

FIRST PRINCIPLES What does “first principles” mean? Curio Kids Crew	ANSWER Breaking a big thing into small true pieces, then building back up. Try it: Take apart your lunch in words.	FIRST PRINCIPLES What is a pancake made of? Curio Kids Crew	ANSWER Flour, egg and milk. Flour comes from wheat seeds. Try it: Draw a Take-Apart Tree.
FIRST PRINCIPLES What's the best question a detective can ask? Curio Kids Crew	ANSWER “What do we know for sure?” Try it: Ask it at dinner tonight.	FIRST PRINCIPLES Keep taking ANY stuff apart. What do you find at the end? Curio Kids Crew	ANSWER Atoms! There are 118 kinds, called elements. Try it: Head to Element Explorers.
FIRST PRINCIPLES Part or whole: a wheel? Curio Kids Crew	ANSWER A part! The bike is the whole. Try it: Find 3 parts of a chair.	FIRST PRINCIPLES What can you say when you don't know? Curio Kids Crew	ANSWER “I don't know yet. Let's find out!” Try it: Say it the next time you're stuck.

MOVE LAB What do muscles do? Curio Kids Crew	ANSWER They pull! Muscles pull on bones to move you. Try it: Make a muscle and feel it get hard.	MOVE LAB How many bones does a grown-up have? Curio Kids Crew	ANSWER 206. Babies start with about 300 that join as they grow. Try it: Find the bones in your hand.
MOVE LAB Why do muscles come in pairs? Curio Kids Crew	ANSWER They can only pull, so one pulls your arm up and its partner pulls it down. Try it: Bend your arm and feel both sides.	MOVE LAB What does your heart do when you run? Curio Kids Crew	ANSWER Beats faster to send more blood and oxygen to your muscles. Try it: 10 jumping jacks, then feel your heart.
MOVE LAB What is balance? Curio Kids Crew	ANSWER Your brain, eyes, inner ears and muscles working together to keep you steady. Try it: Flamingo stand for 10 seconds.	MOVE LAB Cross the middle! Touch your right hand to your... Curio Kids Crew	ANSWER Left knee! Cross-body moves get both sides working together. Try it: Do 10, switching sides.

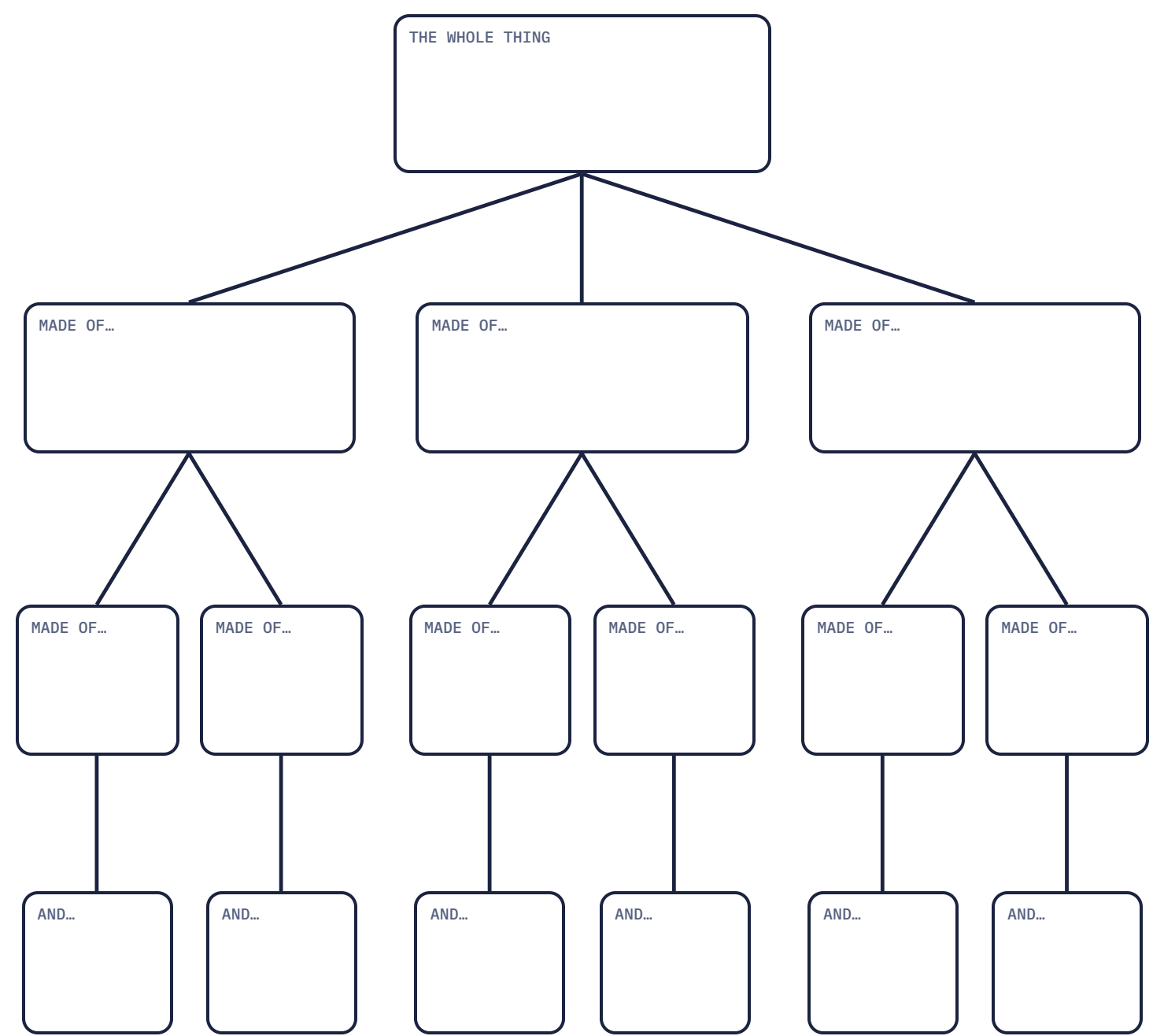
SHAPES OF LIFE Which shape do bees build? Curio Kids Crew	ANSWER Hexagons. Six-sided cells fit together with no gaps. Try it: Count the sides on a honeycomb picture.	SHAPES OF LIFE Where can you find a spiral? Curio Kids Crew	ANSWER Snail shells, fern curls, sunflowers, pinecones. Try it: Find one spiral today.
SHAPES OF LIFE What do trees, rivers and lungs share? Curio Kids Crew	ANSWER Branching! Branches reach far from one starting point. Try it: Make a branch with your arms and fingers.	SHAPES OF LIFE What shape is a small raindrop? Curio Kids Crew	ANSWER A tiny sphere. Big drops get squished flat like a bun as they fall! Try it: Look at drops on a window.
SHAPES OF LIFE What is symmetry? Curio Kids Crew	ANSWER When one half matches the other, like a butterfly's wings. Try it: Fold a paint blot to make one.	SHAPES OF LIFE How many arms do most starfish have? Curio Kids Crew	ANSWER Five, arranged around a center. That's radial symmetry. Try it: Draw a starfish with 5 matching arms.

ELEMENTS How many elements are there? Curio Kids Crew	ANSWER 118 known elements. Try it: Find number 1 on a periodic table.
ELEMENTS Which element is H? Curio Kids Crew	ANSWER Hydrogen, element number 1, the lightest of all. Try it: Say “H is for hydrogen” three times fast.
ELEMENTS What is water made of? Curio Kids Crew	ANSWER H₂O: two hydrogen atoms and one oxygen atom. Try it: Build it from playdough.
ELEMENTS Which element is in diamonds AND pencils? Curio Kids Crew	ANSWER Carbon! Diamond and pencil graphite are both pure carbon. Try it: Draw with some carbon.
ELEMENTS Which element makes balloons float? Curio Kids Crew	ANSWER Helium (He). It's lighter than air. Try it: Spot a floating balloon.
ELEMENTS Which element in your blood helps carry oxygen? Curio Kids Crew	ANSWER Iron (Fe). Try it: Find iron in a cereal box's ingredients.

ASL CREW What is ASL? Curio Kids Crew	ANSWER American Sign Language: a full language you see, with hands, face and body. Try it: Wave hello to someone with a sign.	ASL CREW How do you sign HELLO? Curio Kids Crew	ANSWER Flat hand starts near your forehead and moves out, like a small salute. Try it: Sign HELLO to your family.
ASL CREW How do you sign THANK YOU? Curio Kids Crew	ANSWER Fingertips touch your chin, then move forward toward the person. Try it: Sign it at your next meal.	ASL CREW How do you sign MORE? Curio Kids Crew	ANSWER Both hands in a flat "O"; tap the fingertips together. Try it: Ask for more snack, no words!
ASL CREW How do you sign ALL DONE? Curio Kids Crew	ANSWER Open hands, palms toward you, twist out so they face away. Try it: Sign it when you finish eating.	ASL CREW What is fingerspelling? Curio Kids Crew	ANSWER Spelling words letter by letter with handshapes, like your name. Try it: Fingerspell your first name.

Take-Apart Tree

Write or draw something at the top: a pancake, a bike, rain. Then ask “what is it made of?” and branch down. How far can you go? Keep going and you'll reach elements!



Name: _____ Grown-up question: “What do we know for sure?”

Move & Freeze Cards

MOVE LAB • CUT ON THE DASHED LINES

Pick a card, do it for 30 seconds, then freeze! Afterward, hand on chest: is your heart fast or slow?

ANIMAL WALK Bear crawl Hands and feet on the floor, bottom up high. Walk forward! Working: Arms and shoulders	ANIMAL WALK Crab walk Sit, hands behind you, lift your tummy. Walk sideways. Working: Arms, belly, legs	ANIMAL WALK Frog jump Squat low, hands down, then spring up and forward. Working: Big leg muscles
BALANCE Flamingo Stand on one foot. Count to 10. Switch feet. Working: Ankles and core	BALANCE Tree One foot on your other ankle or calf, arms up like branches. Working: Balance and focus	CROSS THE MIDDLE Cross crawl Right hand to left knee, left hand to right knee. 10 times! Working: Both brain sides
ANIMAL WALK Penguin waddle Feet together, arms stiff at your sides, waddle! Working: Hips and balance	ANIMAL WALK Kangaroo hops Feet together, hop, hop, hop! Working: Calves and thighs	STRETCH Starfish Jump out wide like a starfish, then back to a pencil. Working: Whole body
STRETCH Snake slither Lie on your tummy and slither forward using your arms. Working: Arms and back	ANIMAL WALK Elephant stomp Big slow stomps, arm swinging like a trunk. Working: Legs and rhythm	FREEZE! Statue Music off? FREEZE! Can you hold perfectly still for 5? Working: Self-control

Nature uses the same shapes again and again because each one is good at a job. Find each shape, write where you found it, and tick the box.



Spiral

Grows bigger without changing shape

Try: Snail shells, fern curls, pinecones

I FOUND IT ON...

☐

Hexagon

Six sides that fit with no gaps

Try: Honeycomb, bubble rafts, some tiles

I FOUND IT ON...

☐

Branch

Reaches far from one start

Try: Trees, leaf veins, rivers, cracks

I FOUND IT ON...

☐

Sphere

Holds the most inside

Try: Berries, oranges, water drops, pebbles

I FOUND IT ON...

☐

Symmetry

Two halves that match

Try: Butterflies, leaves, faces, starfish

I FOUND IT ON...

☐

DRAW YOUR BEST FIND. WHAT JOB IS ITS SHAPE DOING?

What Am I Made Of?

If your body were 100 squares, here's how many squares each element would fill (by weight). Color the squares to match the key, starting at the top left.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Oxygen (O)
65 squares

Carbon (C)
18 squares

Hydrogen (H)
10 squares

Nitrogen (N)
3 squares

Everything else
4 squares
calcium, phosphorus and more

Grown-ups: most of that oxygen and hydrogen is in water. Use any colors you have; the key is a suggestion.

Meet the starter eight. Color the big letters!

1

H

Hydrogen
The Sun is mostly hydrogen.

2

He

Helium
Makes balloons float.

6

C

Carbon
In every living thing.

7

N

Nitrogen
About 78% of air.

8

O

Oxygen
About 21% of air.

11

Na

Sodium
Half of table salt.

20

Ca

Calcium
Strong bones and teeth.

26

Fe

Iron
Helps blood carry oxygen.

Every Curio lesson follows these six steps. A full loop takes 10–20 minutes. Short on time? Do Wonder, Move and Name today and the rest tomorrow.

STEP 1 Wonder	Open with a real question a kid would ask. Let them guess before you explain.	<i>“What do you think? Why?”</i>
STEP 2 Move	Put the idea in the body: act it out, build it, walk it.	<i>“Show me with your body.”</i>
STEP 3 Make	Draw, sort or build something they can hold or keep.	<i>“Can you draw what you mean?”</i>
STEP 4 Name	Now give the real words. Three new words, max.	<i>“Scientists call that a...”</i>
STEP 5 Share	The kid teaches it back to you, a sibling or a toy.	<i>“Can you teach it to Teddy?”</i>
STEP 6 Return	Revisit in 2–3 days with a flashcard or a new example.	<i>“Remember the...? Where else is it?”</i>

Do

- Concrete first: real objects before pictures, pictures before words.
- Help a little, then step back (“I do, we do, you do”).
- Praise effort and strategy: “You tried three ways!”
- Watch videos together and talk about them.
- Say “I don’t know yet. Let’s find out.”

By age

- **3–5 Tiny Crew:** touch it, move it, name it. Lots of repeats.
- **6–8 Crew:** sort, draw, explain. Two- and three-step chains.
- **9–11 Big Crew:** predict, test, design. “Why does it work?”

Snack-Time Signs

ASL (American Sign Language) is a full language used by Deaf communities. Use a matching face: your expression is part of the sign. **Watch each sign on video before teaching:** Lifeprint.com, Signing Savvy or Gallaudet's ASL Connect.

MORE

Both hands in a flat “O” shape. Tap the fingertips together twice.

Snack-time sign

PLEASE

Flat hand on your chest. Rub in a small circle.

Snack-time sign

THANK YOU

Fingertips of a flat hand touch your chin, then move forward toward the person.

Snack-time sign

ALL DONE

Open hands, palms facing you. Twist them out so palms face away.

Snack-time sign

HELLO

Flat hand starts near your forehead and moves out, like a small salute.

Bonus sign

MILK

Open and squeeze your fist, like milking a cow.

Bonus sign

HELP

Thumbs-up fist resting on your other flat palm. Lift both up together.

Bonus sign

FRIEND

Hook index fingers together, flip, and hook again.

Bonus sign

This week

- Use MORE, PLEASE, THANK YOU and ALL DONE at every snack.
- Fingerspell your first name with an ASL alphabet chart.
- Name signs are given by Deaf community members, so fingerspell your name rather than inventing one.