



FREE COPY

Published by the Peter Underwood Centre



Follow us on Facebook

www.facebook.com/UnderwoodCentre/

September 20, 2021

BURY YOUR UNDIES



Bacteria, actinomycetes, fungi, algae, protozoa and nematodes are all soil microbes.

One square metre of soil can contain a billion organisms.

Mushrooms are the "fruit" of a large underground fungi.

Share projects inspired by *The Wonder Weekly* with us. Email: UnderwoodCentre.Enquiries@utas.edu.au

IMAGE: iStock/ Kirisagg

DO you have a garden at home?

Perhaps you live on a farm, or know people who do.

Have you ever wondered why plants grow well in some places and not others?

We know that plants need sunlight and water, but how important is healthy soil?

Well the answer is healthy soil is very important, and not just for plants.

Humans and other animals rely on healthy soils as well.

Healthy soils provide us with clean water and air, and productive farmlands for grazing and crops.

They sustain forests and wildlife.

But what makes some soils healthier than others?

There are many parts to this puzzle, but the starting point are a team of tiny heroes - billions of bacteria, fungi and other microbes.

These living organisms might be too small to see without a microscope, but they have a big role to play.



EXPERIMENT: Hansen Orchards manager Wayne Trengrove about to bury a pair of large cotton undies .

Soil microbes transform organic matter into nutrients that plants can use to grow.

Organic matter is anything alive or dead in soil.

This includes plant roots, leaves and animal poo.

The microbes munch away on this organic matter and help it to decompose.

One little creature we can see,

earthworms, do a similar job.

The finished product of this work is humus, a black crumbly material that stores plant nutrients, holds moisture and improves soil structure.

But how do you tell if soil is healthy or not?

The Tasmanian Institute of Agriculture, at the University of Tasmania, have come up with a

fun way of testing soil quality.

TIA have encouraged apple growers to take part in an eight-week soil health challenge by burying a pair of undies at their orchards.

Not just any undies, 100% cotton undies, because cotton is a natural product.

In other words, it was a living thing, and once in the ground,

becomes organic matter.

If, after eight weeks, the undies have been heavily munched on, the farmers will know their soils are healthy.

Hansen Orchards manager Wayne Trengrove has buried some undies and is hoping to dig up some holey rags on November 1.

"We think about soil health all the time," Mr Trengrove said.

"When we mow, we throw our grass clippings back into the row [of trees], but I know we could probably do a lot more to improve our soil."

You might like to test the health of the soil at your house.

Ask for permission from an adult family member first, dig a hole in the garden and bury an old pair of cotton undies or a T-shirt you no longer want to wear.

Wait eight weeks and dig the item up to see how much biological activity is happening.

In a future edition of *The Wonder Weekly* we will look at fun ways of putting more organic matter into soil to improve its health.

"Education perhaps more than anything else is a passport to a better life." - Peter Underwood AC



Versions of tic-tac-toe were played in ancient Egypt and Rome.

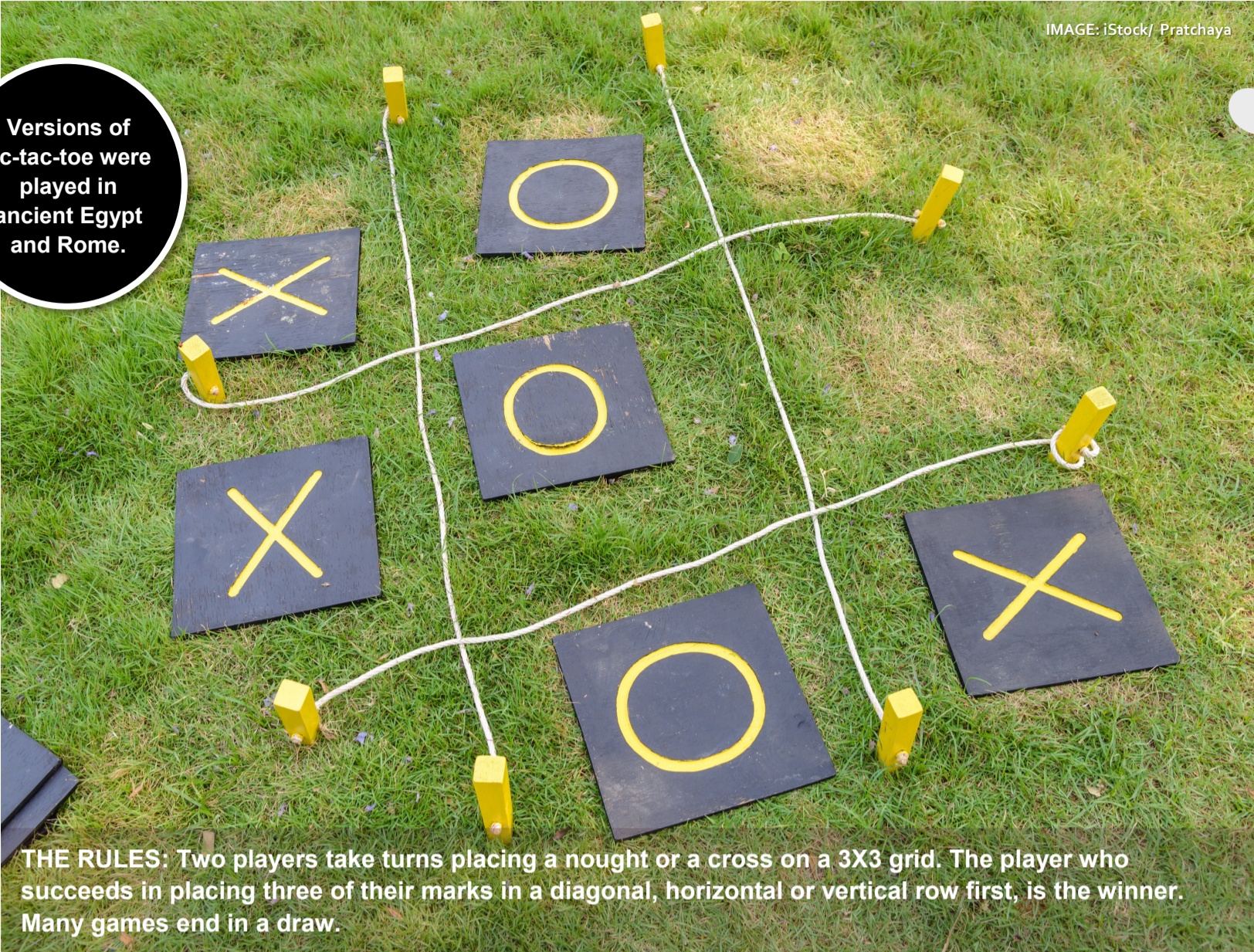


IMAGE: iStock/ Pratchaya

Talking about pop music

IF you like music and technology, this week's episode of *UCTV Alive for Kids* is sure to interest you.

Dave McNamara from Mt Carmel College will be dropping into the studio to show us how to create a pop music beat.

UCTV Alive for Kids is the Peter Underwood Centre's own online show, broadcast live via Zoom.

This week's episode will go to air on Wednesday, September 22, from 9:15am to 10am (replays are available on the Peter Underwood Centre website).

Follow this link to register: <https://bitly.co/8fpY>

THE RULES: Two players take turns placing a nought or a cross on a 3X3 grid. The player who succeeds in placing three of their marks in a diagonal, horizontal or vertical row first, is the winner. Many games end in a draw.

The tic-tac-toe relay

DO you ever play noughts and crosses, or tic-tac-toe, as it is otherwise known?

Most likely you have at some time.

It's an easy game to play, with just a little bit of strategy involved, and all you need is pen and paper.

It can get a bit dull after a while though, right?

Maybe it is time to add some extra elements to the game.

How about an outdoor version of noughts and crosses?

What if the game involved two teams of people?

Perhaps it could also include a relay race.

This would involve competitors from each team running a certain distance to the noughts and crosses grid, taking their turn as quickly as they could, and then sprinting back to hand

the baton to the next team member.

Alright, so here's a challenge.

Design an outdoor game of noughts and crosses.

You could follow the example above, and use rope for the grid, and cut out cardboard noughts and crosses, or use items you have at home.

You could also use chalk on a hard surface, or head to the beach and draw the grid in the sand.

You could even make your game more challenging by using balls.

You will need 10 balls for each team, and instead of running, the relay could involve throwing the balls to teammates.

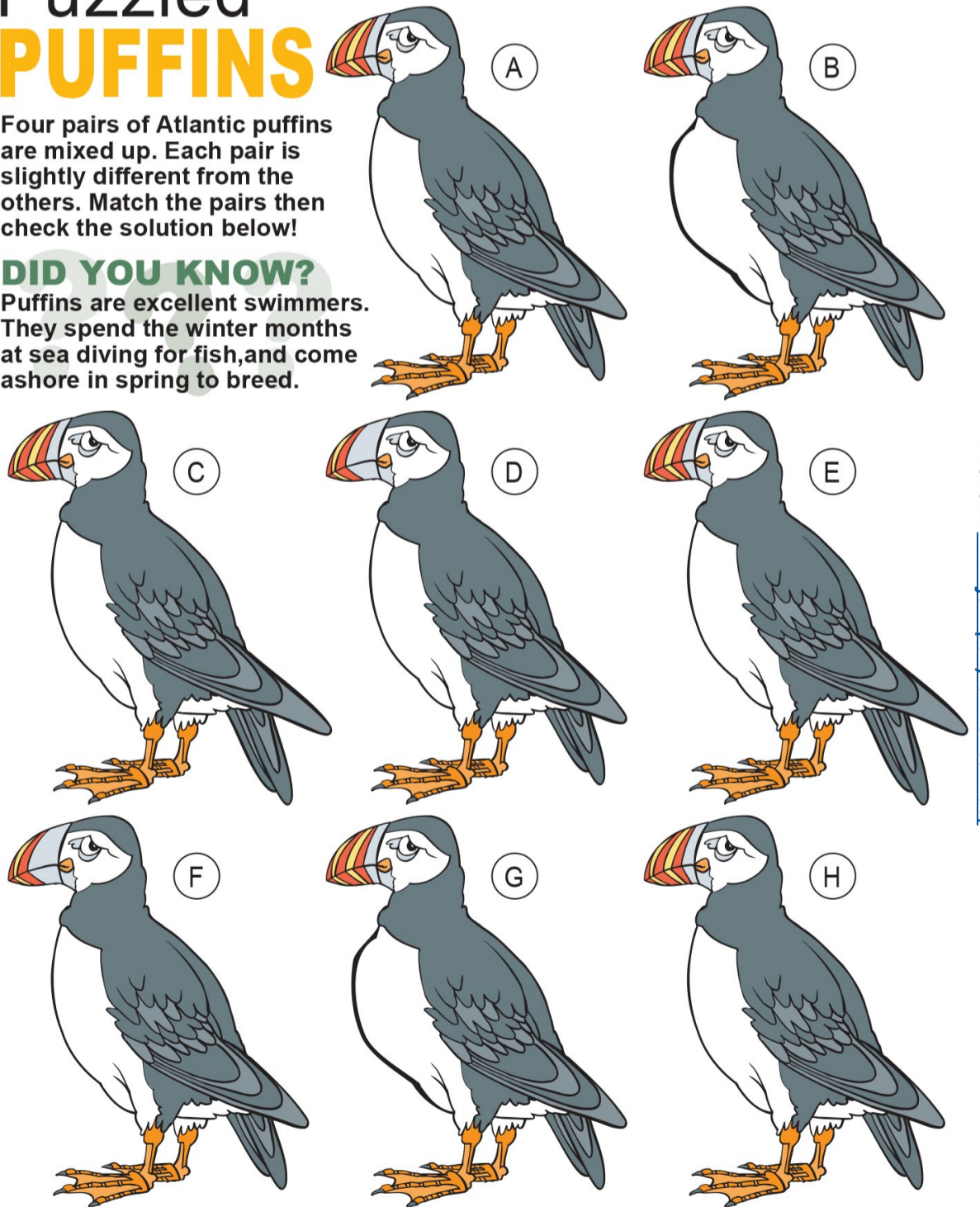
Children's University Tasmania members can earn stamps in their passports for this challenge, at the discretion of their school coordinator.

Puzzled PUFFINS

Four pairs of Atlantic puffins are mixed up. Each pair is slightly different from the others. Match the pairs then check the solution below!

DID YOU KNOW?

Puffins are excellent swimmers. They spend the winter months at sea diving for fish, and come ashore in spring to breed.



SOLUTION: A+H, B+G, C+E, D+F