How **Science** Simplifies and Supercharges Primary Level **Mathematics** Learning and Teaching

www.podometic.in/aamt-talk

Science

Mathematics

Science

Symmetry

Mathematics

How **Science**

Symmetry
Empirical

Mathematics

Science

Symmetry
Empirical

Mathematics

ARITHMOS Applied
& practical for workers & slaves

How **Science**

Symmetry
Empirical

ARITHMOS Applied
& practical for workers & slaves

Mathematics

Science

Asymmetric

Mathematics

Symmetry

Empirical

ARITHMOS Applied

& practical for workers & slaves

Science

Asymmetric

Symmetry

Mathematics

Empirical

ARITHMOS Applied

& practical for workers & slaves

Abstract

Science

Symmetry
Empirical

ARITHMOS Applied
& practical for workers & slaves

Asymmetric
Mathematics
Abstract

ARITHMOI
Abstract for philosophers

ARITHMOS

Symmetry
Empirical

Science

ARITHMOI

Mathematics
Abstract

Asymmetric

ARITHMOI

Asymmetric
Mathematics
Abstract

ARITHMOS

Science
Symmetry
Empirical

Get Podometic Quick Smart (Better than Arithmetic)
@jcrabtree

⏳ GOT 10 SEC?
🙂 FUN POLL
YOUR OPINION IS NEEDED!

Get Podometic Quick Smart (Better than Arithmetic)
@jcrabtree

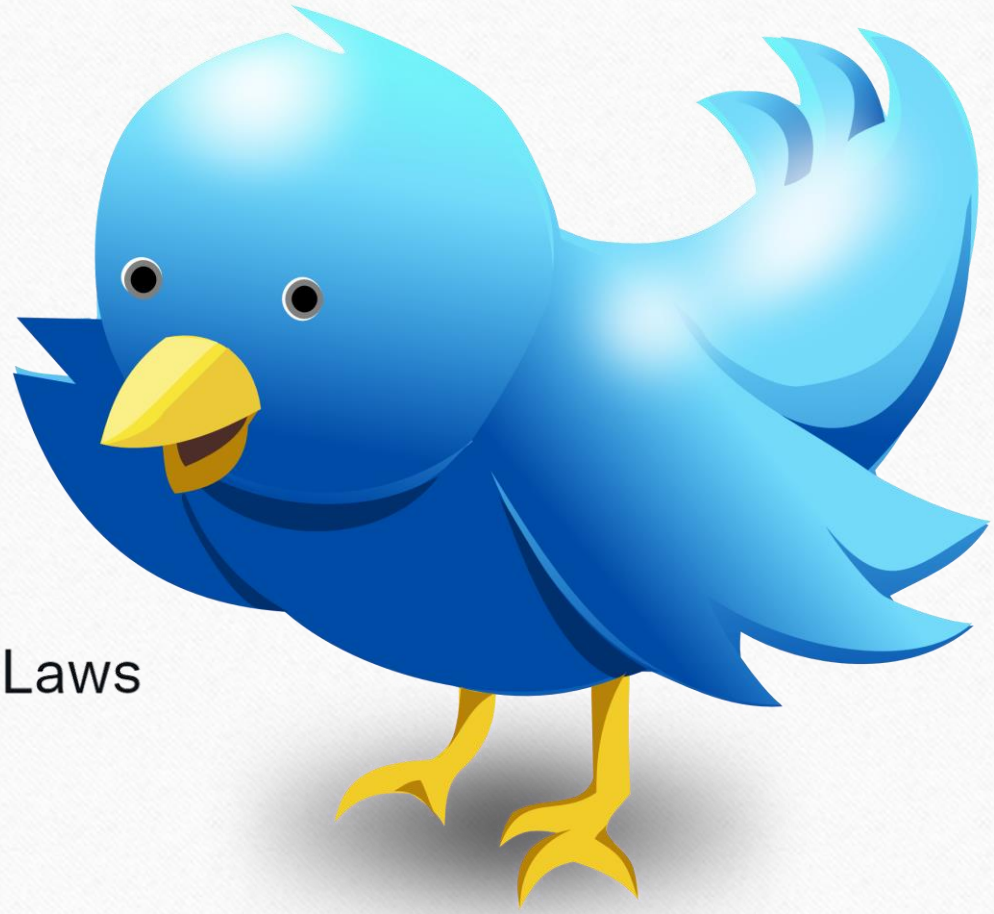
⏳ GOT 10 SEC?
🙂 FUN POLL

YOUR OPINION IS NEEDED!
Click to Vote!
==========
What Should School
Kids be Taught Today?
==========

Get Podometic Quick Smart (Better than Arithmetic)
@jcrabtree

⏳ GOT 10 SEC?
🙂 FUN POLL

YOUR OPINION IS NEEDED!
Click to Vote!
==========
What Should School
Kids be Taught Today?
==========
- Math Laws CONTRARY to Simple Science Laws



Get Podometic Quick Smart (Better than Arithmetic)
@jcrabtree

⏳ GOT 10 SEC?
🙂 FUN POLL

YOUR OPINION IS NEEDED!
Click to Vote!
==========
What Should School
Kids be Taught Today?
==========
- Math Laws CONTRARY to Simple Science Laws
or
- Math Laws CONSISTENT with Simple Science Laws

WHY FIX
ELEMENTARY ARITHMETIC?

My Research into its Evolution Reveals it to be

INCONSISTENT

INCOMPLETE

INFERIOR

HOW DO WE FIX

ELEMENTARY ARITHMETIC?

STOP TEACHING ARITHMOI START TEACHING ARITHMOS

INCONSISTENT

INCOMPLETE

INFERIOR

INCONSISTENT ARITHMETIC

The product of two smaller factors
can be **greater than** the
product of two larger factors

INCONSISTENT ARITHMETIC

The product of two smaller factors
can be **greater than** the
product of two larger factors
$^{-}3 \times {}^{-}4 = {}^{+}12$ yet the product of two
'larger' factors like $^{+}1 \times {}^{+}2$ is LESS!

INCONSISTENT ARITHMETIC

Fractions are equal if they BOTH have the smaller number as the numerator and the larger number as the denominator, or vice-versa.

Yet, $^{+}1/_{+}2 = {}^{-}1/_{-}2$ so $^{-}1$ IS LESS than $^{-}2$ for the equality to hold true!

INCONSISTENT ARITHMETIC

Fractions are equal if they BOTH have the smaller number as the numerator and the larger number as the denominator, or vice-versa.

$^{+}2/^{+}4 = {}^{+}3/^{+}6$ ✔ $^{+}2/^{+}4 = {}^{+}6/^{+}3$ ✗

Yet, $^{+}1/^{+}2 = {}^{-}1/^{-}2$ so $^{-}1$ IS LESS than $^{-}2$ for the equality to hold true!

INCONSISTENT ARITHMETIC

Fractions are equal if they BOTH have the smaller number as the numerator and the larger number as the denominator, or vice-versa.

$^{+}2/^{+}4 = {}^{+}3/^{+}6$ ✔ $^{+}2/^{+}4 = {}^{+}6/^{+}3$ ✗

$^{+}4/^{+}2 = {}^{+}6/^{+}3$ ✔ $^{+}4/^{+}2 = {}^{+}3/^{+}6$ ✗

Yet, $^{+}1/^{+}2 = {}^{-}1/{}^{-}2$ so $^{-}1$ IS LESS than $^{-}2$ for the equality to hold true!

INCONSISTENT ARITHMETIC

$^{+}1/^{+}2 = {}^{-}1/^{-}2$ ✓

INCONSISTENT ARITHMETIC

$^{+}1/^{+}2 = {}^{-}1/^{-}2$ ✓

Therefore…

$^{-}1$ IS LESS THAN $^{-}2$

INCONSISTENT ARITHMETIC

The English definition of multiplication since February 1570 defines ab as

$a \times b$ = a added to itself b times

"to multiply a by positive integral b is to add a to itself b times"

www.collinsdictionary.com/dictionary/english/multiplication

INCONSISTENT ARITHMETIC

The English definition of multiplication since February 1570 defines $\mathbf{1} \times \mathbf{1}$ as

$\mathbf{1} \times \mathbf{1} = \mathbf{1}$ added to itself $\mathbf{1}$ times

Does one multiplied by one equal two?

INCONSISTENT ARITHMETIC

Definitions of a^3

The result of multiplying a number, quantity or expression by itself three times. - To multiply a number or a quantity by itself three times. - In 2^3, 2 is multiplied by itself three times. - x^3 ...means x multiplied by itself three times. - cube root of a number is the number, when multiplied by itself three times, equals the given number. - When a number is multiplied by itself three times, it is cubed. - Cube Root. Number that you can multiply by itself three times to get a given number. - The cube of a number n is this number multiplied three times by itself. - Cube Root. Number that can be multiplied by itself three times to get a given number. - multiplied by itself three times. - Cube Root. A number that must be multiplied times itself three times to equal a given number.

INCONSISTENT ARITHMETIC

Definitions of a^3

the product of a number multiplied by itself twice. - the cube of a number is the larger number that is the result of multiplying the number by itself twice. - the result of multiplying a number by itself twice. - to determine the result of multiplying by itself twice. - When a number is multiplied by itself two times, we get the cube of the number. - In the expression 5^3, the 3 is the exponent and indicates that 5 is multiplied by itself twice. - ...a cube is the product of a number multiplied by itself twice. - If you cube a number, you multiply it twice by itself. - The product of a number multiplied by itself twice. Cube: to multiply a number or quantity by itself twice. - A number that is equal to another number multiplied by itself twice.

INCONSISTENT a^3 ARITHMETIC FROM WIKIPEDIA

- The cube of a number n is this number multiplied **three times** by itself.
- to determine the result of multiplying by itself **twice**

Wiktionary **http://simple.wiktionary.org/wiki/cube** **D'oh!** **Wiktionary** **https://en.wiktionary.org/wiki/cube**

INCONSISTENT a^3 ARITHMETIC FROM WIKIPEDIA & DUMMIES BOOKS

- Cube Root. Number that can be multiplied by itself **three times** to get a given number

- the cube root of 8 is 2 because 2 multiplied by itself **two times** is 8.

Technical Math For Dummies D'oh! Pre-Calculus Workbook For Dummies.

https://podometic.in/wp-content/uploads/2021/09/cube-confusion.pdf

WHY FIX **BRITISH** **ARITHMETIC**?

My Research into its Evolution Reveals it to be

INCONSISTENT

INCOMPLETE

INFERIOR

INCOMPLETE ARITHMETIC

ARITHMETIC (BRITISH MATHS)				
Testing the teaching of + – × ÷ with ±12 and ±4				
Do British origin school maths lessons pass the common-sense test? **NO**	$^{+}12$ & $^{+}4$ pos & pos	$^{+}12$ & $^{-}4$ pos & neg	$^{-}12$ & $^{+}4$ neg & pos	$^{-}12$ & $^{-}4$ neg & neg
Addition +	$^{+}12 + ^{+}4$	$^{+}12 + ^{-}4$	$^{-}12 + ^{+}4$	$^{-}12 + ^{-}4$
Subtraction –	$^{+}12 - ^{+}4$	$^{+}12 - ^{-}4$	$^{-}12 - ^{+}4$	$^{-}12 - ^{-}4$
Multiplication ×	$^{+}12 \times ^{+}4$	$^{+}12 \times ^{-}4$	$^{-}12 \times ^{+}4$	$^{-}12 \times ^{-}4$
Division ÷	$^{+}12 \div ^{+}4$	$^{+}12 \div ^{-}4$	$^{-}12 \div ^{+}4$	$^{-}12 \div ^{-}4$
Arithmetic fails as it wasn't built from zero		**PASS**	**FAIL**	**Absent**

ARITHMETIC (BRITISH MATHS)

Testing the teaching of + – × ÷ with ±12 and ±4

Do British origin school maths lessons pass the common-sense test? **NO**	$^{+}12$ & $^{+}4$ pos & pos	$^{+}12$ & $^{-}4$ pos & neg	$^{-}12$ & $^{+}4$ neg & pos	$^{-}12$ & $^{-}4$ neg & neg
Addition +	$^{+}12 + {}^{+}4$	$^{+}12 + {}^{-}4$	$^{-}12 + {}^{+}4$	$^{-}12 + {}^{-}4$
Subtraction –	$^{+}12 - {}^{+}4$	$^{+}12 - {}^{-}4$	$^{-}12 - {}^{+}4$	$^{-}12 - {}^{-}4$
Multiplication ×	$^{+}12 \times {}^{+}4$	$^{+}12 \times {}^{-}4$	$^{-}12 \times {}^{+}4$	$^{-}12 \times {}^{-}4$
Division ÷	$^{+}12 \div {}^{+}4$	$^{+}12 \div {}^{-}4$	$^{-}12 \div {}^{+}4$	$^{-}12 \div {}^{-}4$
Arithmetic fails as it wasn't built from zero		**PASS**	**FAIL**	**Absent**

WHY IS DIVISION SUCH AS $^{+}12 \div {}^{-}4$ UNEXPLAINED?

The Quotative (Repeated Subtraction) Model Fails

WHY IS DIVISION SUCH AS $^{+}12 \div {}^{-}4$ UNEXPLAINED?

The Quotative (Repeated Subtraction) Model Fails

$^{+}12 - {}^{-}4 - {}^{-}4 - {}^{-}4 = {}^{+}24$

WHY IS DIVISION SUCH AS $^{+}12 \div {}^{-}4$ UNEXPLAINED?

The Quotative (Repeated Subtraction) Model Fails

$^{+}12 - {}^{-}4 - {}^{-}4 - {}^{-}4 = {}^{+}24$ **You will never get to Zero**

WHY IS DIVISION SUCH AS $^{+}12 \div {}^{-}4$ UNEXPLAINED?

The Quotative (Repeated Subtraction) Model Fails

$^{+}12 - {}^{-}4 - {}^{-}4 - {}^{-}4 = {}^{+}24$ **You will never get to Zero**

The Partitive (Equal Groups) Model Fails

You can't explain a Partitive negative four equal groups

WHY IS DIVISION SUCH AS $^{+}12 \div {}^{-}4$ UNEXPLAINED?

The Quotative (Repeated Subtraction) Model Fails

$^{+}12 - {}^{-}4 - {}^{-}4 - {}^{-}4 = {}^{+}24$ **You will never get to Zero**

The Partitive (Equal Groups) Model Fails

You can't split $^{+}12$ into negative four equal groups

WHY IS DIVISION SUCH AS $^{+}12 \div {}^{-}4$ UNEXPLAINED?

The Quotative (Repeated Subtraction) Model Fails

$^{+}12 - {}^{-}4 - {}^{-}4 - {}^{-}4 = {}^{+}24$ **You will never get to Zero**

The Partitive (Equal Groups) Model Fails

You can't split $^{+}12$ into negative four equal groups

Dodging division ÷ to discuss abstract sign laws of multiplication × is bad pedagogy

WHY FIX **BRITISH** **ARITHMETIC**?

My Research into its Evolution Reveals it to be

INCONSISTENT

INCOMPLETE

INFERIOR

S ave
Y our
S chools
T ime
E ffort &
M oney!

How Science Simplifies Mathematics Teaching

THE MATHEMATICS FUTURE PROOFING BEGAN IN 1983

AAMT eConference
www.podometic.in

INCONSISTENT

INCOMPLETE

INFERIOR

18 March 1983

I set out to change the way the Western world teaches maths

INCONSISTENT

INCOMPLETE

INFERIOR

18 March 1983

I set out to change the way the Western world teaches maths

Maths? It's all in the mind, says Jonathan

1988

JONATHAN throws away his calculator and uses brain powers to solve even the hardest of equations.

IF you were asked what day it was on July 24, 1706, what would you say?

It's all in the mind, he says.

After a four second calculation he came up with the correct day.

"I hope to change the way the Western world teaches maths," Jonathon said.

Jonathon will be holding two classes at the Park Orchards Community Centre.

"I hope to change the way the Western world teaches maths," Jonathon said.

"I've learnt to tap the workings of the brain."

Jonathon's interest in brain powers began when he completed a speed reading class.

Using his speed reading ability, he read and absorbed numerous books on the imagination and the thing that drives it — the brain.

Eventually Jonathon discovered a revolutionary method of teaching maths to children.

The second course will run on Fridays, March 4 and 11 at 1 to 3 pm.

This is *Fantastic Maths*, which Jonathon says can enable you to become a calculating whiz kid by learning how to mentally check the answer to any sum you do.

These classes will be run on Tuesdays, February 23, March 1 and March 8.Grades five and six at 3.45 to 4.30 pm and grades seven and eight 4.45 to 5.30 pm.

on July 24, 1706, what would you say?

It's all in the mind, he says.

After a four second calculation he came up with the correct day.

ern world teaches maths," Jonathon said.

Jonathon will be holding two classes at the Park Orchards Community Centre.

"I hope to change the way the Western world teaches maths," Jonathon said.

"I've learnt to tap the workings of the brain."

Jonathon's interest in brain powers began when he completed a speed reading class.

Using his speed reading ability, he read and absorbed numerous books on the imagination and the thing that drives it — the brain.

Eventually Jonathon discovered a revolutionary method of teaching maths to children.

The second course will run on Fridays, March 4 and 11 at 1 to 3 pm.

This is *Fantastic Maths*, which Jonathon says can enable you to become a calculating whiz kid by learning how to mentally check the answer to any sum you do.

These classes will be run on Tuesdays, February 23, March 1 and March 8.Grades five and six at 3.45 to 4.30 pm and grades seven and eight 4.45 to 5.30 pm.

An example of the detailed research that went into the development of Podometic™ Bharatiya Maths

Examples of some languages reviewed by elementary mathematics historian

Jonathan J. Crabtree, Founder of www.podometic.in (Post Vedic Maths)

888	Greek	ἀριθμὸς ἀριθμὸν πολυπλασιάζειν λέγεται. ὅτ’αν ὅσαι εἰσιν ἐν αὐτῶι μονάδες τοσαυτάκις συντεθῆι ὁ πολλαπλασιαζόμενος καὶ γένηταί τις
950	Arabic	يوجد أحد العددين بعدد آحاد العدد الآخر فيكون حصة الواحد من آحاد المضروب هي المضروب فيه بعينه والمجموع هو العدد الحاصل من ضرب العدد
1482	Latin	Numerous per alium multiplicari dicitur, qui totiens sibi coacervatur, quotiens in multiplicante est unitas.
1543	Italian	Quel numero se dice esser multiplicato per un'altro, il quale si e assunato tante volte, quante unita e in lo multiplicante.
1555	German	Ain zal multiplicirt oder meret ain andere / wann die ander / als offt die erst zal ains in jr beschleüßt / genommen vnd zuesamen bracht wirdt. multiplicirt oder meret die zal 7. wann die zal 7. vier mal / in ansehen das ains in 4. viermal begriffen ist / genommen vnd zuesamen bracht wir
1565	French	Un nombre, se dict multiplier un autre nombre, quand autant d'unitez, qu'il y a en luy, autant de fois se compose le multiplie, & en naist un aut
1570	English	A number is sayd to multiply a number, when the number multiplyed, is so oftentimes added to itselfe, as there are in the number multiplying and an other number is produced.
1665	Spanish	Un número se dice multiplicar á otro quando tantas veces estuviere compuesto el que se multiplica, quantas fueren las unidades del multiplica producto fuere algun número.
1695	Dutch	Een getal segt men een getal te vermeenigvuldigen, als dat soo meenigmaal een saamgeset getal is, dat vermeenigvuldigt word, als ‘er eenhede vermeenigvuldigende sijn, en dat ‘er eenig getal voortkomt.
1719	Sanskrit	गुण्याङ्कगुण्काङ्कयोर्घातो गुणनफलं क्षेत्रफलं भवति
1855	Swedish	Ett tal säges multiplicera ett tal, när det sednare talet tages så många gånger, som enheter finnas i det förra, och ett annat tal (produkten) derat uppkommer
1857	Chinese	乘數者，數有若干倍，即若干為乘數。面數者， 兩數相乘所得，原兩數為其邊。
1865	Hungarian	Szám számot szorozni mondatik, midon a hány egység van benne, annyiszor rakatik a szorzandó, és igy származik szám.
1907	Czech	Pravíme, že číslo číslem se násobí, když násobené (násobenec) tolikrát se složí, kolik v druhém jest jednotek, a nějaké vznikne.
1912	Hebrew	כוי במספר אחר הוא המספר הנכפל פעמים אשר מנינם כמנין האחדים אשר במספר השני אשר הוא נמנה בו, כמו שתי פעמים שלש או שתי פעמים עשרה מספר שטוח וזו צ ו ר ת ו : : : והמספר הנקבע מהכפל הזה יקרא מספר שטוח
1912	Danish	Et Tal siges at multiplicere et Tal, naar det, som multipliceres, lægges sammen ligesaa mange Gange, som der er Enheder i det første, og et eller frembringes.
1949	Russian	Говорят, что число умножает число, когда сколько в нем единиц, столько раз составляется умножаемое и что-то возникает.

Sanskrit text and commentary from Ch.18 Verses 30-35 from Brahmagupta's Brāhmasphutasiddhānta

P.1

अथ धनर्णशून्यानां सङ्कलनम् ।

धनयोर्धनमृणमृणयो-
र्धनर्णयोरन्तरं समैक्यं खम् ।
ऋणमैक्यं च धनमृणध-
नशून्ययोः शून्ययोः शून्यम् ॥ ३० ॥ (३१)

धनयोरैक्यं धनमृणयोरैक्यमृणं भवति । धनर्णयोरन्तरमेवैक्यं भवति । समयोर्धनर्णयोरैक्यं खं शून्यं भवति । ऋणशून्ययोरैक्यमृणं धनशून्ययोरैक्यं धनं शून्ययोरैक्यं च शून्यं भवति ।

अत्रोपपत्त्यर्थं मन्मुद्रिता भास्करबीजटिप्पणी द्रष्टव्या ॥ ३० ॥

इदानीं व्यवकलनमाह ।

ऊनमधिकाद्विशोध्यं धनं धनाद्दृणमृणादधिकमूनात् ।
व्यस्तं तदन्तरं स्याद्दृणं धनं धनमृणं भवति ॥ ३१ ॥ (३२)
शून्यविहीनमृणमृणं धनं धनं भवति शून्यमाकाशम् ।
शोध्यं यदा धनमृणाद्दृणं धनाद्वा तदा क्षेप्यम् ॥ ३२ ॥ (३३)

अधिकाद्ध्रुनादूनं धनं विशोध्यं शेषं धनं भवति । अधिकाद्दृणाद्ध्रुनमृणं विशोध्यं शेषमृणं भवति । ऊनाद्ध्रुनादधिकं धनं वोनाद्दृणादधिकमृणं विशोध्यं तदा तदन्तरं व्यस्तं विपरीतं स्यात् । अर्थादधिकं धनं विशोध्यं तदा शेषमृणं भवति । अधिकमृणं विशोध्यं तदा शेषं धनं भवति । कथं विपरीतं भवतीत्याह । ऋणं धनं भवति धनं चर्णं भवतीति । चेदृणं शून्यविहीनं शून्येन विहीनं तदा ऋणं धनं च शून्यविहीनं धनं शून्यं च शून्यविहीनमाकाशं शून्यं भवति । यदि ऋणाद्ध्रुनं शोध्यं वा धनाद्दृणं शोध्यं तदा क्षेप्यमर्थात् तदा तयोर्योग एवान्तरं भवतीति ।

अत्रोपपत्त्यर्थं मन्मुद्रिता भास्करबीजटिप्पणी विलोक्या ॥ ३१–३२ ॥

P.2

इदानीं गुणने करणसूत्रम् ।

ऋणमृणधनयोर्घातो धनमृणयोर्धनवधो धनं भवति ।
शून्यर्णयोः स्वधनयोः स्वशून्ययोर्वा वधः शून्यम् ॥ ३३ ॥ (३४)

ऋणधनयोर्घात ऋणं भवति । ऋणयोर्वधो धनवधो धनयोर्वधश्च धनं भवति । शून्यर्णयोः स्वधनयोः शून्यधनयोर्वा स्वशून्ययोश्च वधः शून्यं भवति ॥ ३३ ॥

इदानीं भागहारे करणसूत्रं वृत्तद्वयम् ।

धनभक्तं धनमृणहृतमृणं धनं भवति खं स्वभक्तं खम् ।
भक्तमृणेन धनमृणं धनेन हृतमृणमृणं भवति ॥ ३४ ॥ (३५)
खोद्धृतमृणं धनं वा तच्छेदं खमृणधनविभक्तं वा ।
ऋणधनयोर्वर्गः स्वं स्वं स्वस्य पदं कृतिर्यत् तत् ॥ ३५ ॥ (३६)

धनं धनभक्तं वा ऋणं ऋणभक्तं फलं धनं भवति । स्वभक्तं खं फलं खं भवति । ऋणेन धनं भक्तं फलमृणं स्यात् । धनेन ऋणं हृतं फलमृणं भवति । ऋणं वा धनं खेनोद्धृतं तच्छेदं तस्य शून्यस्य छेदो यस्मिन् ऋणे वा धने तच्छेदं भवति । एवं खं शून्यमृणधनविभक्तं (शून्यं) वा तच्छेदं भवति । फलं शून्यं भवति वा शून्यं तद्धरं स्यादित्यर्थः । ऋणधनयोर्वर्गः स्वं भवति । स्वस्य वर्गः खं भवति । तदेव वर्गस्य पदं भवति यत्कृतिः स एव वर्गो भवेदिति । भास्करबीजेऽप्येतदेव सर्वम् । अत्र स्वभक्तं स्वमर्थात् $\frac{0}{0}$ इदं सर्वदा शून्यसमं नेत्येतदर्थे चलनकलनं विलोक्यम् ॥ ३४–३५ ॥

इदानीं सङ्क्रमणविषमकर्माह ।

योगोऽन्तरयुतहीनो द्विहृतः सङ्क्रमणमन्तरविभक्तं वा ।
वर्गान्तरमन्तरयुतहीनं द्विहृतं विषमकर्म ॥ ३६ ॥ (३७)

योगो राश्योर्योगोऽन्तरेण राश्यन्तरेण युतो हीनश्च द्विहृतो दलितो राशी स्तः । इदं सङ्क्रमणं नाम गणितम् । वा राश्योर्वर्गान्तरं राश्यन्तरेण विभक्तं फलमन्तरेण युतं हीनं द्विहृतं च राशी स्तः । इदं विष-

that explain addition, subtraction, multiplication & division on Zero, Negatives and Positives, 628 C.E..

ARITHMOI

Pythagoras/Plato/Aristotle/Euclid/Nicomachus

Philosophy, Abstract Geometry, No. Theory

ARITHMETIC

ARITHMOS

ARITHMOI

Pythagoras/Plato/Aristotle/Euclid/Nicomachus

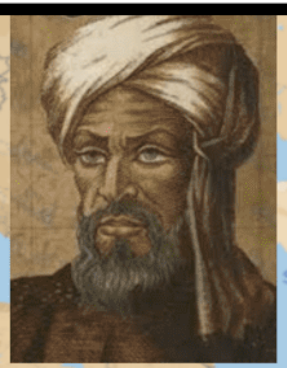
Philosophy, Abstract Geometry, No. Theory

ARITHMETIC

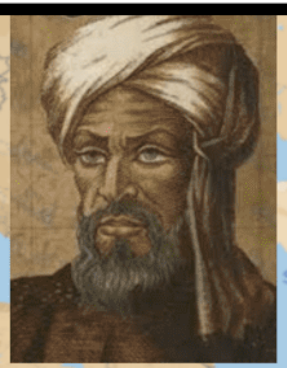
astronomy, practical geometry **ARITHMOS**

Baudhāyana/Āryabhaṭa/Bhāskara/Brahmagupta

In England, my famous 1543 arithmetic book *'The Ground of Arts'* was followed for more than 150 years, being last published in 1699.



Transmission of zero as a placeholder, yet not as defined by Brahmagupta 628 CE.



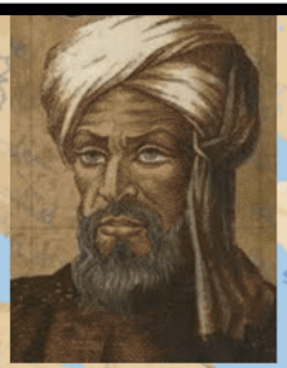
Transmission of zero as a placeholder, yet not as defined by Brahmagupta 628 CE.

Those unaware zero was defined as the sum of equal pos. & neg.
- Al-Khwārizmī, Iraq 9th C.
- Traders, Nth Africa 12th C.
- Leonardo Pisano, Italy 13th C.
- Robert Recorde, England 16th C.

Teach Brahmagupta's Better Bharatiya Maths! Sign the Petition at www.j.mp/BharatiyaMaths

I never knew your 0 definition Brahmagupta or your 18 sutras for 0, positives & negatives!

Recorde knew a subtraction subtracted is like an addition yet that's another idea.



Transmission of zero as a placeholder, yet not as defined by Brahmagupta 628 CE.

Those unaware zero was defined as the sum of equal pos. & neg.
- Al-Khwārizmī, Iraq 9th C.
- Traders, Nth Africa 12th C.
- Leonardo Pisano, Italy 13th C.
- Robert Recorde, England 16th C.

Teach Brahmagupta's Better Bharatiya Maths! Sign the Petition at www.j.mp/BharatiyaMaths

WHY FIX **BRITISH** **ARITHMETIC**?

My Research into its Evolution Reveals it to be

INCONSISTENT

INCOMPLETE

INFERIOR

Q217. What would you say is your least favorite subject in school?

SOURCE: WHAT TEENS WANT FROM THEIR SCHOOLS
A National Survey of High School Student Engagement

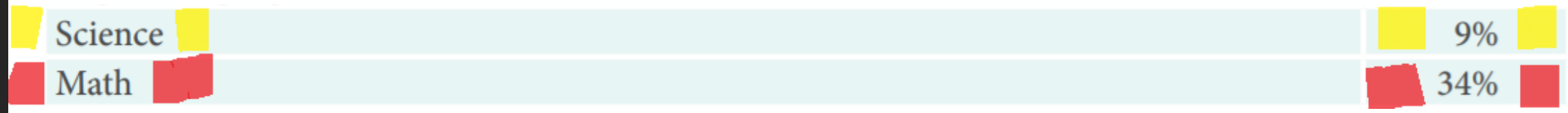
Sample size 2000 US students Years 10 to 12
www.j.mp/WhatTeensWant

Q217. What would you say is your least favorite subject in school?

SOURCE: WHAT TEENS WANT FROM THEIR SCHOOLS
A National Survey of High School Student Engagement

Sample size 2000 US students Years 10 to 12
www.j.mp/WhatTeensWant

Q217. What would you say is your least favorite subject in school?



SOURCE: WHAT TEENS WANT FROM THEIR SCHOOLS
A National Survey of High School Student Engagement

Sample size 2000 US students Years 10 to 12
www.j.mp/WhatTeensWant

Q217. What would you say is your least favorite subject in school?

SOURCE: WHAT TEENS WANT FROM THEIR SCHOOLS
A National Survey of High School Student Engagement

Sample size 2000 US students Years 10 to 12
www.j.mp/WhatTeensWant

Get Podometic Quick Smart (Better than Arithmetic)
@jcrabtree

⏳ GOT 10 SEC?
🙂 FUN POLL

YOUR OPINION IS NEEDED!
Click to Vote!
==========

What Should School
Kids be Taught Today?
==========

- Math Laws CONTRARY to Simple Science Laws
or
- Math Laws CONSISTENT with Simple Science Laws

Contrary Math & Sci Laws

Consistent Math &Sci Laws

Get Podometic Quick Smart (Better than Arithmetic)
@jcrabtree

⏳ GOT 10 SEC?
🙂 FUN POLL

YOUR OPINION IS NEEDED!
Click to Vote!
==========

What Should School
Kids be Taught Today?

Contrary Math & Sci Laws	11.9%
Consistent Math &Sci Laws	**88.1%**

218 votes · Final results

2:47 PM · Sep 9, 2021 · Twitter Web App

INCONSISTENT

INCOMPLETE

INFERIOR

TOP 3 SYSTEM CONSTRAINTS OF BRITISH ARITHMETIC

ZERO

BASE TEN

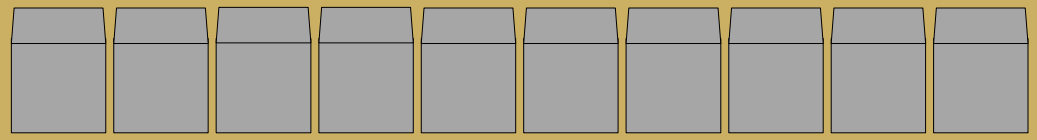
FRACTIONS

THE #1 SYSTEM CONTRAINT

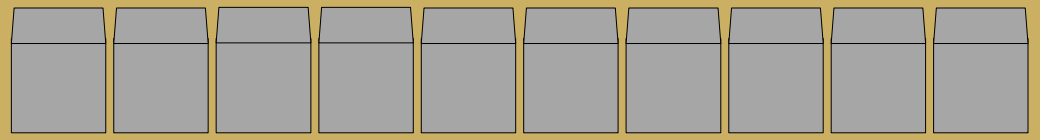
ZERO

In Our Closed System
We Had Zero Bricks
on Ocean Level Zero

Then we Added Bricks to Ocean Level Zero

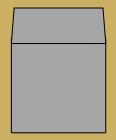


Did the Ocean Rise or Fall?



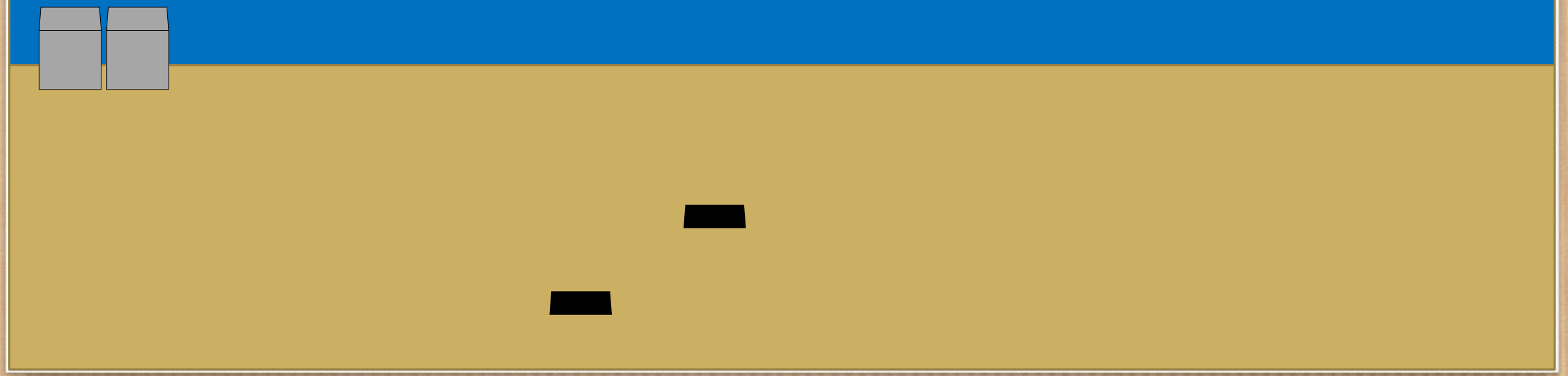
Neither! **Why?**

Because Every Action has an Equal and Opposite Reaction



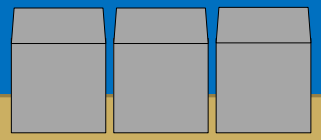
Neither! **Why?**

Because Every Action has an Equal and Opposite Reaction



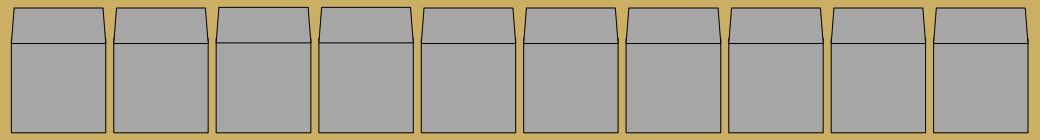
Neither! **Why?**

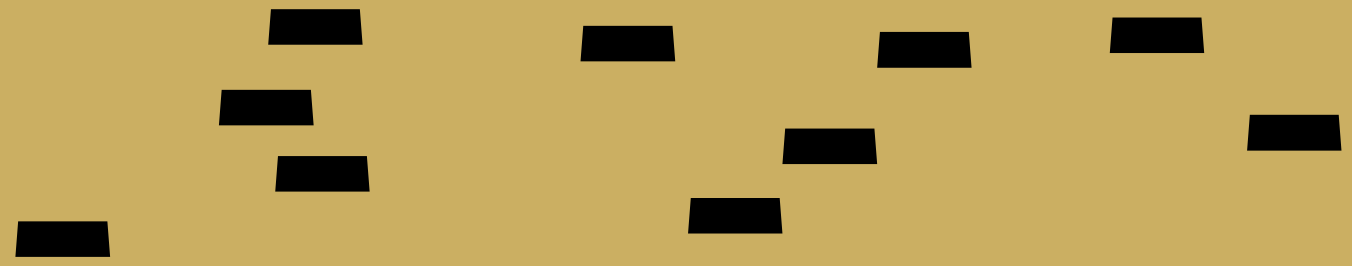
Because Every Action has an Equal and Opposite Reaction



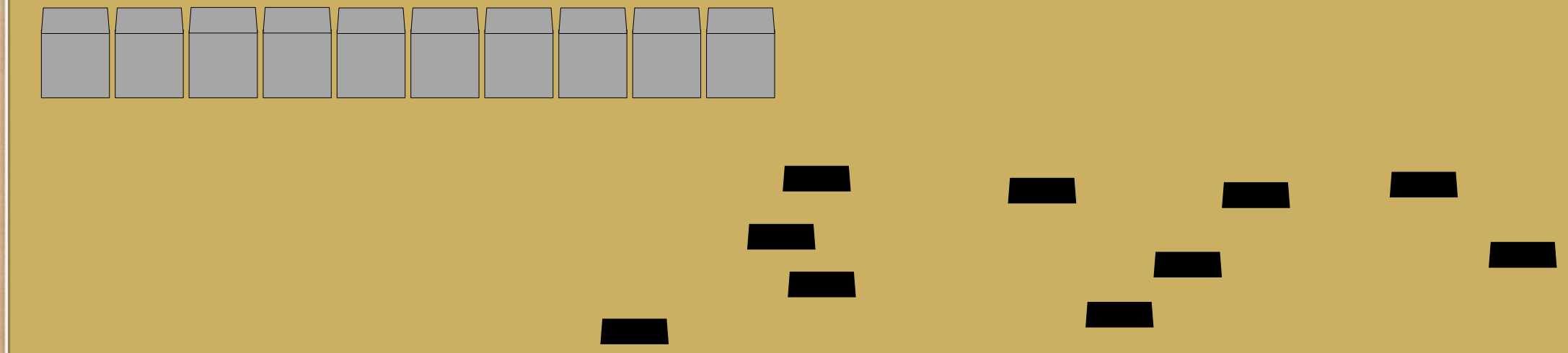
NEWTON'S THIRD LAW

Every Action has an Equal and Opposite Reaction!

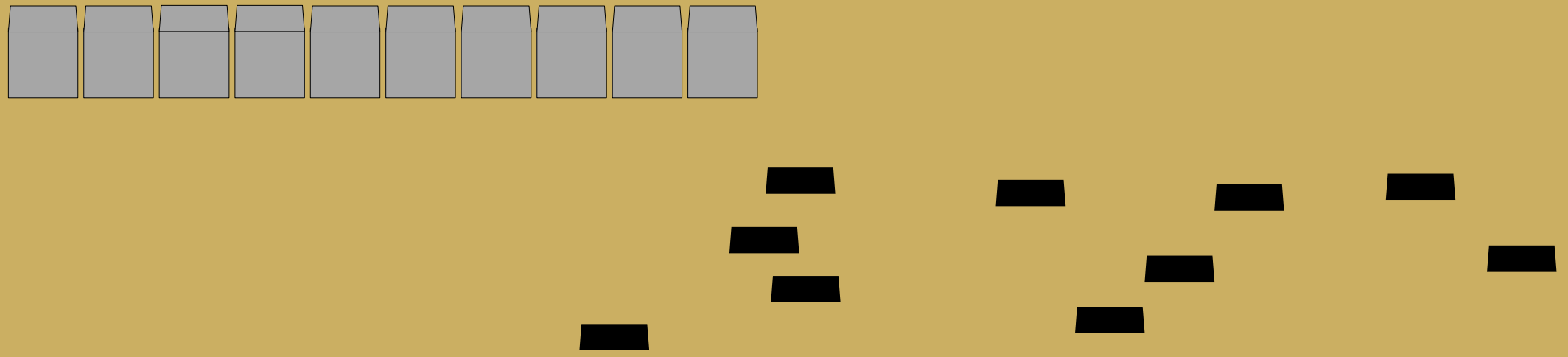




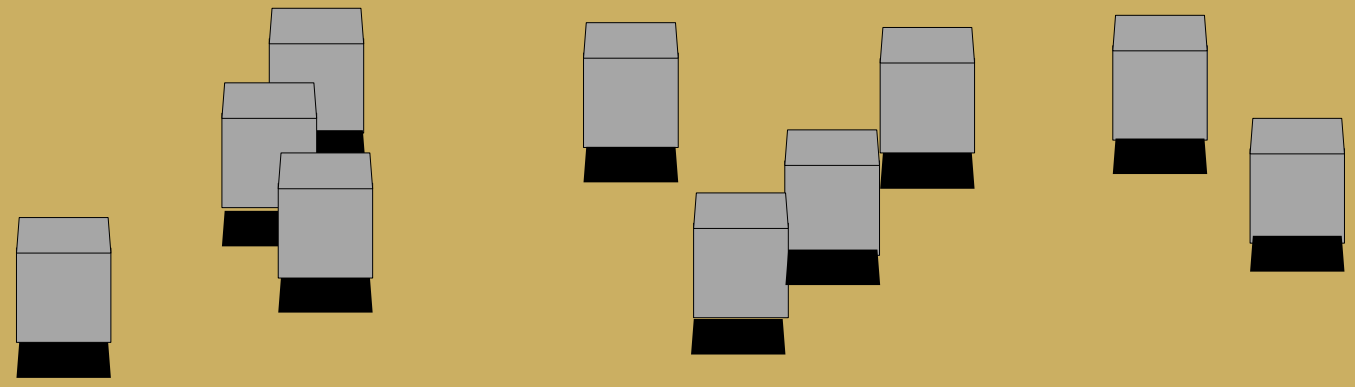
IN OUR CLOSED SYSTEM
We Follow the Principle of Conservation of Mass!



ZERO HAS BEEN SYMMETRICALLY SPLIT INTO EQUAL & OPPOSITE QUANITITIES



THE
EQUAL & OPPOSITE QUANITITIES
SUM TO ZERO



THE
EQUAL & OPPOSITE QUANITITIES
SUM TO ZERO

Brahmagupta's 5 Addition Sutras

धनयोर्धनम्ऋणमृणयोः धनर्णयोरन्तरं समैक्यं खम् ऋणमैक्यं च धनमृणधनशून्ययोः शून्ययोः शून्यम्

AS1 positive plus positive is positive

AS2 negative plus negative is negative

AS3 positive plus negative is the difference between the positive and negative

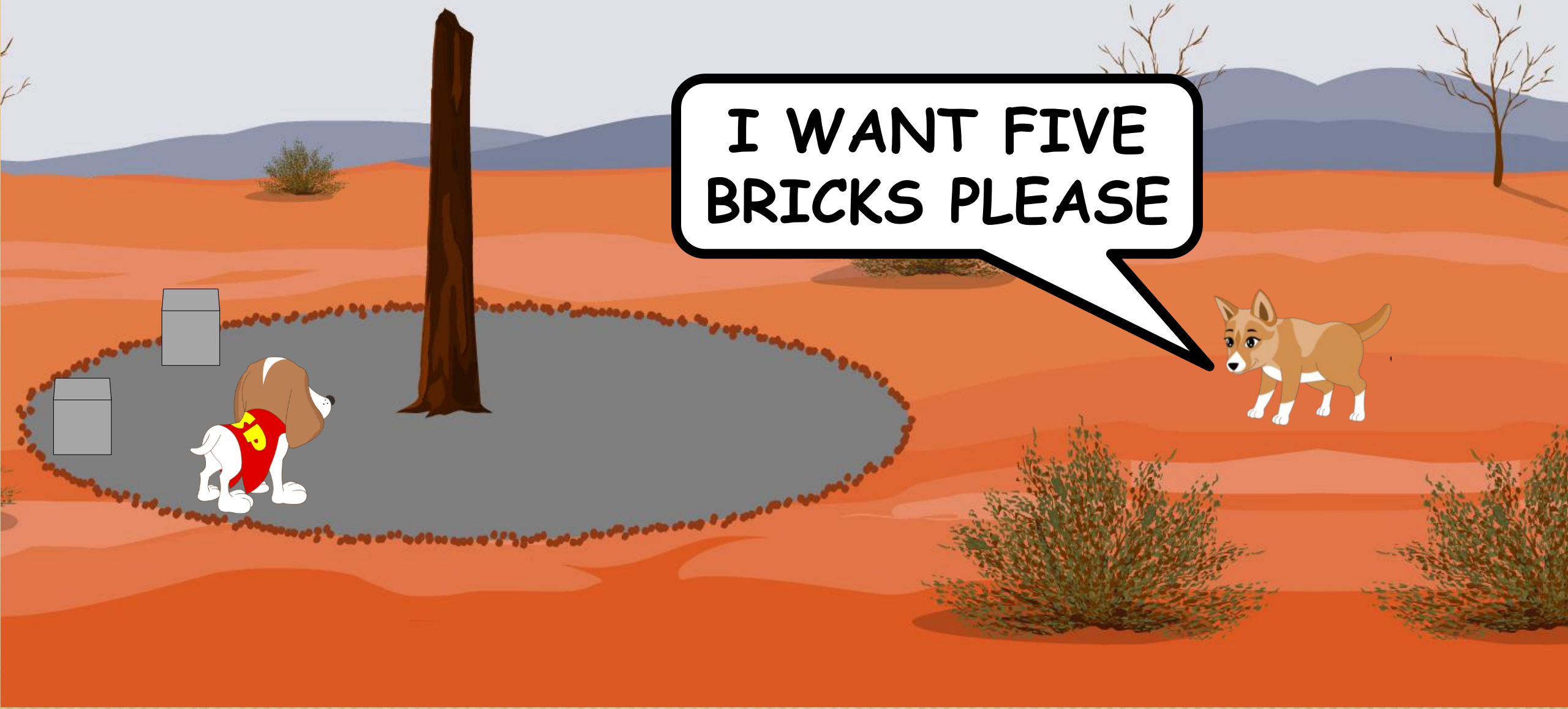
AS4 when positive and negative are equal the sum is zero

AS5
positive plus zero is positive
negative plus zero is negative
zero plus zero is zero

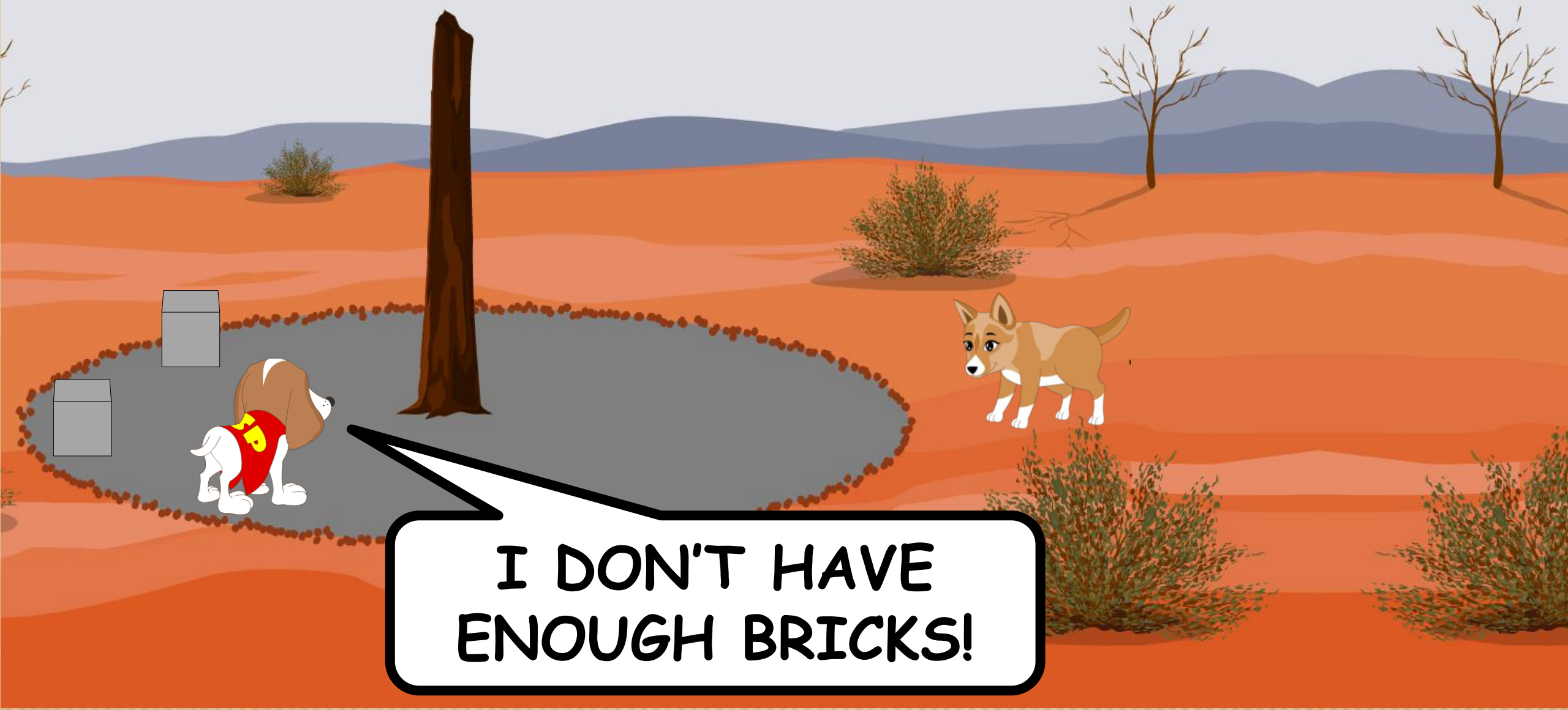
How to reveal 2 – 5 to seven year-olds.

Podo the Puppy has two Bricks for Sale

How to reveal 2 – 5 to seven year-olds.

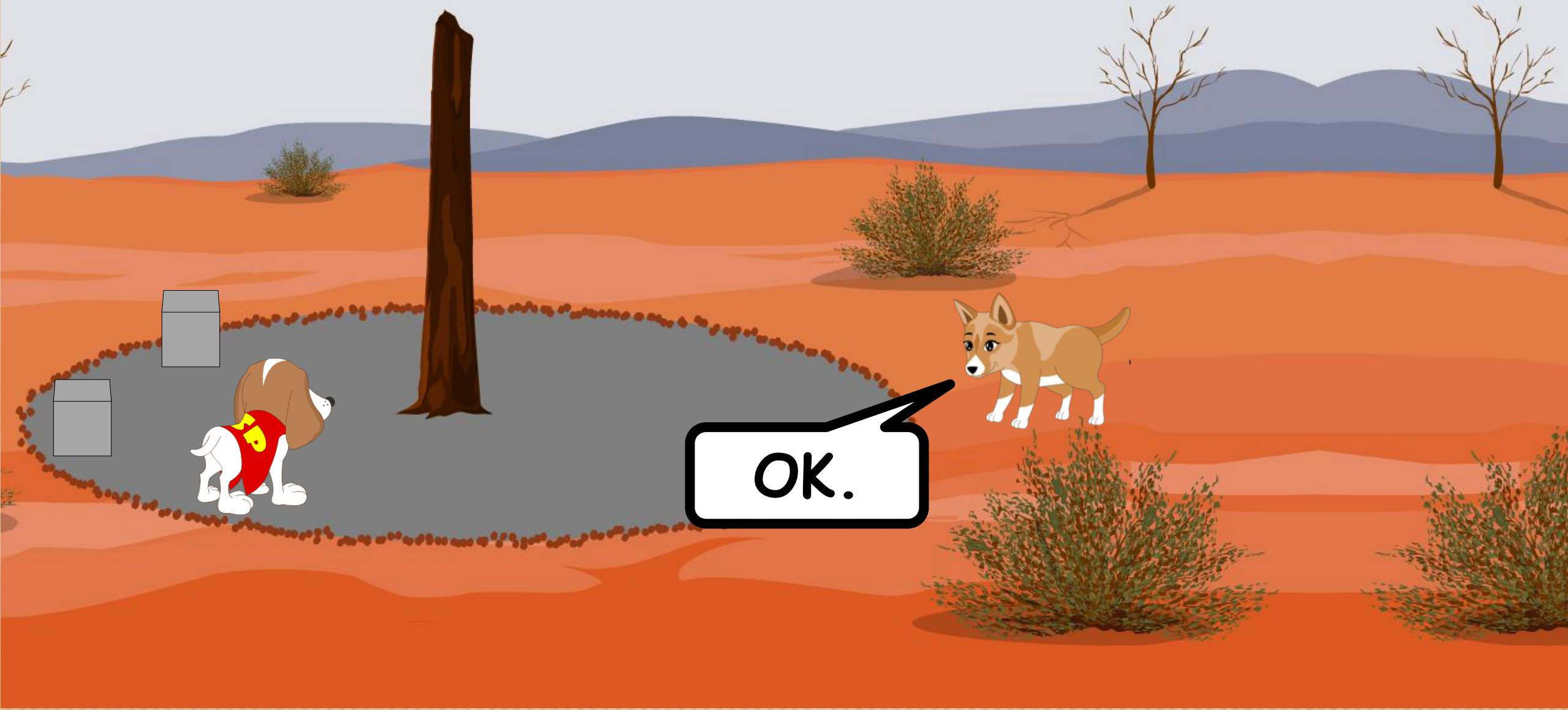


How to reveal 2 – 5 to seven year-olds.



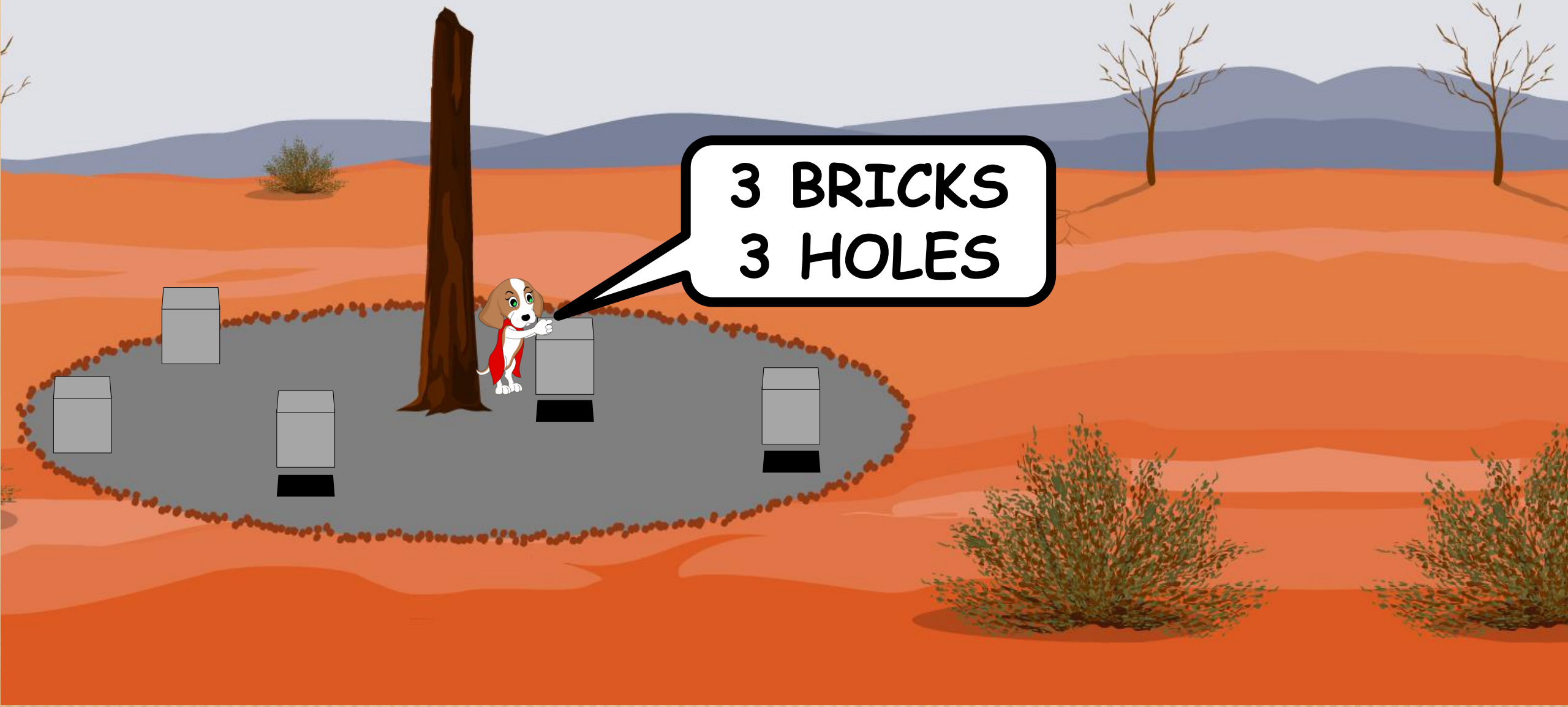
How to reveal 2 – 5 to seven year-olds.

How to reveal 2 – 5 to seven year-olds.



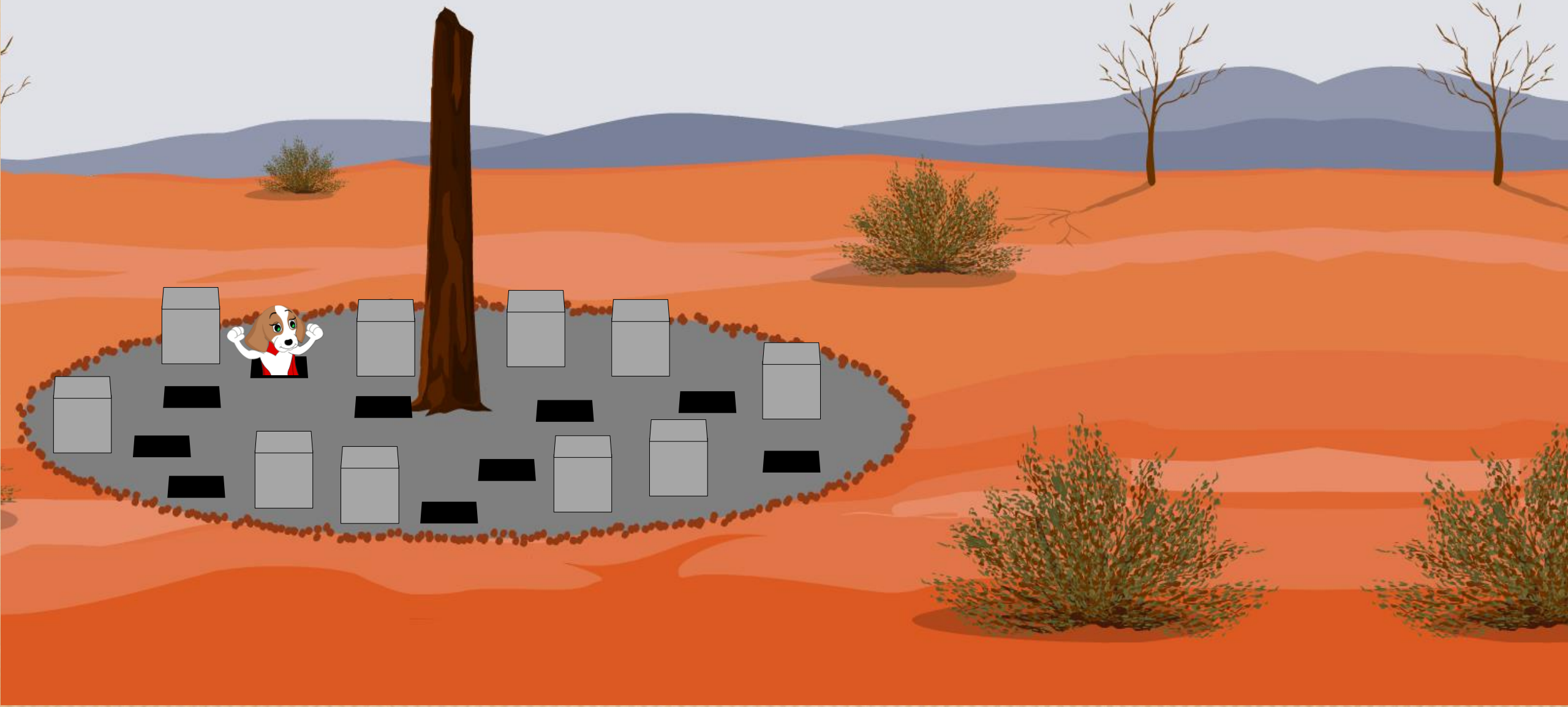
How to reveal 2 – 5 to seven year-olds.

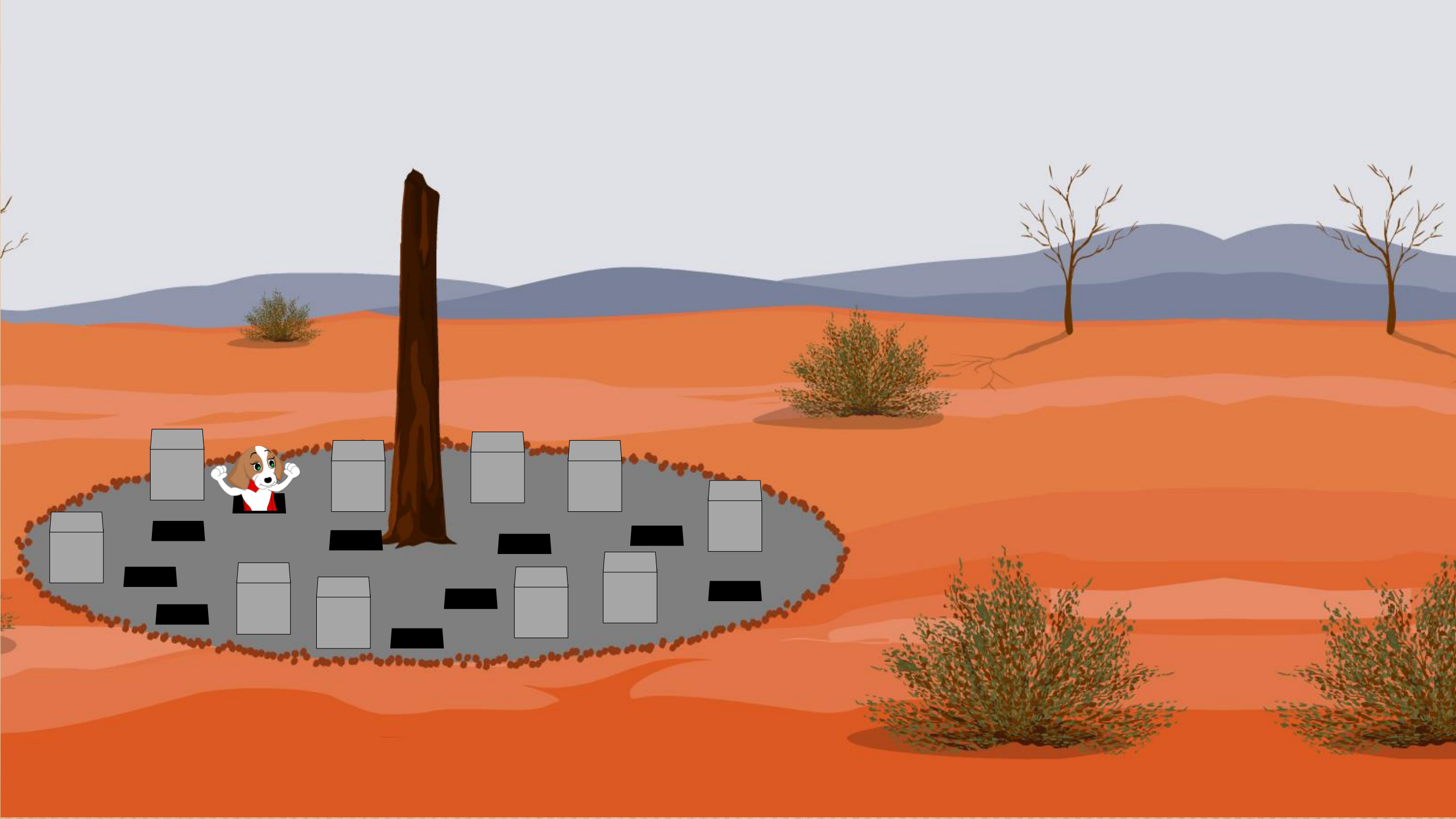
In India Children Play the Happy Harappan Positive Brick and Negative Hole Game!



In India Children Play the Happy Harappan Positive Brick and Negative Hole Game!

In India Children Play the Happy Harappan Positive Brick and Negative Hole Game!





ARITHMOI

Pythagoras/Plato/Aristotle/Euclid/Nicomachus

Philosophy, Abstract Geometry, No. Theory

ARITHMETIC

PODOMETIC

ARITHMOS

astronomy, practical geometry

Baudhāyana/Āryabhaṭa/Bhāskara/Brahmagupta

ARITHMETIC 300 BCE - 2020

PODOMETIC 2021 - 3020