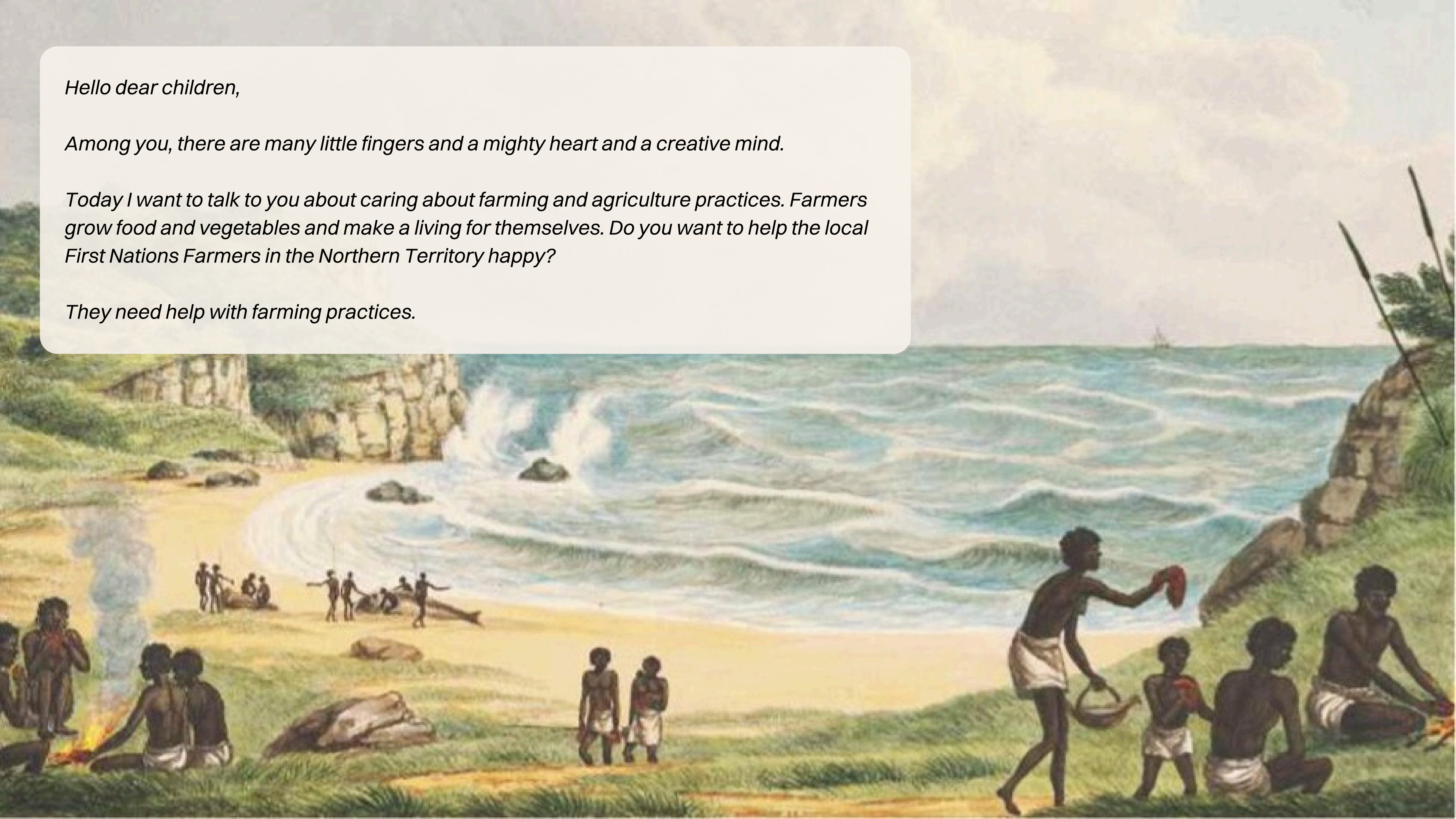
First Nation Farming and Agriculture Storybook

Hello dear children,

Among you, there are many little fingers and a mighty heart and a creative mind.

Today I want to talk to you about caring about farming and agriculture practices. Farmers grow food and vegetables and make a living for themselves. Do you want to help the local First Nations Farmers in the Northern Territory happy?

They need help with farming practices.

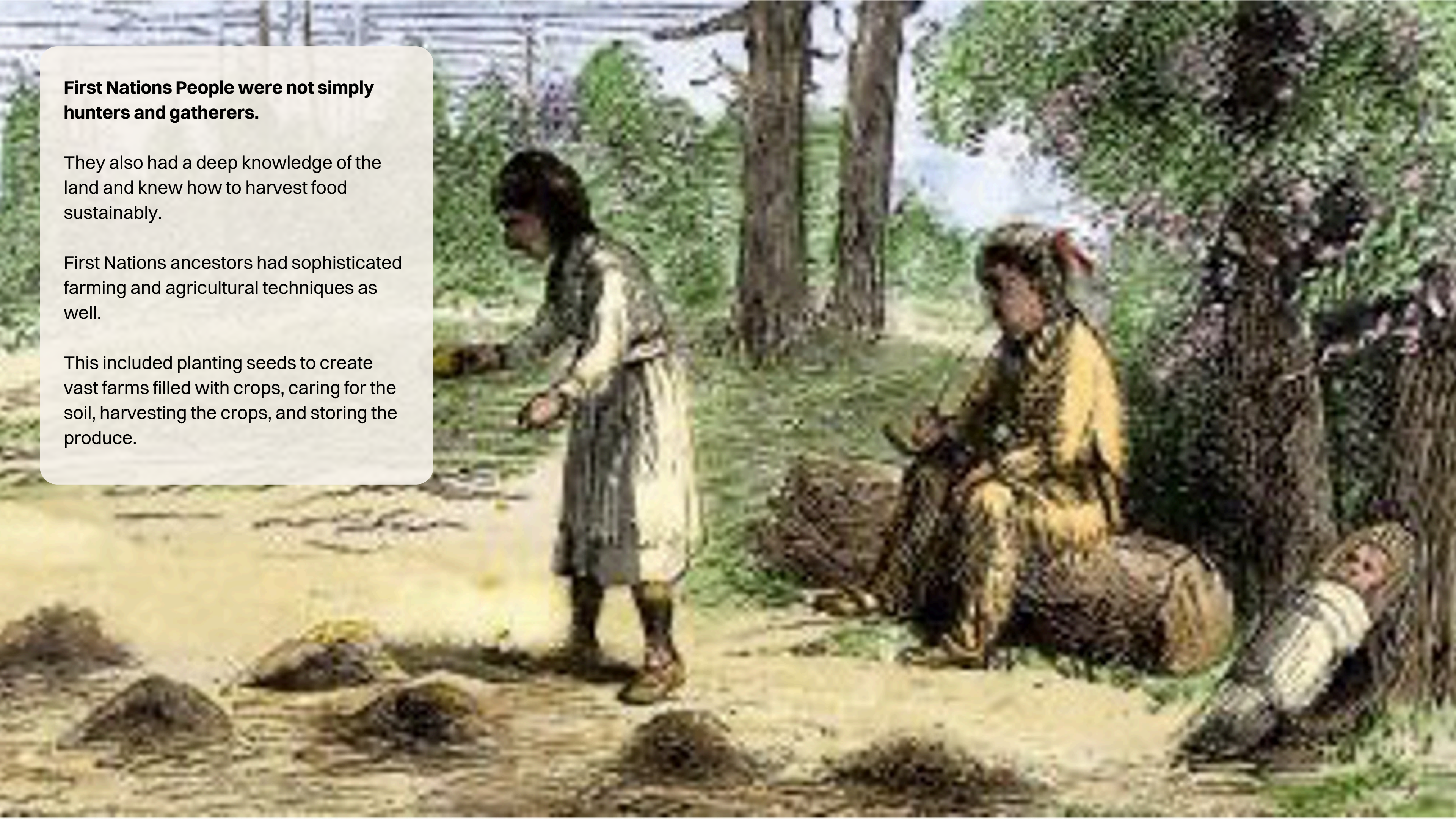


First Nations People were not simply hunters and gatherers.

They also had a deep knowledge of the land and knew how to harvest food sustainably.

First Nations ancestors had sophisticated farming and agricultural techniques as well.

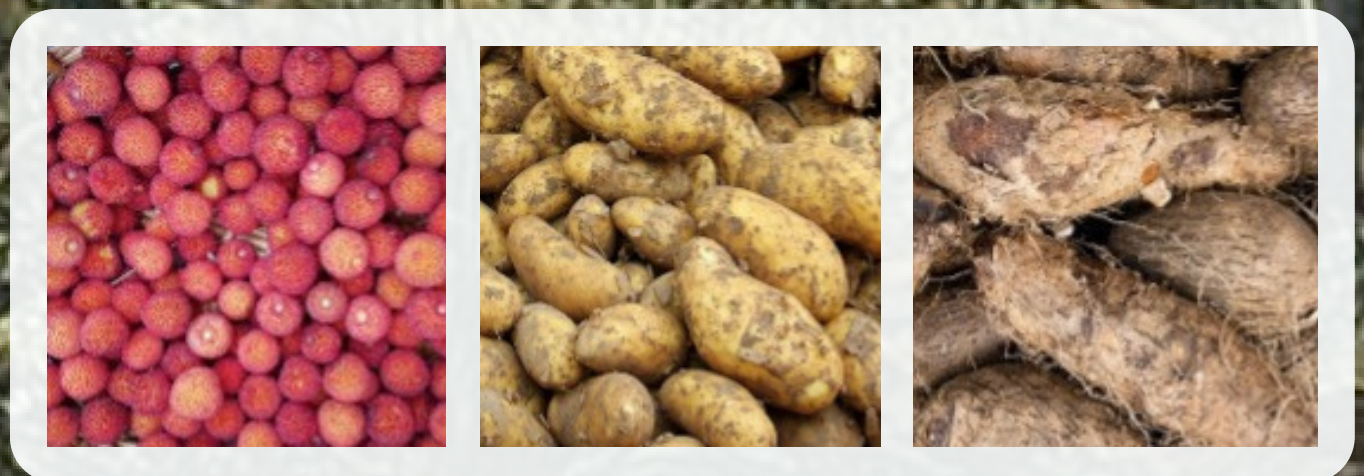
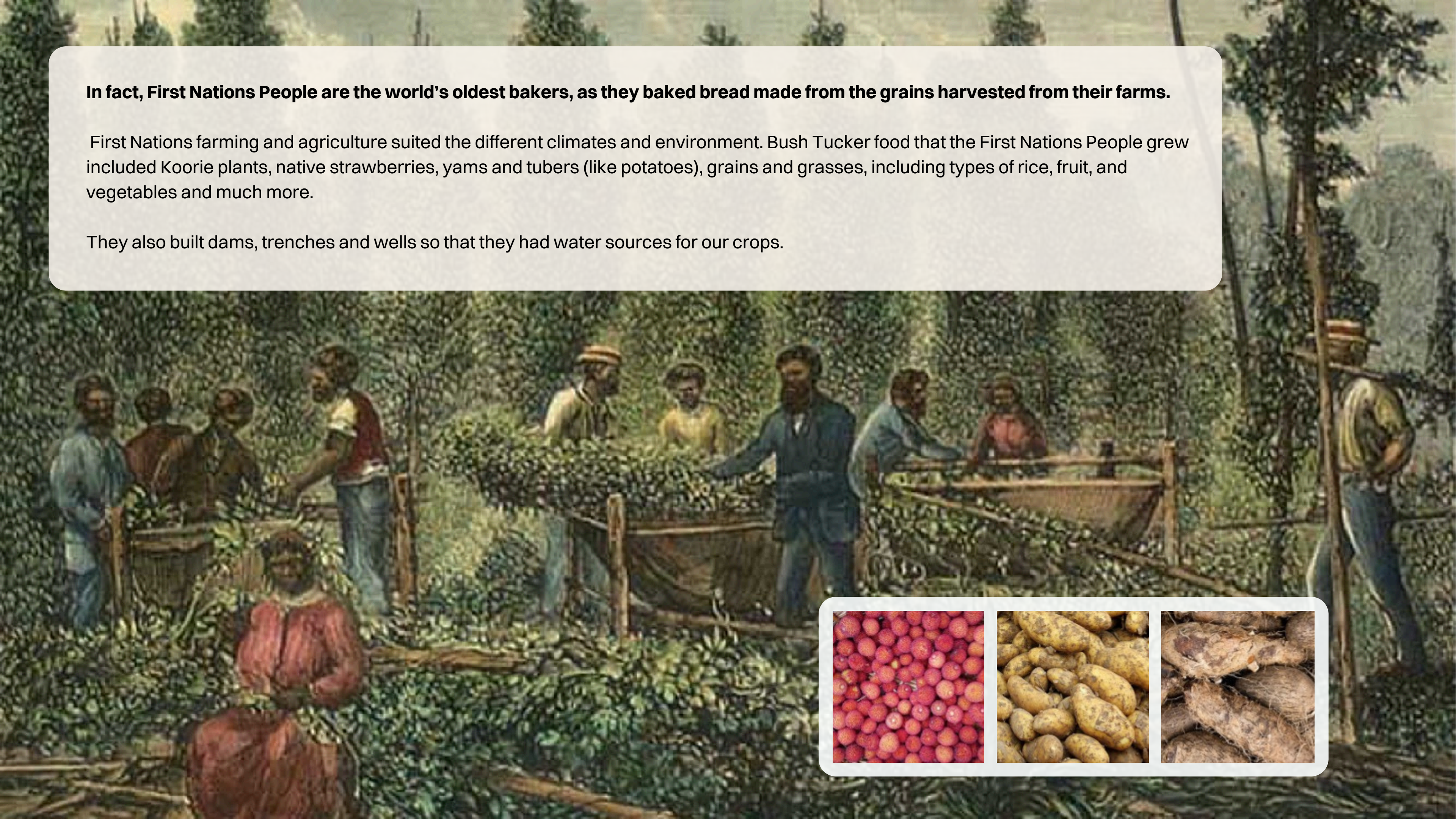
This included planting seeds to create vast farms filled with crops, caring for the soil, harvesting the crops, and storing the produce.

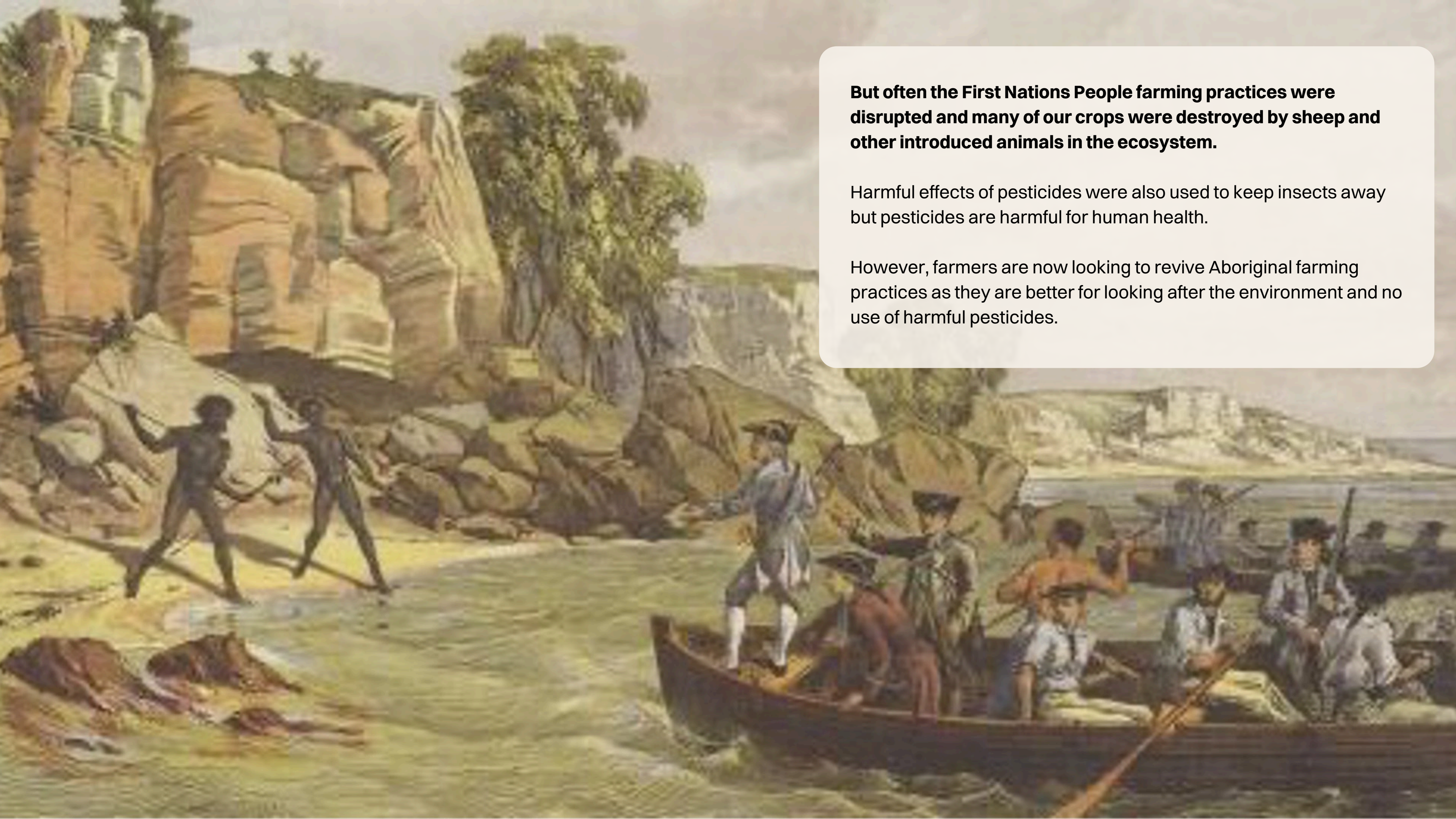


In fact, First Nations People are the world's oldest bakers, as they baked bread made from the grains harvested from their farms.

First Nations farming and agriculture suited the different climates and environment. Bush Tucker food that the First Nations People grew included Koorie plants, native strawberries, yams and tubers (like potatoes), grains and grasses, including types of rice, fruit, and vegetables and much more.

They also built dams, trenches and wells so that they had water sources for our crops.

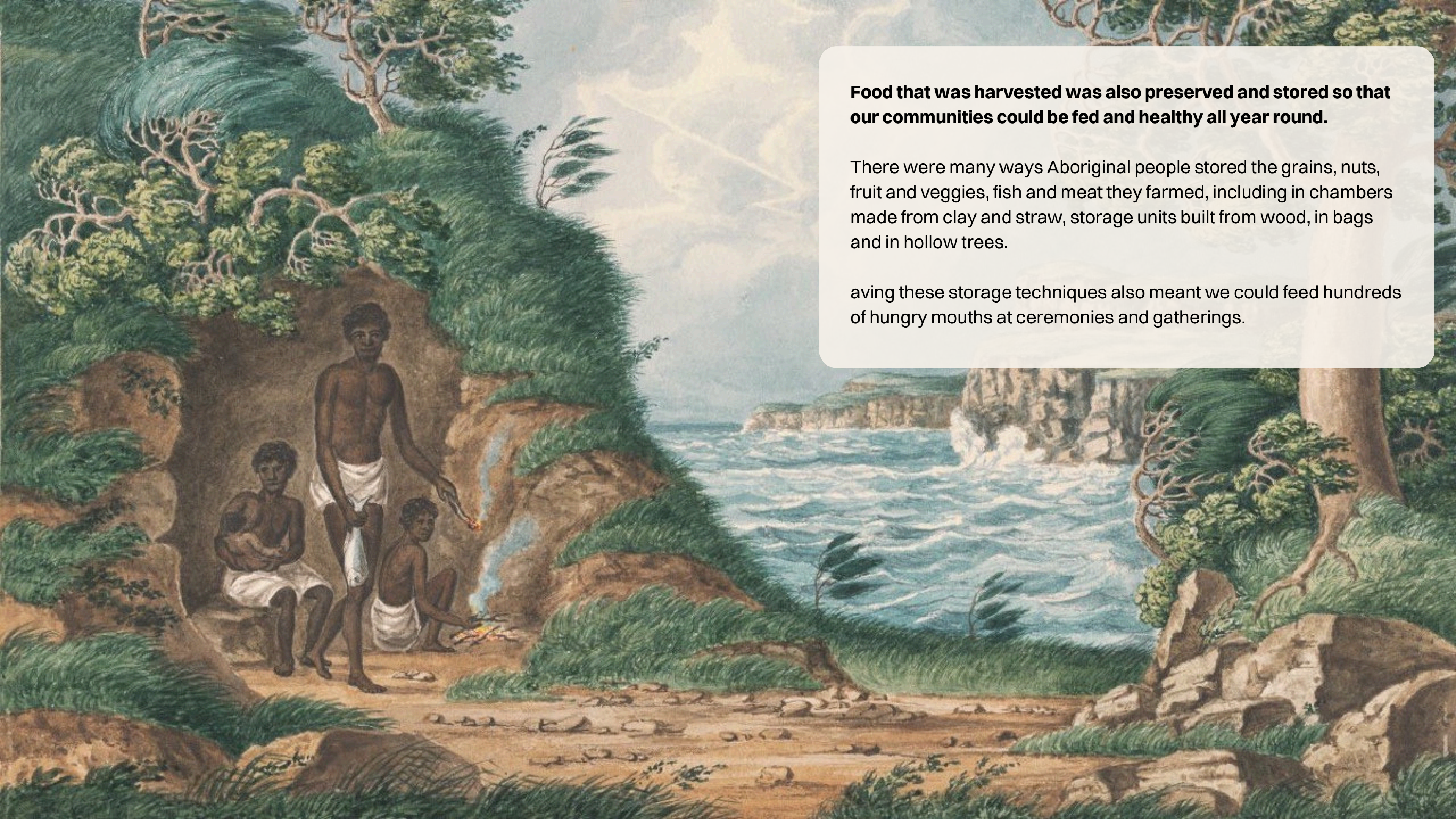




But often the First Nations People farming practices were disrupted and many of our crops were destroyed by sheep and other introduced animals in the ecosystem.

Harmful effects of pesticides were also used to keep insects away but pesticides are harmful for human health.

However, farmers are now looking to revive Aboriginal farming practices as they are better for looking after the environment and no use of harmful pesticides.



Food that was harvested was also preserved and stored so that our communities could be fed and healthy all year round.

There were many ways Aboriginal people stored the grains, nuts, fruit and veggies, fish and meat they farmed, including in chambers made from clay and straw, storage units built from wood, in bags and in hollow trees.

Having these storage techniques also meant we could feed hundreds of hungry mouths at ceremonies and gatherings.



Robotics Engineers in Action

Role play that you are a Robotics-engineer, what will you like to do to help the First Nation People to grow crops sustainably. Let's begin our adventure.

List the top 3 things that made you think that is a real threat to First Nations People's farming and agriculture practices and ultimately to our Planet Earth.

1

2

3

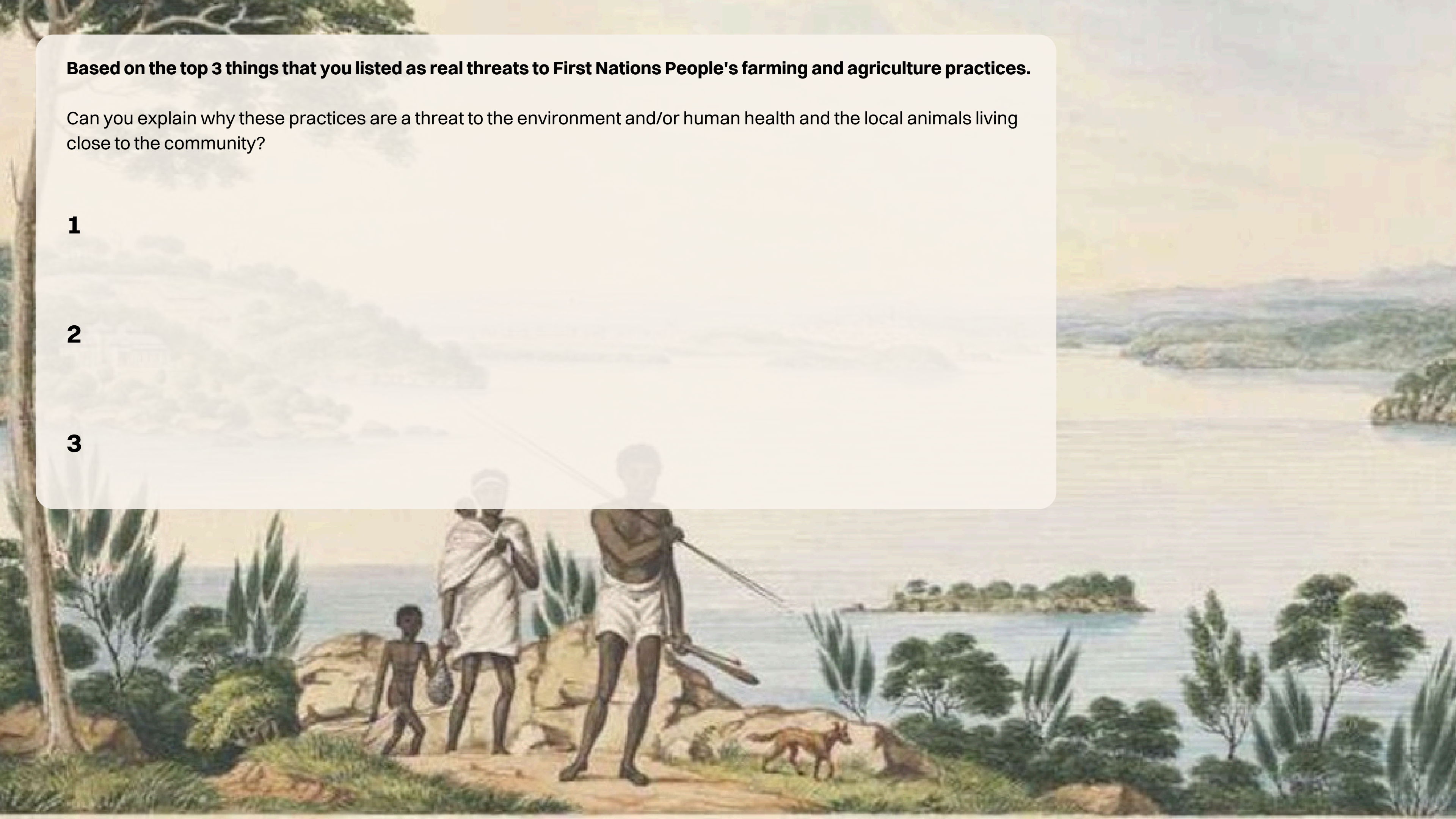
Based on the top 3 things that you listed as real threats to First Nations People's farming and agriculture practices.

Can you explain why these practices are a threat to the environment and/or human health and the local animals living close to the community?

1

2

3



List top 3 things that you now believe that your robot or drone design should have to help eliminate these threats sustainably.

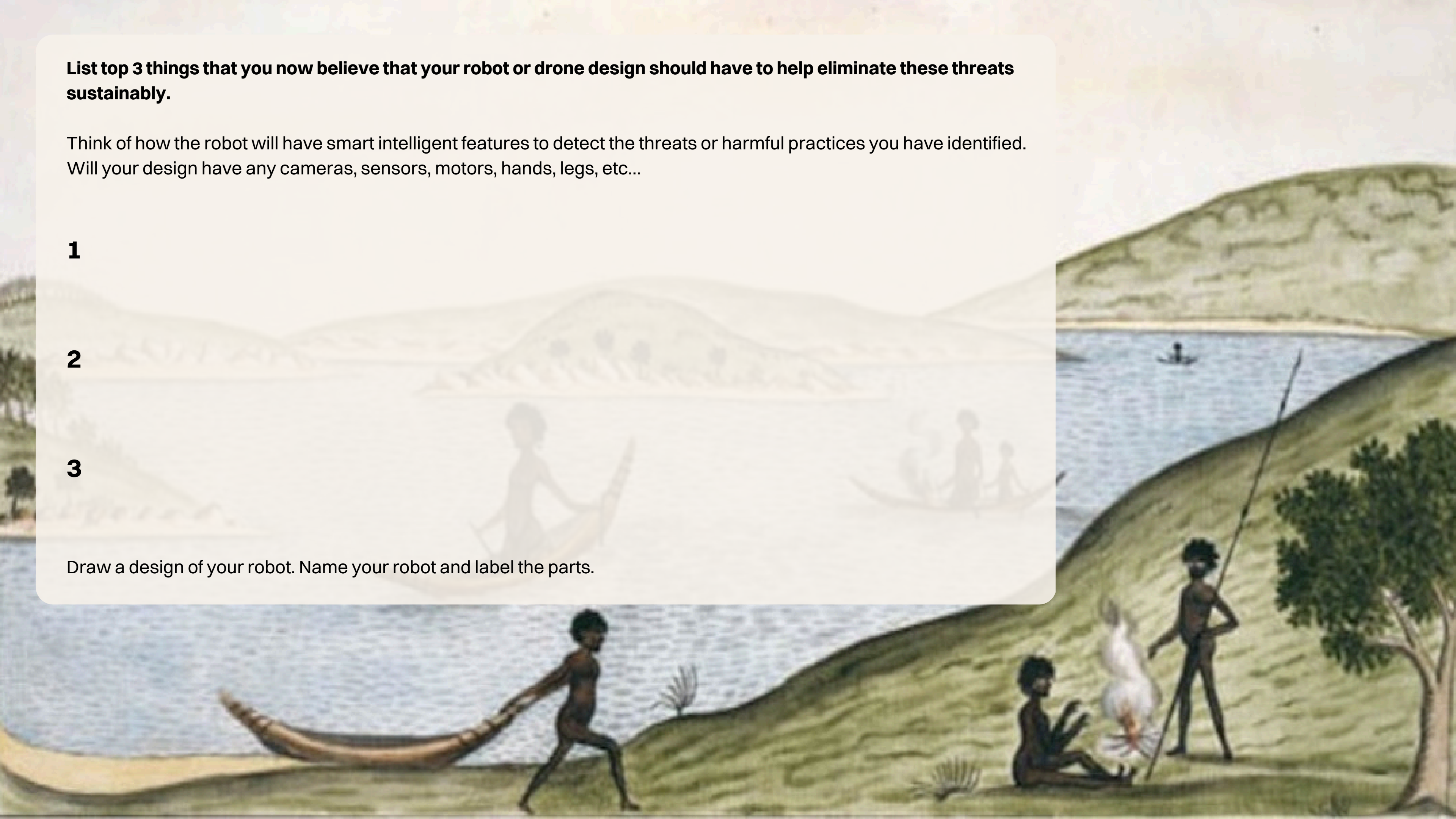
Think of how the robot will have smart intelligent features to detect the threats or harmful practices you have identified. Will your design have any cameras, sensors, motors, hands, legs, etc...

1

2

3

Draw a design of your robot. Name your robot and label the parts.



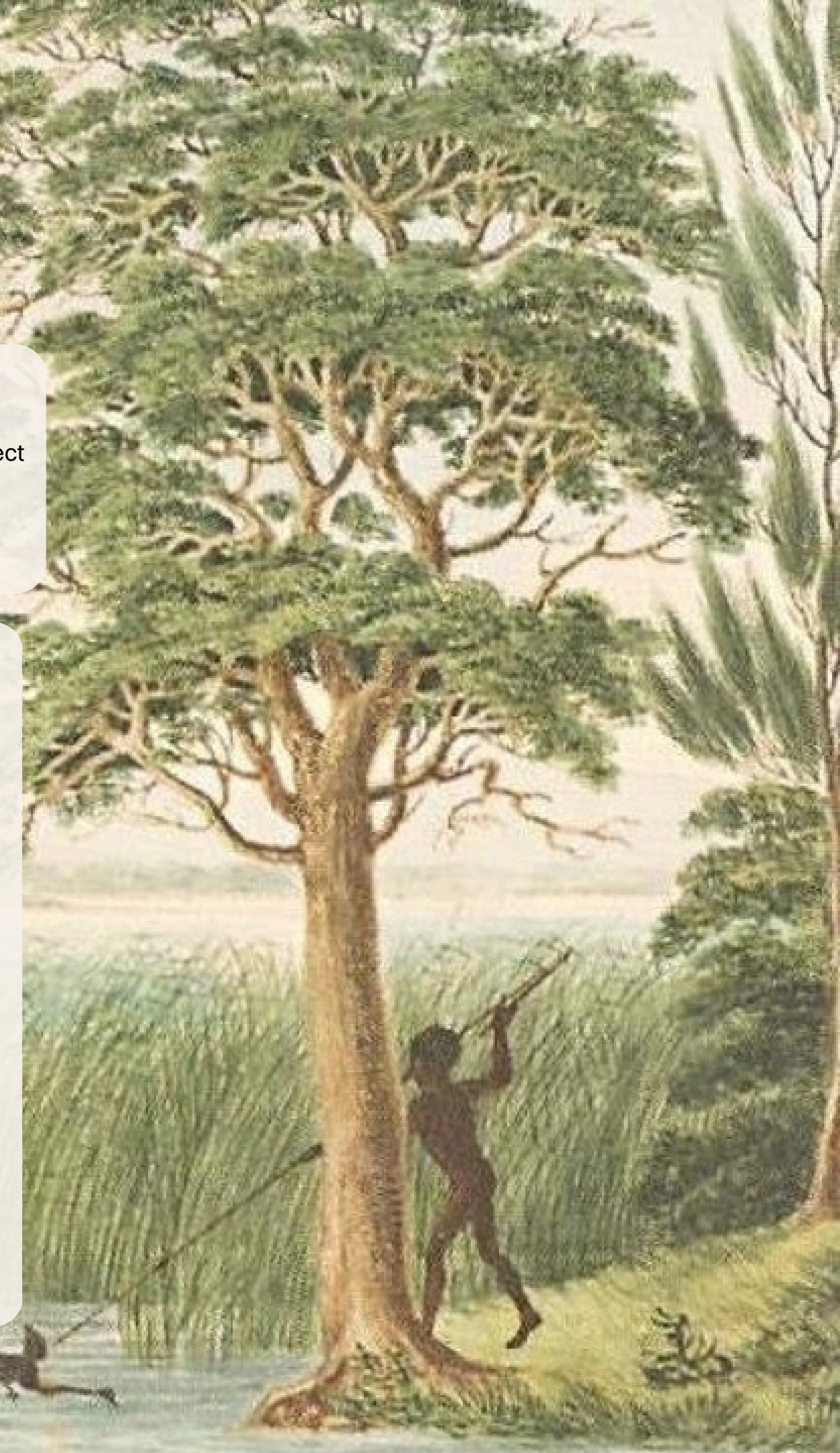
Examples of robots that children can design or build

The below websites have used sustainable approaches to help manage pesticides and insect's threats.

<https://centerforresilience.unl.edu/bats-agriculture#:~:text=Bats%20provide%20many%20ecosystem%20services,a%20kind%20of%20cascading%20effect>

<https://www.daf.qld.gov.au/news-media/campaigns/agtech/action/future/robots>

<https://www.vaeai.org.au/about/>



EYLF 2022 Links to Learning

Outcome 1: children have a strong sense of identity

- Children learn to interact in relation to others with care, empathy and respect

Outcome 2: children are connected with and contribute to their world

- Children develop a sense of connectedness to groups and communities and an understanding of their reciprocal rights and responsibilities as active and informed citizens
- Children become socially responsible and show respect for the environment

Outcome 3: children have a strong sense of wellbeing

- Children become strong in their physical learning and well-being

Outcome 4: children are confident and involved learners

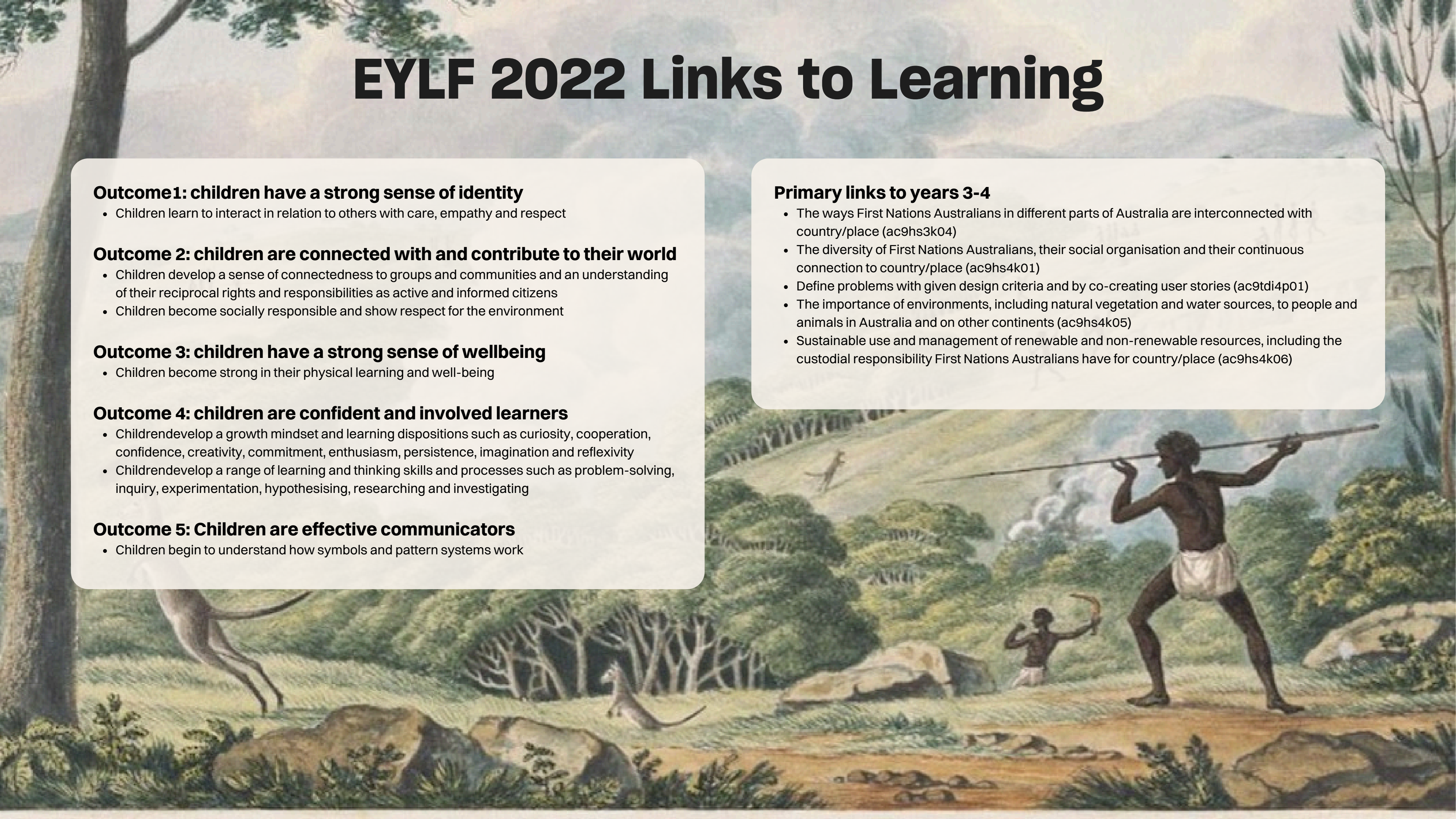
- Children develop a growth mindset and learning dispositions such as curiosity, cooperation, confidence, creativity, commitment, enthusiasm, persistence, imagination and reflexivity
- Children develop a range of learning and thinking skills and processes such as problem-solving, inquiry, experimentation, hypothesising, researching and investigating

Outcome 5: Children are effective communicators

- Children begin to understand how symbols and pattern systems work

Primary links to years 3-4

- The ways First Nations Australians in different parts of Australia are interconnected with country/place (ac9hs3k04)
- The diversity of First Nations Australians, their social organisation and their continuous connection to country/place (ac9hs4k01)
- Define problems with given design criteria and by co-creating user stories (ac9tdi4p01)
- The importance of environments, including natural vegetation and water sources, to people and animals in Australia and on other continents (ac9hs4k05)
- Sustainable use and management of renewable and non-renewable resources, including the custodial responsibility First Nations Australians have for country/place (ac9hs4k06)



References

<https://www.daf.qld.gov.au/news-media/campaigns/agtech/action/future/robots%20>

<https://www.vaeai.org.au/about/>

