

The First Animation of the Ancient World

AGES 3-12 · 42 PAGES · SHAHR-E SUKHTAH — THE BURNT CITY, SOUTH-EASTERN IRAN

Aryan and Ariana are carried into the deep past by the Homa, a mythical bird, and arrive at a city that was already ancient when the pyramids were being built. There they find a clay goblet with five small pictures painted around its rim — and discover that when it spins, the pictures move.

THE BIG QUESTION — FOR EVERY STUDENT

What can an object tell us about people who left no writing behind?

Ask it of the whole class. The supports below are for students who need a way in — not an easier question.

Words to know

archaeologist

artifact

goblet

ibex

animation

Before you read

- What is the oldest thing you have ever touched? How old do you think it was?

Talk about it

- The artist drew a goat leaping up to eat leaves. Why a goat, and not a person?
IF STUCK *I think they drew a goat because ...*
- The people of the Burnt City had no writing at first. What do we know about them anyway, just from this one cup?
IF STUCK *This cup tells me they knew how to ...*
- What can an object tell you about a person that a written story cannot?
IF STUCK *An object shows me ... but a story tells me ...*
- The book calls this the world's first animation. How could anyone prove something is the first of its kind?
IF STUCK *To prove it was first, you would have to ...*

Make it

The Goblet That Moved

25-30 MINUTES

Paper, pencils, scissors, and one sharpened pencil per pair of students.

Step-by-step instructions are on the student sheet overleaf — photocopy one per child.

Check they got it

As students hold up their finished strips, ask each one: **what did the ancient artist have to know to make the cup work?** Listen for *the pictures have to be in order* and *each one changes only a little*. “They were good at drawing” means the idea has not landed — follow up with: what would happen if picture three came last?

What students often get wrong

- ✗ That “ancient” means “simple.” Sequencing five images so they read as movement takes planning and a steady hand.
- ✗ That we know the artist meant to make an animation. We do not know what they intended — saying so out loud is honest history, not a gap.
- ✗ That “first” is a fact. It is a claim about evidence: it means the oldest one anybody has found *so far*.

The real archaeology

- The goblet is roughly the size of a coffee cup, and was excavated at Shahr-e Sukhteh in south-eastern Iran.
- Five sequential images run around its rim, showing a wild goat (an ibex) leaping toward a tree, eating its leaves, and landing.
- The Burnt City was a working city around 3200 BCE — with craft workshops, trade goods and a cemetery archaeologists are still excavating.

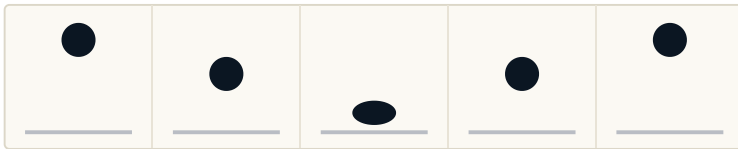
Make a picture that MOVES

A long, long time ago — 5,200 years — someone in Iran painted five little pictures around a clay cup. When the cup spun, the goat jumped up and ate the leaves. You are going to do the same thing.

- 1 Think of ONE thing that moves. A goat jumping. A ball bouncing. A flower opening.
- 2 Draw it five times in the boxes below. Change it just a **tiny** bit each time.
- 3 Cut along the dotted line. Tape the two ends together to make a ring, with your pictures on the **inside**.
- 4 Spin the ring and peep over the top edge at the pictures on the far side.

My moving thing is:

Like this — a ball bouncing:



See how the ball only moves a little between each box? That is the whole trick.

Now your turn:

--	--	--	--	--

✂ CUT ALONG THE DASHED LINE

Now think: Did it work? What happened when you changed the picture too much?

One question I would ask the person who made the cup:

.....

.....

Finished early? Draw a sixth picture — what happens next?

The Ancient Flute of Stone Hill

AGES 3-12 · 46 PAGES · TEPE SANG-E CHAKHMAGH, NEAR SHAHRUD, NORTH-EASTERN IRAN

A silver flute in the school music room sets Aryan wondering who first thought to make music. Homa carries him back eight thousand years to a village of early farmers, where someone has hollowed out the leg bone of a bird and cut holes along it.

THE BIG QUESTION — FOR EVERY STUDENT

How do we know people made music, when music leaves nothing behind?

Ask it of the whole class. The supports below are for students who need a way in — not an easier question.

Words to know

Neolithic flute instrument migratory archaeologist

Before you read

- What is the simplest thing in this room you could make a sound with?

Talk about it

- The oldest flute we know of was made from a bird's leg bone. Why a bone, and not wood or stone?
IF STUCK *A bone would be good because it is already ...*
- Nobody wrote down a single note of the music played on it. So what does the flute itself still tell us?
IF STUCK *Even without the music, the flute tells me they ...*
- Making this took planning, tools and practice. What does that say about a village people sometimes call “primitive”?
IF STUCK *These people must have been good at ...*
- The flute has four holes along it and one at the end. Why is one tube with holes cleverer than five separate tubes?
IF STUCK *One tube is better because ...*

Make it

Five Straws, Five Notes

20-25 MINUTES

Five drinking straws per pair, scissors, and sticky tape.

Step-by-step instructions are on the student sheet overleaf — photocopy one per child.

Check they got it

Ask each pair to blow their **shortest** straw and then their **longest**, and say which is higher. Then ask **why**. Listen for something about the length of the tube. “It just is” or “I blew harder” means the rule has not landed — have them blow the same straw softly and loudly and check whether the note actually changed.

What students often get wrong

- ✗ That blowing harder makes a higher note. It makes a louder one — length changes pitch, effort changes volume.
- ✗ That the oldest instrument found is the oldest instrument made. Wood and reed rot; bone survives. We find what lasts.
- ✗ That early farmers had no spare time for art. Making this took hours of skilled work that somebody chose to spend.

The real archaeology

- The flute was carved from the leg bone of a large migratory bird, using stone tools, more than 8,000 years ago.
- It has four finger holes along its length plus one at the end — several notes from a single tube.
- It comes from Tepe Sang-e Chakhmagh, a village occupied roughly 7200–5200 BCE, and is displayed in the National Museum of Iran in Tehran.

Which straw sings highest?

Eight thousand years ago, somebody took the leg bone of a bird, cut five holes in it, and played it. You are going to find out the rule they already knew.

- 1 Cut five straws to five different lengths. Make the longest about as long as your hand and a half.
- 2 Blow gently **across** the top of each one, like blowing over a bottle.
- 3 Listen hard. Write **high** or **low** next to each straw below.
- 4 Put them in order, shortest to longest. Tape them together side by side.

My five straws are this long:

Shortest straw sounds

Middle straw sounds

Longest straw sounds

So my rule is: the shorter the straw, the

Now think: The ancient flute was ONE tube with holes in it, not five separate tubes. Why was that a better idea?

One thing I would ask the person who made the first flute:

.....
.....

Finished early? Blow the same straw softly, then hard. Does the note change — or just the loudness?

The Toy That Waited

AGES 3-12 · 42 PAGES · SUSAS, SOUTH-WESTERN IRAN

Aryan and Ariana are shaping animals in the sand when Homa sweeps them back to the ancient city of Susa. There they find children doing exactly what they were doing — pressing clay into little sheep, carts and figures that stayed in the ground for six thousand years.

THE BIG QUESTION — FOR EVERY STUDENT

If only some things survive being buried, how much of the past are we missing?

Ask it of the whole class. The supports below are for students who need a way in — not an easier question.

Words to know

excavate artifact clay preserve evidence

Before you read

- What is your favourite toy, and what is it made of? Would it still be here in a thousand years?

Talk about it

- Children in Susa played with tiny clay sheep and little carts with wheels. What do you play with that is a bit like that?

IF STUCK *My toy is like theirs because ...*

- Almost every ancient toy we find is made of clay. What does that tell us — and what might it be hiding?

IF STUCK *We find clay ones because clay ... but we never find ...*

- An archaeologist finds a small clay animal. How would they decide whether it was a toy or something else?

IF STUCK *You could tell it was a toy if ...*

- Some toys from Susa now sit in a museum thousands of miles away. Is that a good thing? Give one reason.

IF STUCK *I think it is good / not good because ...*

Make it

The Six-Thousand-Year Toy

30 MINUTES

Air-dry clay or plasticine, plus scrap paper, string, twigs and fabric offcuts.

Step-by-step instructions are on the student sheet overleaf — photocopy one per child.

Check they got it

Point at any object on a student's desk and ask: **would an archaeologist find this in 6,000 years?** Listen for a reason about the material, not the object — *plastic might, paper won't, clay would*. "Yes, because it's important" means the idea has not landed; importance does not preserve anything.

What students often get wrong

- ✗ That we find the most important things. We find the most *durable* things, which is not the same.
- ✗ That ancient people had few possessions. They had plenty — most were wood, cloth, leather and basketry, and all of it rotted.
- ✗ That a small figure must be a toy. It might be a decoration, an offering, or a model; archaeologists often cannot tell, and say so.

The real archaeology

- Excavations at Susa and other ancient *tepes* have turned up small clay animals, miniature dishes, tiny carts with working wheels and human figurines.
- Some look like sheep, cows and dolls — still recognisable as toys more than five thousand years later.
- Several Susa pieces are held at the Louvre Museum in Paris; others remain in museums in Iran.

Make a toy that lasts 6,000 years

Children in the city of Susa played with little clay sheep and carts with real wheels. Some of those toys are still here today. Yours has to survive too.

- 1 Design a toy for a child in Susa. You may **ONLY** use what they had: clay, wood, stone, bone, string and cloth.
- 2 Draw your toy in the big box. Keep it small — most real ones fit in a child's hand.
- 3 Now look at the materials you used. Write each one in the right column below.

My toy is made of:

Draw your toy here



Bury it for 6,000 years. What is left?

Still here	Rotted away
	

Now think: If only the clay parts survive, does the past look more boring than it really was?

One question I would ask the child who owned the real toy:

.....

.....

Finished early? Draw the same toy as it would look after 6,000 years underground.

The Journey to the Ancient City of Shahdad

AGES 3–12 · 44 PAGES · SHAHDAD, ON THE EDGE OF THE LUT DESERT

On the edge of one of the hottest, driest deserts on Earth, people built a city and filled it with furnaces. Homa carries Aryan and Ariana back five thousand years to Shahdad, where metalworkers melt copper out of rock and hammer it into tools, mirrors and treasures.

THE BIG QUESTION — FOR EVERY STUDENT

Why would anyone build a city next to the hottest desert on Earth — and how did they make it work?

Ask it of the whole class. The supports below are for students who need a way in — not an easier question.

Words to know

furnace

copper

bronze

channel

craft

Before you read

- Name three things you would need to survive in a desert, then put them in order of importance.

Talk about it

- Shahdad sat beside a desert. How do you think its people found enough water to grow food?
IF STUCK They could get water by ...
- Melting rock until metal runs out of it needs a very hot fire. How would someone learn to do that without books?
IF STUCK They would learn it from ...
- Shahdad had separate neighbourhoods for different kinds of workers. Why would a city arrange itself that way?
IF STUCK Keeping the metalworkers together would help because ...
- Bronze is two metals mixed to make something harder than either alone. What else works better mixed than pure?
IF STUCK Something else that is better mixed is ...

Make it

Hammered in Metal

25–30 MINUTES

Kitchen foil squares, a blunt pencil or empty ballpoint pen, and newspaper to work on.

Step-by-step instructions are on the student sheet overleaf — photocopy one per child.

Check they got it

Hold up two finished pieces — one bold, one faint — and ask **why does this one read and this one doesn't?** Listen for pressure or line thickness. If a student says “that one's just better”, ask them to point at the exact part that disappeared and say what would fix it.

What students often get wrong

- ✗ That deserts were empty. Shahdad was a working city with workshops, trade and neighbourhoods.
- ✗ That bronze is a metal you dig up. It is a recipe — two metals deliberately mixed, which is why the age is named after it.
- ✗ That ancient metalwork was crude. Shahdad's metalworkers were among the finest anywhere in the world at the time.

The real archaeology

- Shahdad sat at the edge of the Lut Desert, one of the hottest and driest places on the planet; its people dug channels to bring water to their fields.
- Its metalworkers heated rock in furnaces until copper ran out of it, then hammered and cast tools, mirrors and cups.
- The best-known object found there is a standard made of metal, sometimes called the Shahdad flag.

Design a standard for your city

Five thousand years ago, in a city beside a burning desert, someone made a flag out of metal. It is still here. You are going to design your own — first on paper, then pressed into foil.

- 1 Sketch your design in the box. Big, bold shapes work best. Thin scribbles disappear in metal.
- 2 Lay your foil on newspaper, shiny side down.
- 3 Draw firmly over your design with a blunt pencil. Push the metal — do not tear it.
- 4 Turn the foil over. Your design now stands up.

My city is called:

Sketch your design here FIRST



Now think: Which lines came out clearly, and which vanished? What does that teach you about designing for metal instead of paper?

One thing I would ask a metalworker from Shahdad:

.....

.....

Finished early? Design a second one using only straight lines. Is it easier or harder to read?

The Oldest Venus: A Magical Journey to Sarab

AGES 3-12 · 64 PAGES · TEPE SARAB, NEAR KERMANSHAH, WESTERN IRAN

Aryan wonders whether his own country hides anything older than the famous figures of Europe. Homa carries them eight thousand years back to Sarab, a village of the first farmers, where someone sat down with a lump of clay and made a small statue.

THE BIG QUESTION — FOR EVERY STUDENT

Why does *where* something was buried matter as much as the thing itself?

Ask it of the whole class. The supports below are for students who need a way in — not an easier question.

Words to know

excavation

figurine

Neolithic

layer

record

Before you read

- What is the difference between an ordinary hill and a hill made of buried houses?

Talk about it

- Someone made this little figure with their hands. What might they have been thinking about while they made her?
IF STUCK *I think they were making her for ...*
- At Sarab there were no cities yet — people were only just learning to plant seeds. What would a day there have been like?
IF STUCK *In one day they would have to ...*
- We do not know what the figure was for. What should a museum label say when nobody knows?
IF STUCK *The label should say ... because ...*
- Why would an archaeologist draw an object before lifting it out of the ground?
IF STUCK *If you pick it up first, you lose ...*

Make it

Bury It, Then Dig It Up

35-40 MINUTES, OR SPLIT ACROSS TWO LESSONS

Air-dry clay, a shallow tray of sand or soil per group, an old paintbrush each.

Step-by-step instructions are on the student sheet overleaf — photocopy one per child.

Check they got it

Before any group lifts anything, stop them and ask: **what have you written down so far?** A group with an empty record sheet and a figure already in their hand has missed the whole lesson — have them rebury it and start again. Recording before lifting is the rule on a real dig.

What students often get wrong

- ✗ That archaeology is about finding treasure. It is about finding *information*, most of which is in the position, not the object.
- ✗ That deeper always means older — usually true, but digging, building and flooding can shuffle the layers.
- ✗ That experts always know what an object was for. Often they genuinely do not, and saying so is good science.

The real archaeology

- Tepe Sarab is a low mound near Kermanshah — a village that was buried gradually over a very long time.
- It dates from before cities existed, when people were first planting seeds deliberately and keeping sheep and goats near home.
- The figure was uncovered by archaeologists brushing dirt away by hand, which is still how delicate finds are lifted today.

Be the archaeologist

Eight thousand years ago someone in a village called Sarab made a small clay figure. Archaeologists found her by brushing away dirt, one careful stroke at a time. Now it is your turn — and there is one rule: **write it down before you pick it up.**

- 1 Take another group's tray. Do not shake it, do not tip it.
- 2 Brush the sand away gently. Use the brush, never your fingers.
- 3 STOP when you can see the object. Do not lift it yet.
- 4 Fill in the record below and draw exactly how it was lying. **Then** you may lift it out.

I am excavating the tray belonging to:

How deep was it?

Which way was it facing?

What is it made of?

Draw it exactly where it lay

Now think: Why does drawing it first matter more than digging it up fast?

One question I would ask the person who made the real figure:

.....

.....

Finished early? Swap sheets with another group. Could you find their object using only their notes?

The Girl Who Had Two Languages

AGES 3-12 · SUSAN, SOUTH-WESTERN IRAN

The night before a new school, Ariana turns a question over: am I American, Iranian, or both? Homa carries her and Aryan to ancient Susa, where they meet Niloufar — a girl who speaks two languages and cannot understand why anyone would call that a problem.

THE BIG QUESTION — FOR EVERY STUDENT

What do you gain from a second language that you cannot get any other way?

Ask it of the whole class. The supports below are for students who need a way in — not an easier question.

Words to know

heritage

translate

ancient

trade route

belong

Before you read

- Is there a word you use with your family that you never use at school?

Talk about it

- Niloufar speaks two languages and has never thought of herself as half of anything. What changes when you stop counting in halves?
IF STUCK *If you stop counting halves, you get to be ...*
- Ariana wonders whether she is American, Iranian, or both. Why do you think she felt she had to choose?
IF STUCK *She might feel she has to choose because ...*
- A language carries jokes, songs and ways of being polite that do not translate. What is lost when a family stops speaking one?
IF STUCK *If a family stopped speaking it, they would lose ...*
- Susa was a city where people speaking different languages lived side by side. How is this room like that?
IF STUCK *This room is like Susa because ...*

Make it

The Language Map of This Room

30 MINUTES

A world map, sticky notes, and pens. No preparation needed.

Step-by-step instructions are on the student sheet overleaf — photocopy one per child.

Check they got it

Count the languages on the map with the class, out loud. Then ask: **was that more or fewer than you expected?** The number is the point. Follow up with one student: *what can you say in your other language that is hard to say in English?* — a real example, not “it’s just different”.

What students often get wrong

- ✗ That a second language holds children back. Research consistently finds the opposite — a secure sense of heritage tracks with better wellbeing and school attitudes.
- ✗ That everyone in an ancient city spoke one language. Cities on trade routes were mixed, and Susa sat on those routes.
- ✗ That translation is exact. Every language holds ideas the next one has no single word for.

The real archaeology

- Susa is one of the oldest cities on Earth, lived in for thousands of years, and a place where people from different lands met, traded and settled.
- Because it sat on routes between regions, more than one language would have been heard in its streets — which is why the author chose it for this story.
- The same city gives us the clay toys in Book 3 — the two books are set in one place, thousands of years apart.

How many languages live in this room?

In the ancient city of Susa, a girl called Niloufar spoke two languages and thought nothing of it. To her they were simply two ways of reaching people. Let us find out how many ways this room can reach people.

- 1 Write down every language anyone in your home speaks — even a few words from a grandparent counts.
- 2 Put your sticky note on the map, where that language comes from.
- 3 Count all the languages in the room together. Write the number down.
- 4 Teach the class ONE word from a language other than English.

My name, written the way my family writes it:

Languages spoken in my home

Languages in this whole room

The word I taught the class

What it means

Now think: What can you say in one language that is hard to say in another?

One thing I would ask Niloufar:

.....

Finished early? Find two languages on the map that sit close together. Do they share any words?