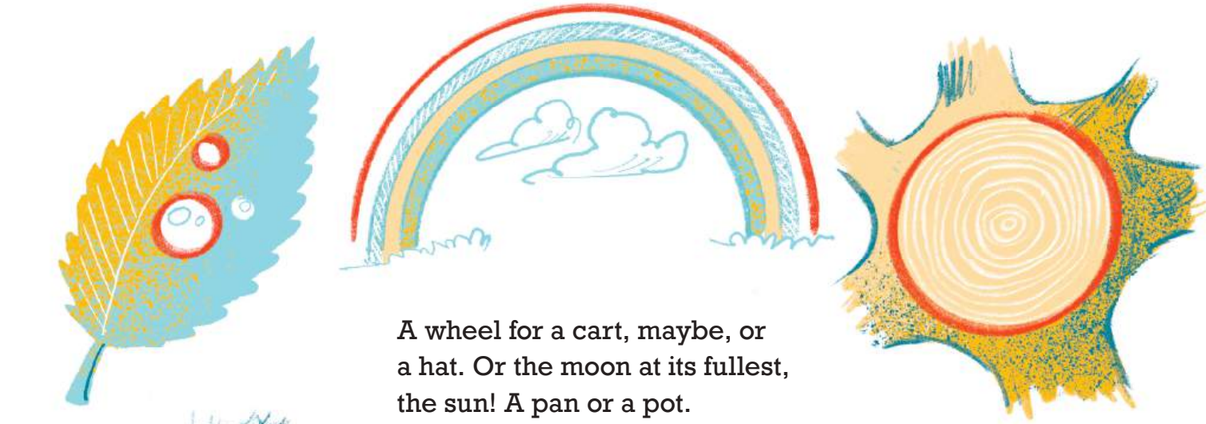

Pi

CHAPTER 1
INTRO

At first,
there was…

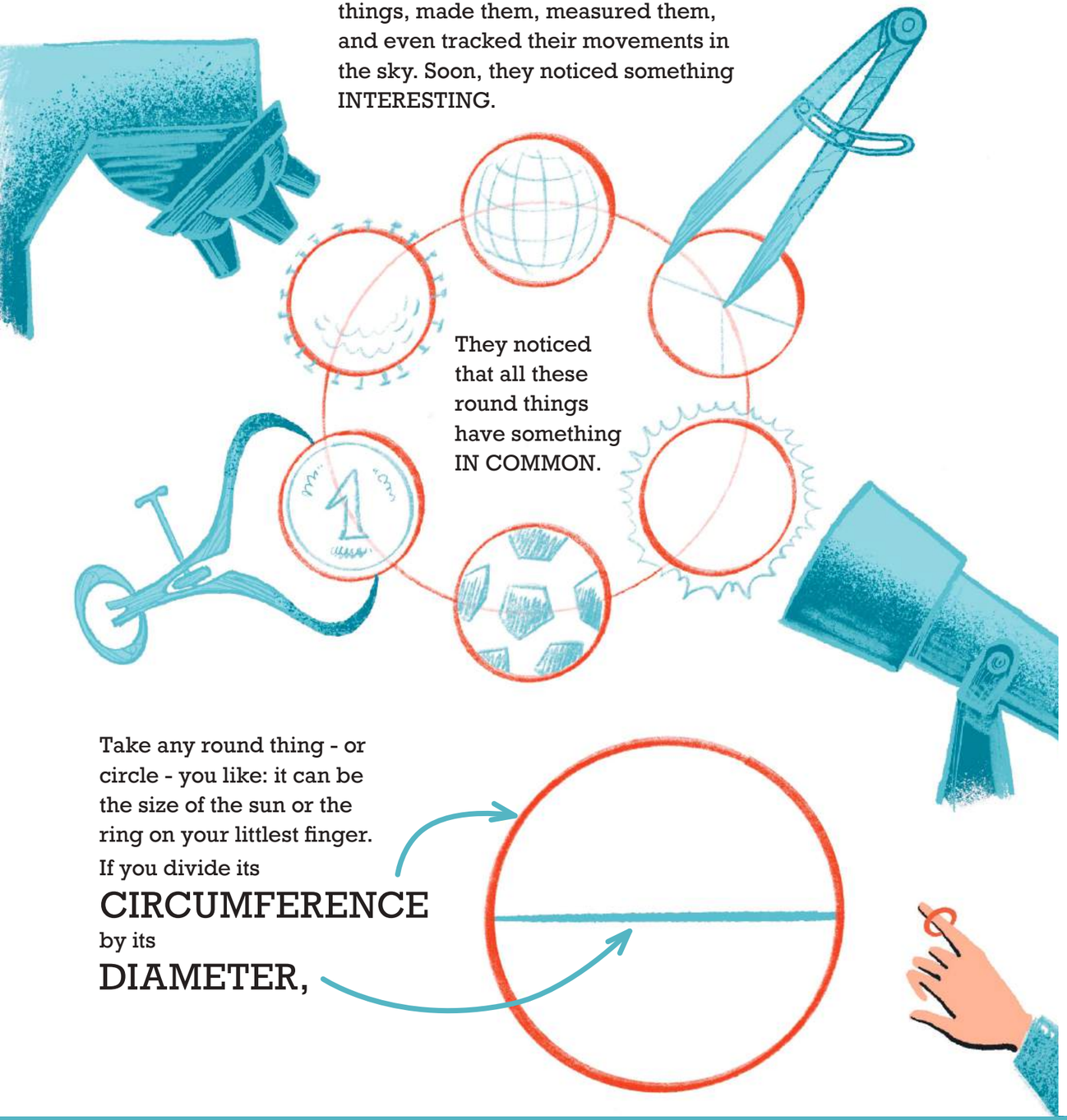
A CIRCLE.

A round thing.



A wheel for a cart, maybe, or
a hat. Or the moon at its fullest,
the sun! A pan or a pot.

People worked with these round things, made them, measured them, and even tracked their movements in the sky. Soon, they noticed something INTERESTING.



They noticed that all these round things have something IN COMMON.

Take any round thing - or circle - you like: it can be the size of the sun or the ring on your littlest finger.

If you divide its

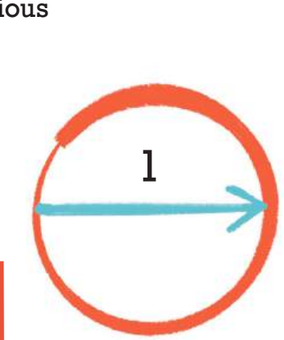
CIRCUMFERENCE

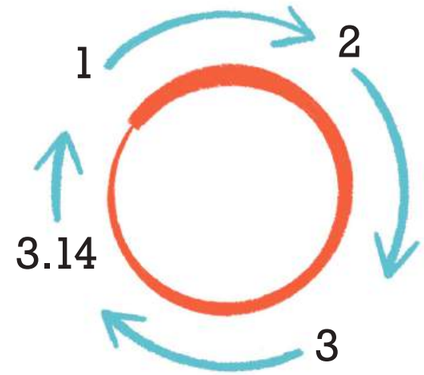
by its

DIAMETER,

….you will find a mysterious number that is

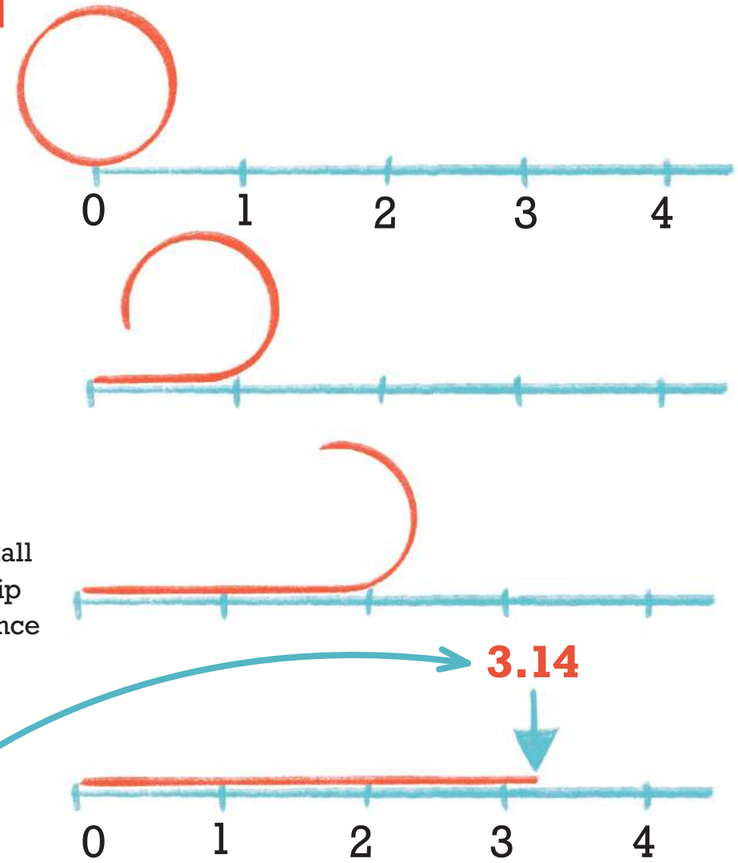
SOMEWHERE BETWEEN 3 AND 4.





And this mysterious, constant number is called

Pi.



No matter how big or small the circle, the relationship between the circumference and the diameter is ALWAYS THE SAME.

It's a

CONSTANT!

Circumference is the distance around the outside of a circle.

The diameter is a direct line between to opposite points of a circle.

Constant is a value (or number) that doesn't change.

Pi is the relationship between the circumference and the diameter of any given circle.

WHY IS IT CALLED PI?

I'M SO GLAD YOU ASKED!!

Well. In the golden mediaeval days, mathematicians wrote to each other about circles all the time.

And instead of **PI**, they wrote: *'quantitas in quam cum multiflicetur diameter, proveniet circumferencia'*

This is mediaeval Latin. Translated it means:

'The quantity which, when the diameter is multiplied by it, yields the circumference'

Oufff!!
That's complicated!

Can you even imagine being a mathematician and, EVERY TIME you want to share anything about circles, you have to say

THAT SENTENCE?

With unhelpful sentences like that, no wonder people thought mathematicians were a bit...

WEIRD!

THEN ALONG CAME WILLIAM JONES...

(1746-1794, from Wales)

He did a lot of exciting maths with circles. He wanted to share his great thoughts with his friends.

So, he kept using THAT sentence:

Oh, you, know: *The quantity which, when the diameter is multiplied by it, yields the circumference.*

There MUST be away to talk about this constant without boring the pants off everyone!

zzz...

So, one day (maybe in the bath, or sitting under a tree, or while eating his granny's delicious apple pi), he had an

IDEA!

!

'Instead of saying:

Oh, you, know: *The quantity which, when the diameter is multiplied by it, yields the circumference.*

I could make it MUCH SIMPLER.

I could just say:

Pi!

Pi is NICE AND SHORT.'

ABER WIESO PI? WIESO NICHT PA ODER PO?

GUT, DASS DU FRAGST!

Pi ist ein griechischer Buchstabe, der so aussieht: π

Er ist auch der erste Buchstabe im Wort *perimetros*, was »Perimeter« bedeutet.

Perimeter ist ein Wort, das in der Mathematik häufig verwendet wird.

Es könnte sogar Williams LIEBLINGSWORT gewesen sein, denn Mathematiker sind ja echt witzig.

Der **perimeter** ist die Länge der Außenseite einer Form.

Der Perimeter eines Kreises ist genau dasselbe wie sein Umfang!

Die Verwendung von PI war eine GROSSARTIGE IDEE. Bald benutzte es jeder und die Leute waren William sehr dankbar, weil sie nun nicht mehr sagen mussten:

»Ach, du weißt schon: Die Grösse, mit dessen Multiplikation mit dem Durchmesser, man den Umfang erhält.«

Sie konnten einfach »Pi« sagen und jeder wusste, was sie meinten, und das war äußerst HILFREICH.

Die Autoren dieses Buches sind William Jones dankbar dafür, dass er ihr Leben wesentlich VEREINFACHT hat. Dank ihm lautet der Titel dieses Buches nicht:

Pi
DIE GRÖSSE, MIT DESSEN MULTIPLIKATION MIT DEM DURCHMESSER, MAN DEN UMFANG ERHÄLT.

Stattdessen heißt es einfach:

Verrückt nach Pi

PUH.

Der berühmte schweizerische Mathematiker **Leonhard Euler** (1707-1783) war einer der ersten, der π in seinen Arbeiten verwendete. Auf S. 40 könnt ihr mehr über ihn erfahren.