Stardust to Storytellers

Prehistory Lab Book

Younger Learners Edition

MY PREDICTION

Before we start, circle what you think will happen when the balloon gets bigger:

- The dots will get CLOSER TOGETHER
- The dots will get FARTHER APART
- The dots will STAY THE SAME

DRAW MY GALAXIES

Draw your balloon when it was SMALL (dots close together).

Draw your balloon when it was SMALL (dots close together)	Draw your balloon when it was BIG (dots spread out)

MY NOTES

WHAT I NOTICED

Circle the right answers:

- When the balloon got bigger, the dots moved: APART / CLOSER
- Was there one dot that stayed in the middle and never moved? YES / NO

MY BIG QUESTION

If YOU were standing on one of the dots, what would you see happening around you? Draw or write it here.

Write or draw here

I LEARNED THAT

The universe started tiny and is always getting _____.

The dots on the balloon are like _____ in the real universe.

BEFORE WE START

Circle what you think your body is made of:

- Things from the ground
- Elements made inside stars
- Things from the ocean
- I don't know

MY STAR

Draw your play dough star. Use colors to show the different elements inside it. Label the core, the outer layers, and any scattered stardust.

Draw here

WHAT HAPPENED

Circle the right answers:

- When we squeezed the play dough together, it got: BIGGER / SMALLER
- When the star died and we spread it apart, the pieces: STAYED TOGETHER / SPREAD OUT

I LEARNED THAT

Stars make new _____ inside them.

When a star dies it scatters those elements into _____.

That means you are made of _____!

WHERE DO I LIVE?

Fill in the blanks from smallest to biggest:
Me ---->

Planet _____ ---->

The _____ System ---->

The _____ Way ---->

The _____

DRAW IT

Draw yourself inside Earth, inside the Solar System, inside the Milky Way. Use circles inside circles!

Draw here

CIRCLE THE RIGHT ANSWER

- The Milky Way is a: PLANET / GALAXY / SOLAR SYSTEM
- Our Sun is a: PLANET / MOON / STAR
- Earth is the _____ planet from the Sun. (write the number)

I LEARNED THAT

My full cosmic address is: Me, on _____, in the _____ System,

in the _____ Galaxy, in the _____.

Something that surprised me was

MY PREDICTIONS

Before each drop, circle what YOU think will happen:

- Drop 1 -- flat paper vs. crumpled paper: FLAT lands first / CRUMPLED lands first / SAME TIME

- Drop 2 -- full bottle vs. half-full bottle: FULL lands first / HALF-FULL lands first / SAME TIME

WHAT ACTUALLY HAPPENED

Draw the two papers falling. Circle which one got to the ground first.

Draw here

CIRCLE THE RIGHT ANSWER

- Gravity pulls things: DOWN / UP / SIDEWAYS
- The crumpled paper fell faster because it had less: GRAVITY / AIR PUSHING ON IT / WEIGHT

I LEARNED THAT

Gravity pulls _____ things at the same speed.

The flat paper was slower because of _____ resistance.

BEFORE WE BUILD

Circle what you think the inside of Earth looks like:

- ALL SOLID ROCK
- ALL LIQUID
- LAYERS LIKE AN ONION
- HOLLOW

MY EARTH MODEL

Draw a circle and color in the layers of your play dough Earth. Use the same colors you used.
Label each layer with its name.

Draw here

MATCH IT

Draw a line from each layer to its description:

CRUST	The hottest, densest center
MANTLE	Where we live
INNER CORE	The thickest layer, slow-moving rock

I LEARNED THAT

Earth has _____main layers.

The layer we live on is called the _____.

The hottest part is the _____.

THE THREE TYPES OF ROCK

Draw a line from each rock type to how it forms:

SEDIMENTARY	Melted and then hardened
METAMORPHIC	Layers pressed together
IGNEOUS	Heat and pressure deep underground

MY ROCK CYCLE

Draw each stage of your candy rock cycle:

Sedimentary	Metamorphic	Igneous

CIRCLE THE RIGHT ANSWER

- Sedimentary rock forms when sediments are: MELTED / PRESSED TOGETHER / SQUEEZED BY HEAT
- Igneous rock forms when melted rock: FREEZES / COOLS AND HARDENS / GETS PRESSED

I LEARNED THAT

Rocks can change from one type to _____.

This is called the rock _____.

BEFORE WE START

Circle what you think will happen when two plates crash into each other:

- ○ They will bounce apart
- ○ One will go under OR they will crunch up
- ○ Nothing will happen

MY BOUNDARY DRAWINGS

Draw what happened at each boundary type:

Divergent (pulled apart)	Convergent (crashed together)	Transform (slid sideways)

MATCH IT

Draw a line from each boundary to what it creates:

DIVERGENT	Mountains or ocean trenches
CONVERGENT	New ocean floor, plates moving apart
TRANSFORM	Earthquakes, plates grinding sideways

I LEARNED THAT

Earth's crust is broken into pieces called tectonic _____.

When plates pull apart, _____ rises up to fill the gap.

The Himalayas formed when two _____ plates crashed into each other.

LABEL THE WATER CYCLE

Draw the water cycle inside the bag outline below. Add labels for: SUN, EVAPORATION, CLOUDS, RAIN, OCEAN.

Draw here

MY PREDICTION

I think the water droplets on the sides of the bag will be:

- ○ BLUE
- ○ CLEAR
- ○ GREEN

WHAT I OBSERVED

Draw what your bag looked like after sitting in the sun:

Draw here

CIRCLE THE RIGHT ANSWER

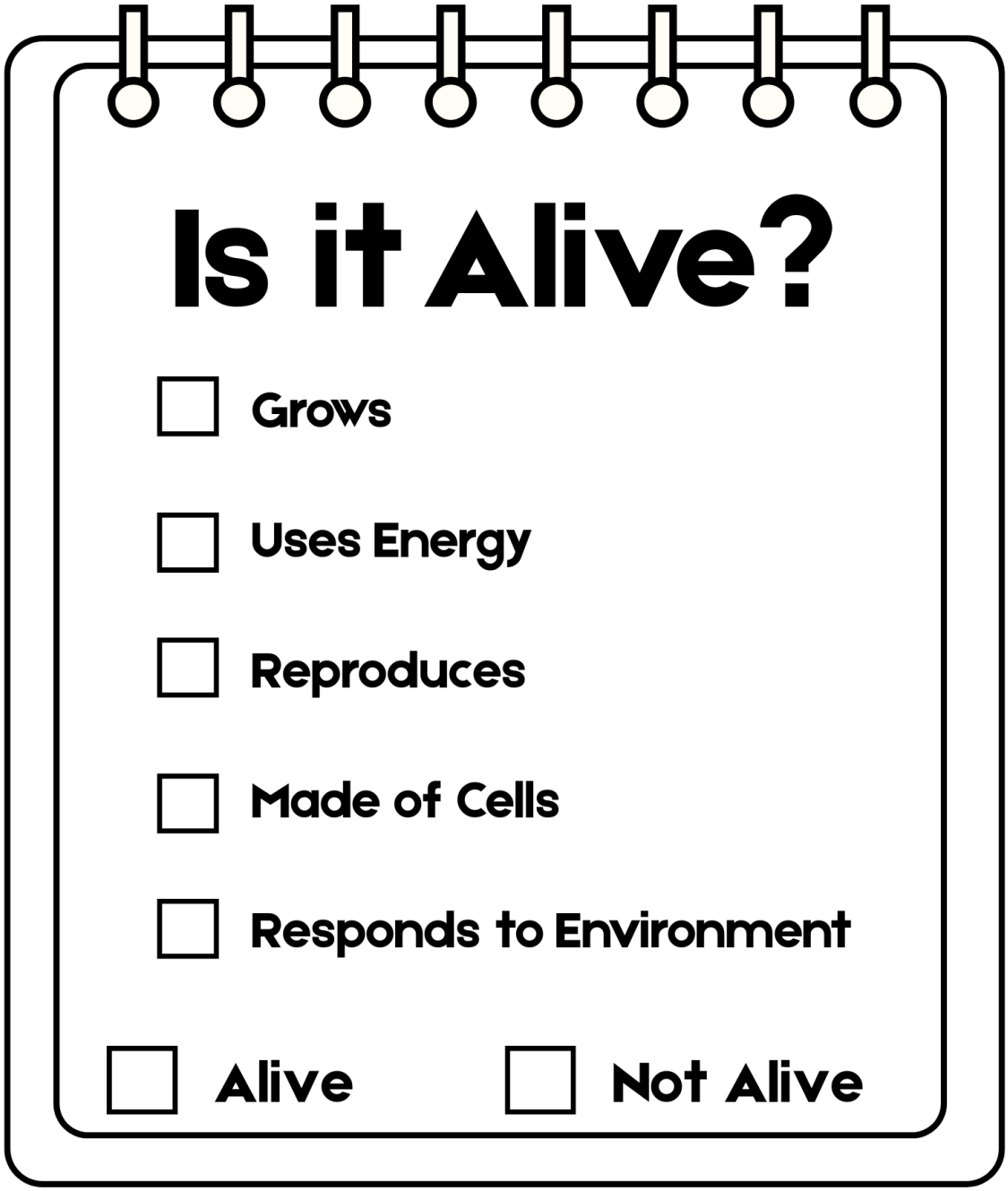
- The droplets on the side were: BLUE / CLEAR
- This is because when water evaporates, it leaves the _____ behind.

I LEARNED THAT

The water cycle has four steps: _____, condensation, _____, and collection.

Rain water is fresh because evaporation leaves _____ behind in the ocean.

THE CHECKLIST



MY TRICKIEST OBJECT

Which object was hardest to decide? Draw it and write why it was tricky.

Write or draw here

I LEARNED THAT

Living things must _____, use energy, reproduce, be made of _____,
and respond to their environment.

SAFETY FIRST

Always wash your hands before and after this activity. Wear gloves when touching the plates. Never open a plate once it has been closed. Tell a grown-up if anything looks black or green.

MY PREDICTIONS

Before we start, write or circle your answers:

The surface I think will be the DIRTIEST is: _____

The surface I think will be the CLEANEST is: _____

A surface that might SURPRISE me is: _____

MY PLATES

Draw each petri dish after you swab and seal it. Write the surface name underneath each one.

Plate 1: _____

Plate 2: _____

WHAT I SAW (after waiting 48 to 72 hours, do NOT open the plates)

Draw what each plate looks like now. Use dots or blobs to show the colonies.

Plate 1: _____

Plate 2: _____

WERE MY PREDICTIONS RIGHT?

The dirtiest surface turned out to be: _____

I was: RIGHT / WRONG / SURPRISED

The cleanest surface turned out to be: _____

I was: RIGHT / WRONG / SURPRISED

I LEARNED THAT

Each dot or blob on my plate is called a _____.

Bacteria reproduce by splitting in two, which is called _____ _____.

For billions of years, all life on Earth was single-celled like bacteria.

IS YEAST ALIVE?

Before we start, circle your prediction:

- ○ Yeast IS a living thing
- ○ Yeast is NOT a living thing
- ○ I'm not sure

WHAT I SEE

Draw what happened in your yeast cup after a few minutes.

Draw here

CHECKING THE LIST

Does yeast show each characteristic of life? Circle YES or NO:

- Uses energy (eats sugar): YES / NO
- Produces gas (a sign of metabolism): YES / NO
- Is made of cells: YES / NO
- Can reproduce: YES / NO

I LEARNED THAT

Yeast is a _____ -celled living organism.

For billions of years, all life on Earth was _____ like yeast.

Yeast shows it is alive by producing _____ bubbles when it eats sugar.

MY PREDICTION

I think the bag will:

- ○ Stay the same size
- ○ Get bigger
- ○ Get smaller
- ○ Pop immediately

DRAW THE EXPERIMENT

Draw the bag at the START (flat).

Draw the bag at the START (flat)	Draw the bag AFTER waiting (inflated)

WHAT CAUSED THE BAG TO INFLATE?

- The yeast ate the sugar and made: WATER / GAS (CO_2) / MORE YEAST
- This is similar to what _____ did billions of years ago to change our atmosphere.

I LEARNED THAT

Yeast releases _____ gas when it eats sugar.

Cyanobacteria changed Earth's atmosphere by releasing _____.

This event is called the Great _____ Event.

LABEL YOUR CELL

Draw your completed cell model. Label as many organelles as you can: Nucleus, Mitochondria, Cell Membrane, Cytoplasm, Ribosomes.

Draw here

WHAT DOES EACH PART DO?

Draw a line from each organelle to its job:

NUCLEUS	Powerhouse, makes energy
MITOCHONDRIA	Controls what enters and exits
CELL MEMBRANE	Holds the DNA instructions

CIRCLE THE RIGHT ANSWER

- A eukaryotic cell has a: NUCLEUS / NO NUCLEUS
- A plant cell has _____ that an animal cell does NOT have.
- Mitochondria were once: FREE-LIVING BACTERIA / MADE FROM SCRATCH

I LEARNED THAT

A eukaryotic cell is more _____ than a prokaryotic cell.

The nucleus holds the cell's _____.

The theory that explains how mitochondria got inside cells is called _____ theory.

TWO TYPES OF SYMMETRY

Draw an animal with BILATERAL symmetry (one line divides it into matching halves).

Draw an animal with BILATERAL symmetry (one line divides it into matching halves)	Draw an animal with RADIAL symmetry (like a starfish or jellyfish)

SORT THEM!

Circle whether each animal has bilateral or radial symmetry:

- Human: BILATERAL / RADIAL
- Jellyfish: BILATERAL / RADIAL
- Starfish: BILATERAL / RADIAL
- Dog: BILATERAL / RADIAL

WHY DOES IT MATTER?

- Animals with bilateral symmetry usually have a: FRONT AND BACK / NO FRONT OR BACK
- Having a head with eyes and a mouth helps an animal: HIDE BETTER / HUNT AND FIND FOOD

I LEARNED THAT

Bilateral symmetry means an animal has a _____ end and a _____ end.

Radial symmetry means an animal looks the same from _____ directions.

Most complex animals today have _____ symmetry.

PICK YOUR ACTIVITY

- ○ Option A: Impression Fossil (clay + object)
- ○ Option B: Mold and Cast Fossil (clay + object + plaster of Paris)

WHAT I USED

Suggested objects: a shell, a leaf, a small bone, a pinecone scale, a textured rock

My object was: _____

Does your object have hard parts or soft parts? _____

Think about a trilobite with its tough exoskeleton versus a jellyfish with nothing but soft tissue.
Which one would leave a clear impression? _____

DRAW WHAT HAPPENED

Draw your clay BEFORE pressing the object in.	**Draw your IMPRESSION after removing the object.**

IF YOU DID OPTION B

Draw your finished plaster cast:

The plaster filled in the _____ left by my object.

This is like how real cast fossils form when _____ fills in the space left by an organism.

I LEARNED THAT

Before the Cambrian Explosion, almost nothing fossilized because animals had no _____.

When Cambrian animals evolved hard parts like exoskeletons and shells, they became _____.

A fossil that shows the shape pressed into rock is called an _____ fossil.

A fossil made when minerals fill in that space is called a _____ fossil.

Most fossils are made of hard parts like _____ and _____ because soft parts usually _____.

MY PREDICTION

I think more small objects will stay in place on:

- ○ The FLAT tray
- ○ The tray WITH the reef structure
- ○ Both the same

DRAW THE RESULTS

Draw the FLAT tray. Show how many objects stayed.

Draw the FLAT tray	Draw the tray WITH the reef

WHAT I FOUND

- More objects stayed safe on the: FLAT TRAY / REEF TRAY
- The reef provided more: FOOD / HIDING PLACES AND STRUCTURE / LIGHT

I LEARNED THAT

Coral reefs are sometimes called 'underwater _____ ' because so many creatures live there.

The reef provides _____ and protection for sea creatures.

Ordovician reefs were built by _____ and sponges.

MY PREDICTION

Which do you think will survive better on dry land?

- ○ A spore (tiny, needs moisture right away)
- ○ A seed (has a tough coat and food inside)
- ○ Both the same

WHAT I OBSERVED

The spores on the DAMP towel: _____

The spores on the DRY towel: _____

The seed on the DRY towel: _____

The seed in the sealed bag: _____

THE TOUGH COAT TEST

When I tried to crush the seed with my fingers: EASY / HARD

The tough coat of a seed protects the _____ inside.

This means a seed can survive conditions that would _____ a spore.

DRAW WHAT YOU SAW

Draw the spores on the DRY towel.	**Draw the seed on the DRY towel.**

CONNECT TO THE DEVONIAN

Before seeds evolved, plants needed _____ to reproduce.

This meant all plants had to stay near _____, _____, or _____.

When seeds evolved in the late Devonian, plants could spread to _____.

A seed is similar to an egg because both carry _____ and _____.

I LEARNED THAT

Spores need _____ to germinate.

Seeds carry their own _____ supply and a _____ coat.

The first seed plants appeared during the _____ Period.

Seeds changed plant life the same way _____ changed animal life: they broke the bond with _____ and opened up the whole land.

THINK ABOUT IT

If seeds had never evolved, what do you think the land would look like today?

MY PREDICTION

I think a candle in a small jar will go out:

- ○ Faster than a candle in a large jar
- ○ Slower than a candle in a large jar
- ○ At the same time

DRAW THE EXPERIMENT

Draw the SMALL jar with the candle. Show what happened.

Draw the SMALL jar with the candle	Draw the LARGE jar with the candle

WHAT I FOUND

- The candle in the SMALL jar went out: FASTER / SLOWER
- This is because the small jar had: MORE OXYGEN / LESS OXYGEN than the large jar

CONNECT TO THE CARBONIFEROUS

During the Carboniferous period, oxygen levels were about _____% (today they are 21%).

Higher oxygen meant insects could grow much _____.

One giant Carboniferous insect was _____, which had wings up to 70 cm wide.

MY PREDICTION

I think the creature WITH a pipe cleaner spine will:

- ○ Hold more weight
- ○ Hold less weight
- ○ Hold the same amount

DRAW YOUR CREATURES

Draw your creature WITHOUT a spine. Show what happened when you added weight.

Draw your creature WITHOUT a spine	Draw your creature WITH a spine

RESULTS

The creature without a spine could support _____ objects before collapsing.

The creature with a spine could support _____ objects before collapsing.

The spine (backbone) helped by providing _____ support.

I LEARNED THAT

Animals with a backbone are called _____.

Animals without a backbone are called _____.

During the Permian, mammal-like reptiles called _____ had backbones and ruled the land.

MY PREDICTION

I think when I mix baking soda and vinegar, the balloon will:

- ○ Stay flat
- ○ Get a little bigger
- ○ Inflate a lot
- ○ Pop

DRAW THE EXPERIMENT

Draw the bottle and balloon BEFORE mixing.

Draw the bottle and balloon BEFORE mixing	Draw the bottle and balloon AFTER mixing

WHAT HAPPENED

- The balloon inflated because: HEAT / GAS (CO2) / AIR was produced
- During the Great Dying, volcanoes released huge amounts of: OXYGEN / CARBON DIOXIDE / WATER VAPOR

I LEARNED THAT

CO2 stands for _____ _____.

When CO2 builds up in the atmosphere, it makes Earth _____.

During the Great Dying, about _____% of all species on Earth went extinct.

MY PREDICTION

I think sprawling like a lizard will feel:

- ○ Easier and faster
- ○ Harder and more tiring
- ○ Exactly the same as walking upright

DRAW THE TWO WALKING STYLES

Draw a REPTILE with legs out to the sides (sprawling posture).

Draw a REPTILE with legs out to the sides (sprawling posture)	**Draw a DINOSAUR with legs straight under its body (upright posture)**

WHAT I NOTICED

- Crawling like a reptile felt: EASY / TIRING for my arms and legs
- Walking upright felt: MORE EFFICIENT / LESS EFFICIENT than crawling
- Dinosaurs could move: FASTER AND FARTHER / SLOWER than sprawling reptiles

I LEARNED THAT

Early dinosaurs stood with their legs _____ their bodies.

This allowed them to use _____ energy when they moved.

The Triassic Period came right after the _____ extinction.

HOW BIG WERE THEY?

The dinosaur we measured was _____ meters long.

That is about the same as _____ cars parked end to end.

That is about _____ times as long as I am tall.

DRAW IT TO SCALE

Draw yourself standing next to the dinosaur. Try to show the size difference honestly!

Draw here

COMPARE TO TODAY

The largest land animal alive today is the _____.

It is about _____ meters long, compared to _____ meters for our dinosaur.

The Jurassic world was _____ and _____, which helped giant dinosaurs grow.

I LEARNED THAT

The Jurassic Period lasted from about _____ to _____ million years ago.

Sauropods were the largest _____ animals that ever lived.

Feathers first appeared on some _____ during the Jurassic.

BEFORE WE CUT

I predict the fruit with the most seeds will be:

- ○ Apple
- ○ Orange
- ○ Tomato
- ○ Bell pepper

DRAW WHAT YOU FOUND

Draw your first fruit, cut open. Show the seeds inside and label them.

Draw your first fruit, cut open	Draw your second fruit, cut open

SEED COUNT TABLE

Count the seeds in each fruit:

Fruit	Number of Seeds	How Seeds Might Spread
Fruit 1:		
Fruit 2:		
Fruit 3:		

I LEARNED THAT

Every seed started as a _____ that was pollinated.

Fruits protect the _____ and help spread them to new places.

Flowering plants first appeared during the _____ Period.

MY PREDICTION

I think a rock dropped from higher up will make a crater that is:

- ○ Smaller
- ○ Larger
- ○ The same size

DRAW YOUR CRATERS

Draw the crater made by a rock dropped from LOW height.

Draw the crater made by a rock dropped from LOW height	Draw the crater made by a rock dropped from HIGH height

WHAT I NOTICED

The higher I dropped the rock, the _____ the crater.

The crater threw material _____ in all directions.

This is similar to what happened when an asteroid hit Earth _____ million years ago.

WHO SURVIVED?

Circle the animals that survived the K-Pg extinction:

- Large dinosaurs
- Small mammals
- Birds
- Crocodiles
- Tyrannosaurs

THE ANCESTOR

THE ANCESTOR
Small, shrew-like early Paleocene mammal
Size of a mouse | Warm-blooded
Flexible diet | Can burrow and climb

When the dinosaurs disappeared, this small mammal's descendants spread into six empty ecological niches. Fill in what body changes were needed for each one.

← THE BURROWER *Underground | roots, worms, soil insects*	**THE SWIMMER →** *Water | fish or aquatic plants*
← THE GLIDER *Trees | air travel | insects or fruit*	**THE LARGE GRAZER →** *Open plains | grasses and low plants*
← THE INSECT EATER *Specialized insect hunter | possibly nocturnal*	**THE FRUIT EATER →** *Forest canopy | fruit, leaves, grasping hands*

NICHE 1: THE BURROWER

THE BURROWER — *Lives underground, eats roots, worms, and soil insects*

To become a burrower, this mammal would need:

_____

Draw it here:

NICHE 2: THE SWIMMER

THE SWIMMER — *Lives in or near water, eats fish or aquatic plants*

To become a swimmer, this mammal would need:

_____

Draw it here:

NICHE 3: THE GLIDER

THE GLIDER — *Lives in trees, moves through the air, eats insects or fruit*

To become a glider, this mammal would need:

_____

Draw it here:

NICHE 4: THE LARGE GRAZER

THE LARGE GRAZER — *Lives on open plains, eats grasses and low plants*

To become a large grazer, this mammal would need:

_____

Draw it here:

NICHE 5: THE INSECT EATER

THE INSECT EATER — *Highly specialized for catching insects, possibly nocturnal*

To become an insect eater, this mammal would need:

_____

Draw it here:

NICHE 6: THE FRUIT EATER

THE FRUIT EATER — *Lives in forest canopy, eats fruit and leaves, needs grasping hands*

To become a fruit eater, this mammal would need:

_____

Draw it here:

I LEARNED THAT

When the dinosaurs disappeared, they left behind empty _____.

Mammals were able to fill those niches because they were small and _____.

This rapid spread into new roles is called adaptive _____.

The three types of mammals are _____, _____, and _____.

WHICH BEAK FOR WHICH FOOD?

Draw a line from each beak tool to the food it works best with:

EYEDROPPER	Nuts and hard seeds
CHOPSTICKS	Nectar from flowers
NUTCRACKER	Catching small insects
TWEEZERS	Pulling worms from mud

DRAW YOUR FAVORITE BEAK

Draw a bird with the beak tool you found most effective. Label what it eats and why the beak shape helps.

Draw here

RESULTS

The beak tool that worked best for me was _____.

It worked well because _____.

The hardest food to get was _____.

I LEARNED THAT

Birds evolved from _____ dinosaurs.

Different beak shapes help birds eat different _____.

This change in beak shape over time is caused by _____ selection.

MY PREDICTION

I think the hand in the blubber glove will feel:

- ○ Colder than the bare hand
- ○ Warmer than the bare hand
- ○ Exactly the same

DRAW THE EXPERIMENT

Draw the BARE hand in the ice water. Show what it felt like.

Draw the BARE hand in the ice water	Draw the BLUBBER glove hand in the ice water

WHAT I FOUND

- The blubber glove felt: WARMER / COLDER / THE SAME as the bare hand
- Blubber works by: HEATING THE BODY UP / STOPPING COLD FROM GETTING IN / MAKING MORE BLOOD

I LEARNED THAT

Blubber is a thick layer of _____ under the skin.

Ice Age mammals like mammoths had thick _____ and fur to stay warm.

When the Ice Age ended and temperatures rose, many _____ went extinct.

MY PREDICTION

I think the ice block will:

- ○ Push rocks easily
- ○ Not move rocks at all
- ○ Melt without doing anything

DRAW THE BEFORE AND AFTER

Draw the tray BEFORE the glacier moved. Show where the rocks and sand are.

Draw the tray BEFORE the glacier moved	Draw the tray AFTER the glacier moved

WHAT THE GLACIER DID

- The ice pushed rocks: FORWARD / SIDEWAYS / BACKWARD
- The glacier carved: A FLAT SURFACE / A VALLEY / NOTHING
- When the ice melted, it left behind: NOTHING / PILES OF SEDIMENT (moraine)

I LEARNED THAT

A glacier is a slow-moving mass of _____.

Glaciers carved features like the Great _____ of North America.

During the Ice Ages, glaciers covered about _____% of Earth's land surface.

MY PREDICTION

I think picking up objects WITHOUT using my thumbs will be:

- ○ Just as easy
- ○ A little harder
- ○ Much harder or almost impossible

DRAW THE CHALLENGE

Draw your hand WITH thumbs picking up small objects.

Draw your hand WITH thumbs picking up small objects	Draw your hand WITHOUT thumbs trying to pick up small objects

MY RESULTS

With thumbs I could pick up _____ objects in one minute.

Without thumbs I could pick up _____ objects in one minute.

Using thumbs was _____ times faster/easier.

I LEARNED THAT

The ability to touch your thumb to your fingers is called having an _____ thumb.

Primates share this trait, which helps with _____ and _____.

Humans and chimpanzees share a common ancestor from about _____ million years ago.

MY PREDICTION

Which do you think will be faster and easier?

- ○ Walking upright (bipedal)
- ○ Moving on all fours (quadrupedal)
- ○ Both the same

I think carrying the most objects will be easier when I am: UPRIGHT / ON ALL FOURS

MY RESULTS

Round	Upright: Time	All Fours: Time
Round 1: Baseline Walk		
Round 2: Carrying Objects		
Round 3: Sorting While Moving		

ROUND 2: LOAD CARRY

Walking UPRIGHT, I could carry _____ objects per trip.

On ALL FOURS, I could carry _____ objects per trip.

The difference was _____ objects per trip.

DRAW THE DIFFERENCE

Draw yourself carrying objects UPRIGHT.	Draw yourself trying to carry objects ON ALL FOURS.

ROUND 3: MULTITASKING

When I walked UPRIGHT and sorted at the same time: EASY / HARD

When I tried to sort on ALL FOURS: EASY / HARD / IMPOSSIBLE

Being upright let me use my _____ to sort while my _____ carried me forward.

CONNECT IT

Scientists found that humans use about _____% LESS energy walking upright than chimps use knuckle-walking.

That saved energy could go toward growing a bigger _____.

Bipedalism freed our hands for _____, _____, and _____.

Early hominins like _____ walked upright about 4 million years ago.

I LEARNED THAT

Bipedalism means walking on _____ legs.

Walking upright uses LESS / MORE energy than walking on all fours.

Saving energy meant early humans had more calories available for their _____.

Bipedalism, big brains, dexterous hands, and _____ are all things that make humans unique.

THINK ABOUT IT

If walking upright saves energy, what could early hominins do with that extra energy that knuckle-walkers could not?

BEFORE I START

I think making a sharp edge on soap will be:

- ○ Very easy
- ○ Medium difficulty
- ○ Very hard and takes a lot of patience

DRAW MY TOOL

Draw your finished soap tool. Label the sharp edge and explain what it could be used for in the real world.

Draw here

REFLECTION

The hardest part of shaping my tool was _____.

Early humans used stone tools for _____, _____, and _____.

Making a tool requires _____ and _____.

I LEARNED THAT

The earliest stone tools are called _____ tools.

Homo _____ was the first hominin known to use fire.

Cooked food releases more _____ and may have helped our brains grow.

TRACE THE ROUTES

Using the world map outline, draw arrows showing how Homo sapiens migrated out of Africa. Start in Africa and show routes to Europe, Asia, Australia, and the Americas.

Draw here

HOW DID THEY GET THERE?

How were humans able to reach Australia and the Americas?

- ○ They swam across the ocean
- ○ They used land bridges and boats
- ○ They were already there
- ○ They flew

LABEL THE MAP

Humans first appeared in _____ about 300,000 years ago.

They reached Europe and Asia about _____ thousand years ago.

They reached the Americas about _____ thousand years ago.

They were able to spread because they could adapt to many different _____.

I LEARNED THAT

The movement of people from one place to another is called _____.

During the Ice Age, lower _____ levels exposed land bridges.

By about 10,000 years ago, Homo sapiens lived on every continent except _____.

MY CAVE ART

Create your own cave art! Use natural-looking colors. Draw animals, handprints, or symbols. Think about what story you want to tell someone who finds this art thousands of years from now.

Draw here

WHAT DID YOU DRAW?

I drew _____ because _____.

Early humans drew animals like _____, _____, and _____.

Cave paintings were found in places like Lascaux in _____ and Altamira in _____.

YOUR HANDPRINT

Trace your hand here, just like early humans did on cave walls. Then write what you think a handprint meant to the people who made it.

Draw here

I LEARNED THAT

Cave paintings are about _____ thousand years old.

Early humans used _____ and _____ to make paint.

Before writing was invented, art was one way people could _____ stories.

The period before written history is called _____.