



MarcoPolo Learning Alignment with TEKS Science

Grade 1

Science, Grade 1

Our Approach: *MarcoPolo Learning engages children in the inquiry process through scientific discovery using real-world footage and hands-on activities. Science topics are introduced to foster a child's curiosity, critical thinking skills, and creativity, encouraging them to observe, wonder, question, test, and design like a scientist.*

Skills: Scientific and Engineering Practices**S.1.1 Scientific and Engineering Practices**

The student asks questions, identifies problems, and plans and safely conducts classroom, laboratory, and field investigations to answer questions, explain phenomena, or design solutions using appropriate tools and models. The student is expected to:

S.1.1.A. Ask questions and define problems based on observations or information from text, phenomena, models, or investigations.

MarcoPolo Learning models scientific and engineering practices through **digital content, inquiry-led discussions, and hands-on activities**. The Polo Characters ask questions and investigate real-world phenomena such as the movement of glaciers, the temperature-regulated robin's nest, or a solar eclipse. Scientific tools are explored as children learn about various STEM careers, such as a meteorologist, various medical professionals, or an inventor.

Asking Questions:

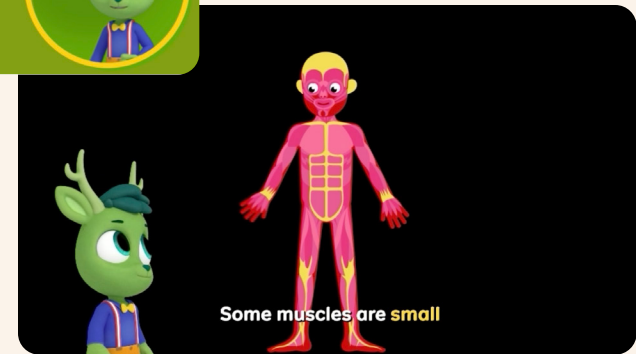
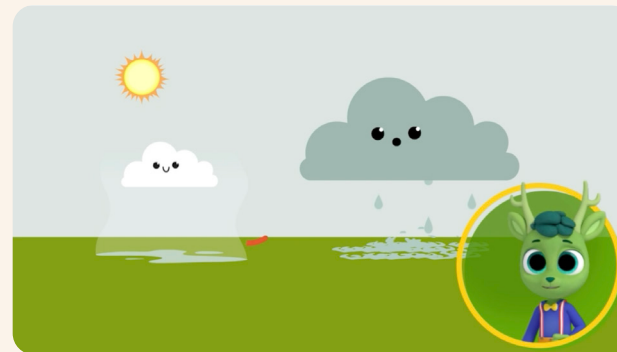
American Robin
 Baby Sea Turtle
 Beaver
 Centipede
 Clouds
 Earth
 Elk
 Firefly
 Glacier
 Grizzly Bear
 Gray Wolf
 Groundhog
 Hurricane
 Insect Bodies
 Insect Life Cycle
 Ladybug
 Leaf-cutter ants

TEKS Science, Grade 1	MarcoPolo Learning Alignment
<i>S.1.1.A continued...</i>	Lightning Lunar Eclipse Migration Meteorologist Moon Tides Moose Ocean Floor Owl Pine Forest Phytoplankton Pollination Porcupine Raccoon Rainbow Rain Skunk Snow Solar Eclipse Stick Insect Tears The Heart The Moon The Water Cycle Thunder Tornado Wind White-tailed Deer Woodpecker

S.1.1.A., continued...

*S.1.1.A continued...***Conducting Investigations:**

Create
Curiosity
Dinosaur Fossils
Hiccups
Hybrid Fruits
Inside a Piano
Popsicle
Plants on Your Plate
Rainbow
Taste
The Eye
The Heart
Trampoline
Unusual Inventions
Woodpecker



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S.1.1.A continued...

MarcoPolo Learning Alignment

Using Tools and Models:

Broken Bones

Bulldozer

Elevator

Entomologist

Excavator

Flush Toilets

Hearing Aid

Helicopter

Hovercraft

Inspired by Nature

Meteorologist

Mobility Inventions

Panama Canal

Rocket Ship

Submersible

Super Fiber

Telephone

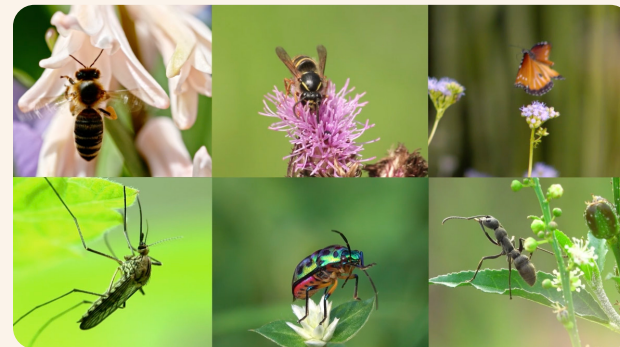
The London Eye

Trampoline

Veterinarian

Weather Tools

X-Ray



TEKS Science, Grade 1	MarcoPolo Learning Alignment
S.1.1.B. Use scientific practices to plan and conduct simple descriptive investigations and use engineering practices to design solutions to problems.	American Robin Beaver Chipmunk Create Curiosity Elevator Earthworm Entomologist Firefly Fingerprints Flush Toilets Flexible Thinking Frustration Hail Hearing Aid How Sound Travels Hurricane Insect Eggs Insect Flight Insect Food Chain Insect Life Cycle Insects Inside a Piano Inspired by Nature Migration Maple Tree Meteorologist Music Box Owl Panama Canal Pillbug Pine Forest Pollination

TEKS Science, Grade 1

S.1.1.B. continued...

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Rainbow
Rain
Smell
Solar Eclipse
Super Fiber
Taste
Termite Mounds
The Brain
The Ear
The Eye
The Leaning Tower of Pisa
The Moon
The Water Cycle
Tornado
Inventions
Wind
Weaver
X-ray

MarcoPolo For Educators

Meteorologist

Activity option 1

EXPLORING WEATHER TOOLS: RAIN GAUGES

In this activity, children will create their own rain gauge to measure rainfall. First, support children to create their own rain gauges. Then, children will decide where to put their rain gauges. Afterward, children should check the water level in their rain gauges regularly, and compare the water levels in each other's rain gauges (particularly if children put their rain gauges in different spots).

Materials:

- Empty two-liter plastic bottles
- Scissors
- Tape
- Ruler
- Permanent marker

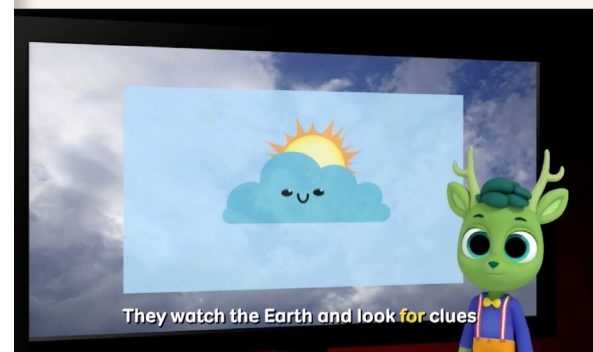
Directions:

1. Use scissors to cut the top of the bottle just below where the bottle begins to narrow.
2. Turn the top of the bottle upside down to make a funnel. Line up the cut edges of the bottle and tape them together, so that the top of the bottle (now inverted) is firmly in place.
3. Note children might need to revisit their designs if their bottle keeps falling over. Encourage engineering new designs.

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S.1.1.C. Identify, describe, and demonstrate safe practices during classroom and field investigations as outlined in Texas Education Agency-approved safety standards.

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The Polo Characters demonstrate safe practices while exploring the world, showing children how to **engage** with their **surroundings responsibly**. Whether it's wearing a helmet and seatbelt in a Formula 1 Car or using solar glasses during an eclipse, safety precautions are highlighted throughout their adventures. Children are also introduced to scientific tools like hand lenses and binoculars, encouraging **respectful observation of nature**.

Visual models, such as the insect life cycle or food chain, and the process of making foods like popcorn, help children grasp complex concepts and understand the world around them.



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S.1.1.D. Use tools, including hand lenses, goggles, trays, cups, bowls, sieves or sifters, notebooks, terrariums, aquariums, samples (rocks, sand, soil, loam, gravel, clay, seeds, and plants), windsock, demonstration thermometer, rain gauge, straws, ribbons, non-standard measuring items, blocks or cubes, tuning fork, various flashlights, small paper cups, items that roll, noise makers, hot plate, opaque objects, transparent objects, foil pie pans, foil muffin cups, wax paper, Sun-Moon-Earth model, and plant life cycle model to observe, measure, test, and compare.

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The MarcoPolo Learning Educator Guides offer valuable support for hands-on learning, encouraging **observation** and **outdoor exploration**. Through engaging activities like observing earthworms in their natural habitat or sorting and classifying local leaves, children are guided to explore the world around them. These activities not only deepen their understanding of nature but also promote active learning and discovery, helping children connect with their surroundings in meaningful ways.



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Leaf-Cutter Ants

Activity option 1

CLASSROOM COMPOST BIN: OBSERVING DECOMPOSITION & FUNGUS

In this activity, children will observe how plants decompose and provide sustenance for living things like earthworms and fungus.

Before this activity, the teacher prepares the following materials:

- A large glass aquarium with a wire top (to provide air circulation to the compost).
- An open space where children can observe the happenings inside the aquarium. The compost should remain at room temperature, but not be in direct sunlight.
- Prepare the layers of compost inside the aquarium. Alternate layers of the materials as follows: 1 inch (2.5 cm) of soil, 2 (5 cm) inches of organic waste (vegetables, fruits, breads, leaves, grasses), a sprinkle of organic fertilizer and water.
- Add earthworms to the compost bin.
- Create a "fungus corner" for children to observe fungus growing: put one larger piece of food waste underneath the first layer of soil and mist this area with water once every few days to keep it moist. This area should not be disturbed to allow the fungus better conditions to grow.

Leaf-cutter ants use leaves to create an ideal environment for fungus to grow. Fungus grows in damp, nutrient-rich places. Nutrient-rich soils are the perfect place for humans to grow crops to eat too! In this activity, children will observe how plant parts decompose over time and provide sustenance to other living things, in this case, earthworms. Support children to observe the compost bin, earthworms, and the growing fungus over time. Children can record their observations by making observational drawings, taking photographs, or recording videos.

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S.1.1.E Collect observations and measurements as evidence.

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Compost
Earth
Earthworm
Insect Food Chain
Insect Life Cycle
Lunar Eclipse
Meteorologist
Pine Forest
Plants on Your Plate
Pollination
Rain
Solar Eclipse
The Moon
The Water Cycle
Weather Tools
Wind



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S.1.1.F. Record and organize data using pictures, numbers, words, symbols, and simple graphs.

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The Educator Guides that accompany each Video Lesson offer hands-on activities to reinforce learning. Graphing activities encourage educators and children to **collect data**, make **comparisons**, and **organize information**.

Whether graphing the plant parts in a child's lunch or exploring outer space to graph planet features, these activities help children visualize and interpret data using pictures, numbers, words, symbols, and simple graphs.

The following **Video Lessons** include a graphing activity in the **Educator Guide**:

Baby Pets

Bread From Around the World

Jupiter

Ostrich

Plants on Your Plate

Taste

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Jupiter

Activity

THE JUPITER AWARDS

Jupiter wins a lot of awards! It is the biggest planet in our solar system, has the biggest storm, and the biggest moon. In this activity, children will draw a picture that depicts one of these features. Post pictures and/or provide nonfiction books that have pictures of the planet Jupiter, the storm, and the moon Ganymede. Children should look closely at the pictures, as the teacher guides them to describe what they see. Ask children which award they will be presenting to Jupiter: the biggest planet award, the award for the biggest storm, or the biggest moon award. Support children to choose accurate colors while drawing. The teacher can choose to label the child's drawing or support the child to label it themselves.

Maths connection

After children have shared their drawings, the teacher can create a graph with three categories, one for each type of award. Then, children can count how many of each award was created, and which category has the most and least amount (see example of graph below).

Biggest Planet Award	Biggest Storm Award	Biggest Moon Award
		

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Ostrich

Activity

RECORD-BREAKING BIRD AWARDS

The ostrich is certainly a record-breaking bird! Using the trophy coloring page (template provided), children will give an award to the ostrich. Children have the option to create a "biggest bird" award, "biggest egg" award, or "fastest two-legged animal" award. Once children choose which award they would like to give to an ostrich (if they could), children draw a picture on the trophy (template provided) to depict their chosen award. Then, the class holds an Ostrich Awards Ceremony. During the award ceremony, children share their pictures and explain how their picture shows the chosen award. After everyone has shared, children count how many of each award there are.

Suggestion:

Create a graph to depict the amount of each award (suggested chart below).

Biggest Bird award	Biggest Egg award	Fastest Two-legged Animal award

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S.1.1.G. Develop and use models to represent phenomena, objects, and processes or design a prototype for a solution to a problem.	Beaver Curiosity Flexible Thinking Flush Toilets Frustration Inspired by Nature Insect Food Chain Insect Life Cycle Inventions Mobility Inventions Panama Canal The Water Cycle Weaver

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S.1.2. Scientific and engineering practices.

The student analyzes and interprets data to derive meaning, identify features and patterns, and discover relationships or correlations to develop evidence-based arguments or evaluate designs. The student is expected to:

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MarcoPolo Learning Video Lessons and Educator Guides are designed to support children in developing **critical thinking skills** in both scientific and engineering practices. The discussion guides included with each Video Lesson encourage **inquiry-led conversations**, allowing children to engage with **real-world concepts** using developmentally appropriate practices. Through guided discussions, children identify patterns, discover relationships, and build evidence-based arguments, enhancing their ability to draw meaningful conclusions.

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Basilisk Lizard

Activity

FLOAT OR SINK?

Set up a float or sink experiment at the water table. Give children a variety of materials of varying weights and textures, and allow them to test them in the water, noting if they float or sink. Sort the objects that sank and floated into two groups.

Questions:

- What do you notice about each group?
- Which objects floated? Why do you think they stayed on top of the water?
- Which objects sank? Why?
- Did any object float for a while and then sink? Why do you think that happened?
- What is special about the basilisk lizard, that allows it to stay on top of the water?

MarcoPolo For Educators

Beaver

Discussion guide

1 Introduction

Have a discussion with children about human homes and animal homes. Show children a photograph of a nest built by a familiar bird. If possible, show an actual bird's nest.

Questions:

- Who do you think built your home?
- What do you think birds use to build nests?
- Beavers live in water; what do you think they use to build their homes?

2 Video discussion

Watch the video lesson with the children. Pause to discuss the following questions:

- What do you notice about the beaver dams in the water?
- How are our human teeth different from beaver's teeth?
- How does building a lodge underwater protect beavers from predators?

3 Culminating discussion

- How do beavers get the sticks and mud they need to build their dams and lodges?
- How does building a dam help the beavers build their lodge?

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TEKS Science, Grade 1	MarcoPolo Learning Alignment
S.1.2.A. Identify basic advantages and limitations of models such as their size, properties, and materials.	Basilisk Lizard Bones Coral Reef Constellations Earth Hurricane Layers of the Rainforest Lunar Eclipse Lungs Moon Tides Rocket Ship Seasons Smell Solar Eclipse Taste Teeth The Brain The Digestive System The Ear The Eye The Heart The Immune System The Milky Way The Moon The Nervous System The Water Cycle Weather Tools

TEKS Science, Grade 1	MarcoPolo Learning Alignment
S.1.2.B. Analyze data by identifying significant features and patterns.	Baby Pets Bread From Around the World Jupiter Ostrich Plants on Your Plate Taste Weather Tools
S.1.2.C. Use mathematical concepts to compare two objects with common attributes.	Black Panther Breeds of Cats Clouds Dog Breeds Fish Insects Musical Instruments Pillbug Planets With Rings Types of Food  Some fish need salt water.  Some fish need fresh water.

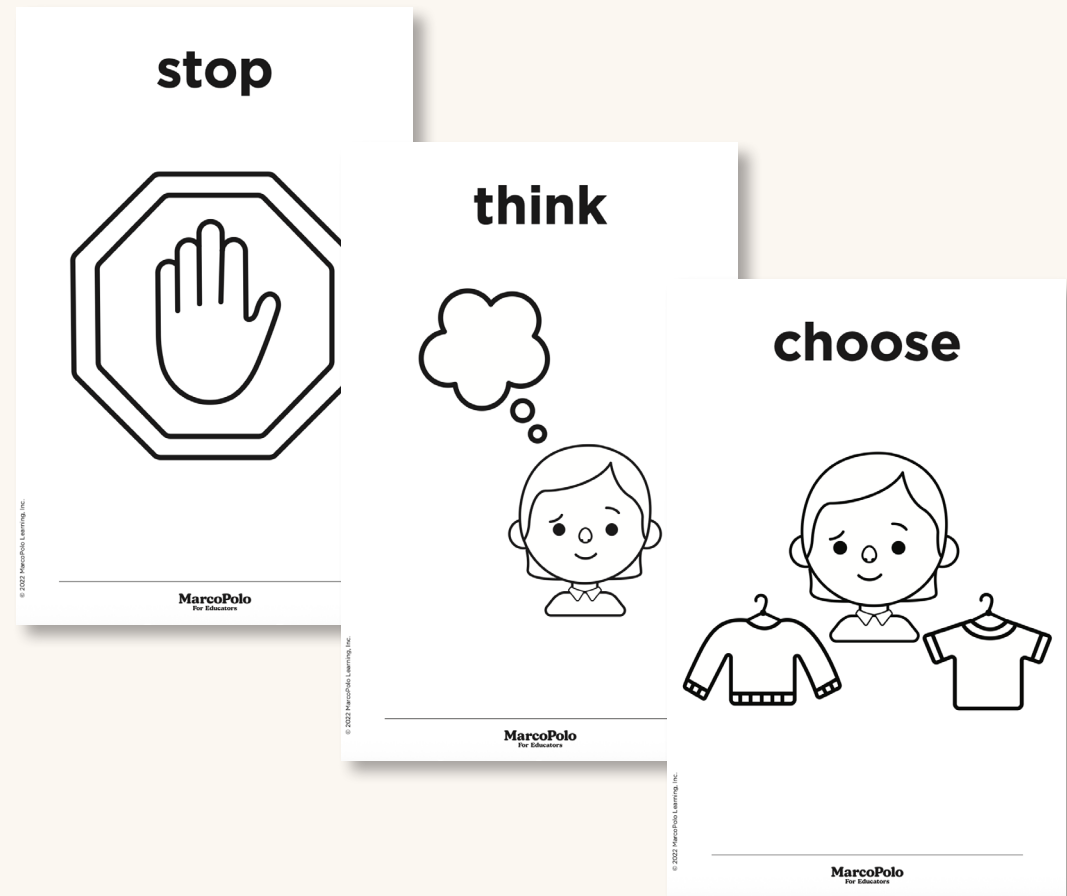
TEKS Science, Grade 1	MarcoPolo Learning Alignment
S.1.2.D. Evaluate a design or object using criteria to determine if it works as intended.	Abacus Braille Bulldozer Electric Car Excavator Food Storage Formula 1 Car Hearing Aid Helicopter Hovercraft Hot Air Balloon Inspired by Nature Inventions Inside a Piano Maglev Train Mobility Inventions Music Box Panama Canal Plastic Rocket Ship Snowboarding Submersible Super Fiber Telephone Trampoline Tuk-Tuk The International Space Station The London Eye Weightlifting Weather Tools X-ray

S.1.3. Scientific and engineering practices.

The student develops evidence-based explanations and communicates findings, conclusions, and proposed solutions. The student is expected to:

MarcoPolo Learning promotes meaningful teacher-child interactions through high-quality Video Lessons, discussions, hands-on activities, and visual supports.

Each Video Lesson is paired with an Educator Guide that includes **open-ended questions**, encouraging children to discuss their observations and share their ideas, fostering **meaningful classroom discourse**. Activity suggestions include using manipulatives and common classroom materials to express ideas and understanding. **Printables** and **Photocards** provide visual aid to support **vocabulary building**, **meaningful conversations**, and **concept development**.



TEKS Science, Grade 1	MarcoPolo Learning Alignment
S.1.3.A. Develop explanations and propose solutions supported by data and models.	Baby Pets Bread From Around the World Chocolate Factory Insect Food Chain Insect Life Cycle Jupiter Ostrich Plants on Your Plate Popcorn Taste Weather Tools
S.1.3.B. Communicate explanations and solutions individually and collaboratively in a variety of settings and formats.	Flexible Thinking Inventions On My Own Takahē Using Your Words MarcoPolo For Educators Flexible Thinking Discussion guide 1 Introduction The teacher tries to write something on chart paper using a dried up marker. The marker doesn't work and the teacher models feeling frustrated. After the children help the teacher come up with a solution (use a different color marker), the teacher writes the word "flexible" on the paper. Questions: • What should I do? This marker is all dried up! • How can I solve this problem? I really wanted to use this color to write. • I had to be flexible and change the color, because this color was dry. What do you think the word "flexible" means? 2 Video discussion Watch the video lesson with the children. Pause to discuss the following questions: • Why does Lily think that the dodgeball game is ruined? • Lily thought about a few alternatives before coming up with the new plan. How could that be helpful when you need to change a plan? 3 Culminating discussion Can you think of a time when you had to use flexible thinking and change your plan? What happened? © 2023 MarcoPolo Learning, Inc. MarcoPolo Learning 2

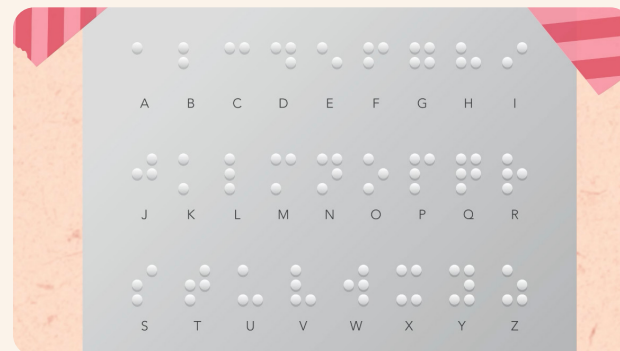
TEKS Science, Grade 1	MarcoPolo Learning Alignment
S.1.3.C. Listen actively to others' explanations to identify important evidence and engage respectfully in scientific discussion.	Curiosity Flexible Thinking Using Your Words Electric Car Takahē
S.1.4. Scientific and engineering practices. <i>The student knows the contributions of scientists and recognizes the importance of scientific research and innovation on society. The student is expected to:</i>	MarcoPolo Learning video content not only encourages children to solve problems but also models strategies used by scientists, helping children to think and approach challenges like real-world scientists. Through engaging lessons, children are introduced to the impact of STEM careers such as entomology, paleontology, medicine, space and weather science, and nutrition, recognizing the importance of scientific research and innovation. Each Educator Guide provides hands-on, inquiry-based activities that promote higher-order thinking and communication skills, fostering a deeper understanding of how scientific contributions shape the world. These adaptable activities support various skill levels, ensuring an engaging learning experience for all children.

TEKS Science, Grade 1

S.1.4.A. Explain how science or an innovation can help others.

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Braille
Broken Bones
Curiosity
Empathy
Elevator
Entomologist
Flexible Thinking
Flush Toilets
Food Storage
Dried Fruit
Hearing Aid
Helicopter
Hovercraft
Hurricane
Inspired by Nature
Inventions
Kimchi
Meteorologist
Mobility Inventions
Panama Canal
Super Fiber
Telephone



TEKS Science, Grade 1

S.1.4.A.continued...

MarcoPolo Learning Alignment

The International Space Station
Weather Tools
Wearing Glasses
X-ray



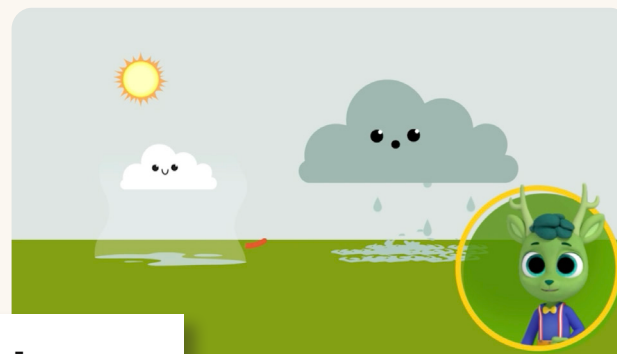
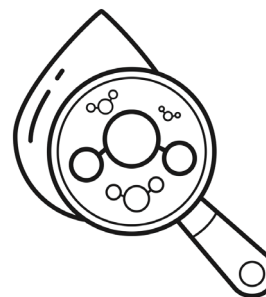
S.1.4.B. Identify scientists and engineers such as Isaac Newton, Mae Jemison, and Ynes Mexia and explore what different scientists and engineers do.

Braille
Elevator
Entomologist
Flush Toilets
Hearing Aid
Inspired by Nature
Inventions
Meteorologist
Mobility Inventions
Panama Canal
Rocket Ship
Super Fiber
Telephone
The International Space Station
Weather Tools
Wearing Glasses
X-ray

Skills: Recurring Themes and Concepts**S.1.5. Recurring themes and concepts**

The student uses recurring themes and concepts to make connections across disciplines. The student is expected to:

Each Video Lesson incorporates **cross-curricular connections** using real-world examples. For instance, the MarcoPolo Learning Video Lesson on “The Water Cycle” introduces content vocabulary and concepts from both math and science—such as spatial awareness, observation, sequencing, and Earth science—reinforcing concepts across multiple disciplines.

**rain**MarcoPolo
For Educators**water**MarcoPolo
For Educators**clouds**MarcoPolo
For Educators

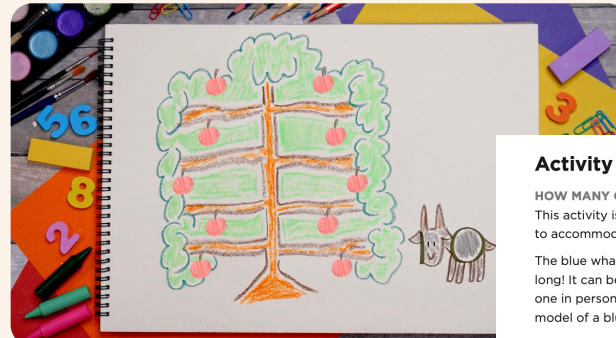
TEKS Science, Grade 1	MarcoPolo Learning Alignment
S.1.5.A. Identify and use patterns to describe phenomena or design solutions.	Blue Morpho Butterfly Harp Seal Ladybug Maple Tree Moon Tides Seasons 
S.1.5.B. Investigate and predict cause-and-effect relationships in science.	Allergies Earthworm Glacier Lightning Moon Tides Pine Forest Pollination Popsicle Rainbow Seasons Tapir The Dead Sea Thunder Tornado Wind Wombat

TEKS Science, Grade 1

S.1.5.C. Describe the properties of objects in terms of relative size (scale) and relative quantity.

MarcoPolo Learning Alignment

Blue Whale
Hail
Number Farm Series



Activity option 1

HOW MANY CHILDREN DOES IT TAKE TO MAKE A BLUE WHALE?

This activity is best conducted in a large, long space at least 30 meters long to accommodate the size of the blue whale model.

The blue whale can be as long as three school buses, which is about 25 meters long! It can be hard to imagine just how big a blue whale can be without seeing one in person. In this activity, children will use their bodies to create a human model of a blue whale.

Instructions:

- Revisit a screenshot of what a blue whale looked like in the video. Then, discuss how they think they could measure the blue whale. Inform the children that they can use their own bodies to measure the blue whale. Show the children how your wingspan is relatively equal to your height. Explain how they will use their wingspans to determine how long a blue whale can be.
- Make estimations about how many children will need to stand in a line with arms outstretched to equal the size of the blue whale.

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S.1.5.D. Examine the parts of a whole to define or model a system.

Bones
Coral Reef
Earth
Insect Bodies
Insect Eggs
Insect Food Chain
Insect Life Cycle
Inside a Piano
Larvae
Layers of the Rainforest
Lungs
Melody
Muscles

TEKS Science, Grade 1	MarcoPolo Learning Alignment
S.1.5.D. <i>continued...</i>	Notes Up and Down Pine Forest Rock Band The Brain The Digestive System The Heart The Immune System The International Space Station The Milky Way The Nervous System The Water Cycle Types of Food
S.1.5.E. Identify forms of energy and properties of matter.	Aurora Borealis Black Hole Electric Car Firefly Glacier Hail Helicopter Humidity Hot Air Balloon Hovercraft Layers of the Rainforest Lightning Lunar Eclipse Maglev Train Music: Get Out in the Sun Popsicle Rain Rainbow

TEKS Science, Grade 1	MarcoPolo Learning Alignment
<i>S.1.5.E. continued...</i>	Snow Snowboarding Solar Eclipse Submersible Surfing The Moon Theremin Thunder
S.1.5.F. Describe the relationship between the structure and function of objects, organisms, and systems.	Bones Coral Reef Earth Insect Bodies Insect Eggs Insect Food Chain Insect Life Cycle Inside a Piano Larvae Layers of the Rainforest Lungs Melody Muscles Notes Up and Down 

S.1.5.F., continued...

TEKS Science, Grade 1

S.1.5.F. continued...

MarcoPolo Learning Alignment

Pine Forest
Rock Band
The Brain
The Digestive System
The Heart
The Immune System
The International Space Station
The Milky Way
The Nervous System
The Water Cycle
Types of Food



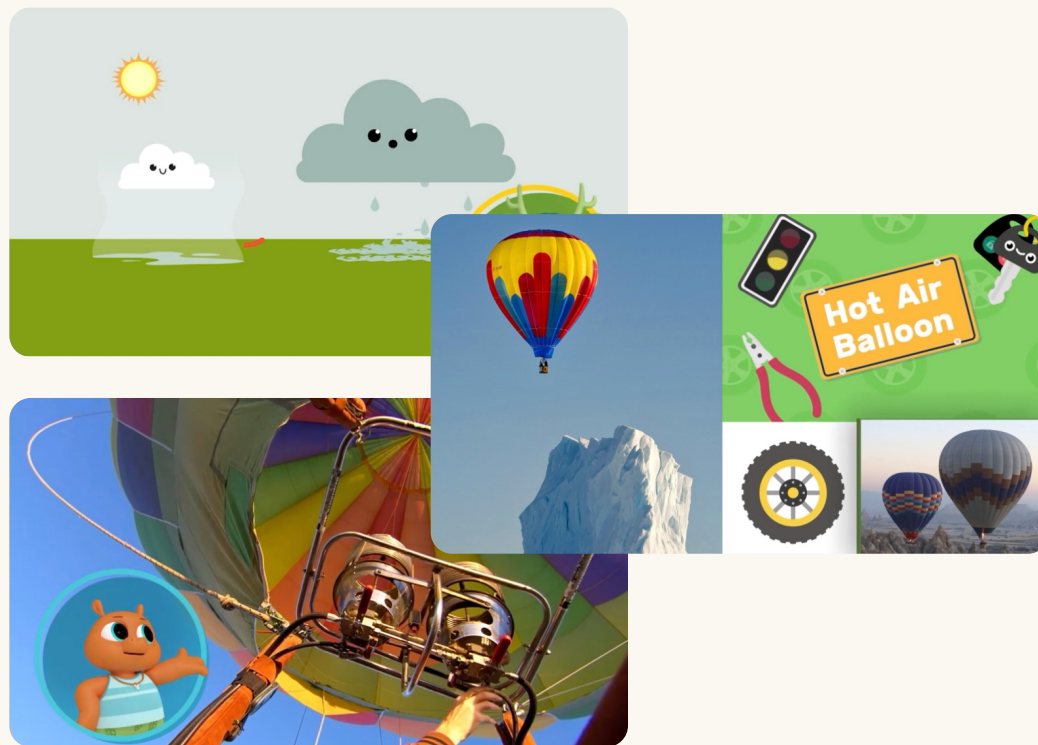
TEKS Science, Grade 1	MarcoPolo Learning Alignment
S.1.5.G. Describe how factors or conditions can cause objects, organisms, and systems to either change or stay the same.	Aurora Borealis Baby Foods Beluga Bengal Tiger Blue Morpho Butterfly Bruises Cane Toad Clouds Compost Cuts Dried Fruit Elevator Electric Car Flexible Thinking Flush Toilets Food Storage Glacier Harp Seal Inventions Lunar Eclipse Moon Tides Parrotfish Pine Forest Plastic Practicing Rain Seasons Solar Eclipse Takahē Telephone Teeth The Water Cycle Undercover Insects Wind X-ray

Skills: Matter and its Properties

S.1.6. Matter and its properties

The student knows that objects have physical properties that determine how they are described and classified. The student is expected to:

The Video Lessons and accompanying Educator Guide activities support student learning by demonstrating how to **classify objects based on different variables**—for example, sorting animals into groups such as dog breeds, or identifying types of clouds in the sky within meaningful contexts. Additional videos address concepts such as heating and cooling methods that can change the properties of materials, illustrated through engaging examples like the hot air balloon. Each video is carefully curated, combining real-world footage with computer-generated animation to make abstract concepts accessible and engaging. The **hands-on activities encourage students to compare and contrast, as well as conduct simple experiments, reinforcing key ideas and bringing the concepts to life.**



TEKS Science, Grade 1	MarcoPolo Learning Alignment
S.1.6.A. Classify objects by observable physical properties, including, shape, color, and texture, and attributes such as larger and smaller and heavier and lighter.	American Robin Arctic Hare Black Panther Braille Breeds of Cats Camouflage Dart Frog Dog Breeds Extraordinary Sounds Fish Food Freckles Hair Color Insect Bodies Insect Eggs Insect Warnings Inspired by Nature Jellyfish Musical Instruments Parrotfish Planets With Rings Platypus Red Octopus Squirrel Super Fiber Taste Toucan Tuatara Types of Food Unusual Inventions What is Music? Shape Circus Series

TEKS Science, Grade 1

S.1.6.B Explain and predict changes in materials caused by heating and cooling.

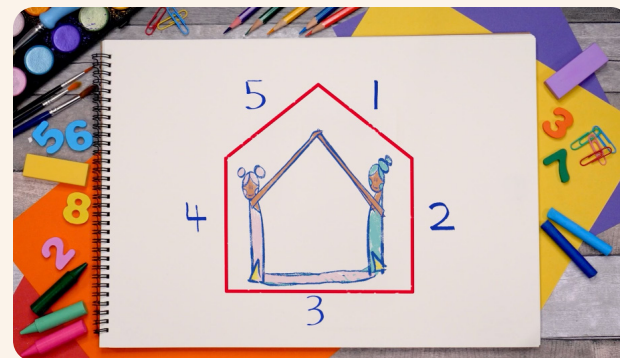
MarcoPolo Learning Alignment

Blizzard
Fever
Food Storage
Glacier
Hail
Hot Air Balloon
Humidity
Popcorn
Sweating
Popsicle
Snow
The Water Cycle
Willow's Snowflake Globe

S.1.6.C Demonstrate and explain that a whole object is a system made of organized parts such as a toy that can be taken apart and put back together.

Abacus
Create
Panama Canal
The London Eye

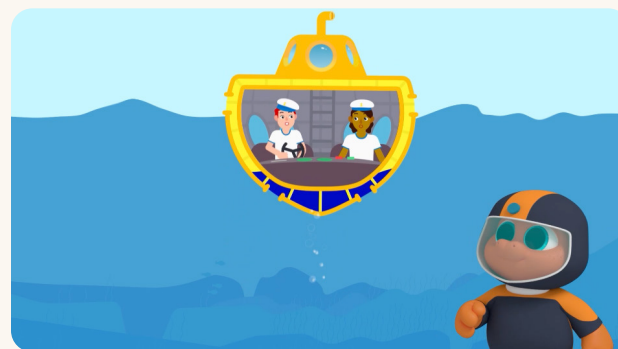
Shape Circus Series



Skills: Force, Motion, and Energy**S.1.7 Force, motion, and energy**

The student knows that forces cause changes in motion and position in everyday life. The student is expected to:

Video lessons introduce students to force, motion, and energy through **clear, developmentally-appropriate examples**. Concepts such as buoyancy in a hovercraft and the various water levels in a submersible help children observe and describe how energy and motion work in real-world contexts. CG animation and real-world footage make abstract ideas concrete, supporting students as they observe and explain physical phenomena.



S.1.7.A Explain how pushes and pulls can start, stop, or change the speed or direction of an object's motion.

Formula 1 Car
Hot Air Balloon
Hovercraft
Maglev Train
Rocket Ship
Snowboarding

S.1.7.B Plan and conduct a descriptive investigation that predicts how pushes and pulls can start, stop, or change the speed or direction of an object's motion.

Formula 1 Car
Hot Air Balloon
Hovercraft
Maglev Train
Rocket Ship
Snowboarding

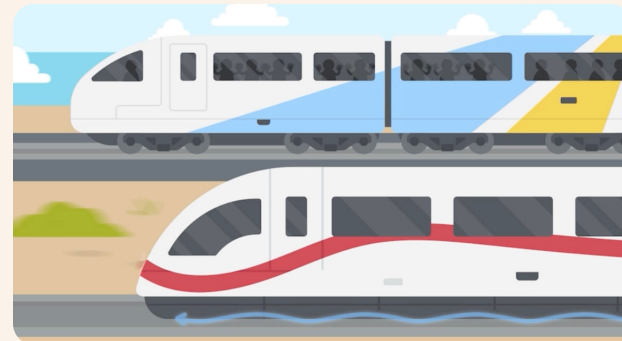
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S.1.8 Force, motion, and energy

The student knows that energy is everywhere and can be observed in everyday life. The student is expected to:

MarcoPolo Learning Alignment

MarcoPolo Learning Video Lessons use engaging CG animation to make complex concepts like force, motion, and energy accessible to young learners. By breaking down these ideas into simple, relatable examples, our video content helps children see how **energy is all around them and how it influences everyday life**. From the magnetic features of a Maglev Train to the friction created while snowboarding, our digital content shows children how to observe and understand the principles of energy and motion in the world around them.



less friction



more friction

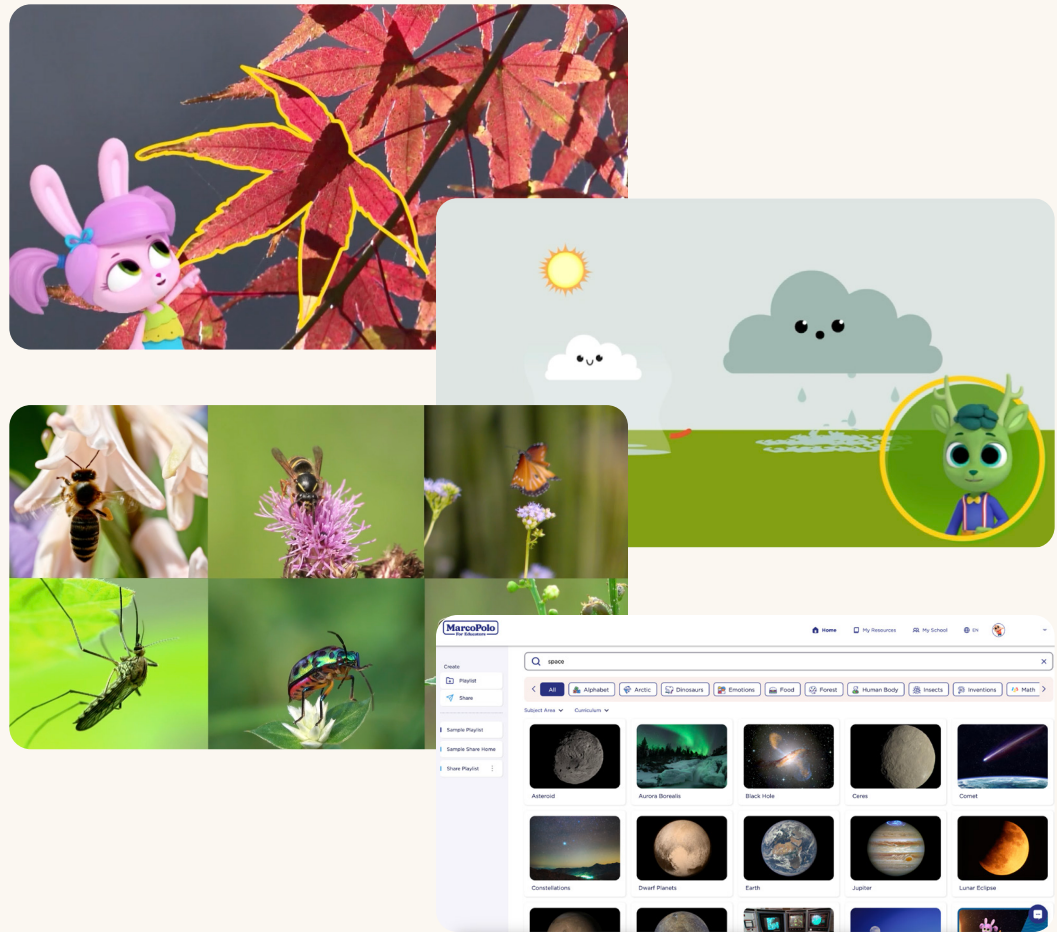


TEKS Science, Grade 1	MarcoPolo Learning Alignment
S.1.8.A Investigate and describe applications of heat in everyday life such as cooking food or using a clothes dryer.	Bread From Around the World Chinese Dumplings Chocolate Factory Dried Fruit Food Storage Pasta Popcorn
S.1.8.B Describe how some changes caused by heat may be reversed such as melting butter and other changes cannot be reversed such as cooking an egg or baking a cake.	Bread From Around the World Chinese Dumplings Chocolate Factory Dried Fruit Food Storage Pasta Popcorn

Skills: Earth and Space**S.1.9 Earth and Space**

The student is expected to describe and predict the patterns of seasons of the year such as order of occurrence and changes in nature.

Children are invited to explore **relationships and patterns** within the natural world and in the sky with our Polo Characters as they investigate the Earth and sky. Our engaging digital content provides children with an approach that makes learning meaningful, as they learn about patterns within nature such as the water cycle, changing seasons, and movement in space.



TEKS Science, Grade 1

S.1.10 Earth and Space

The student knows that the natural world includes earth materials that can be observed in systems and process. The student is expected to:

MarcoPolo Learning Alignment

The MarcoPolo Video Lessons encourage children to explore Earth systems and materials, from the frigid Arctic lands to the hot Savanna grasslands and all the way to the ocean floor. Observation skills are modelled in each Video Lesson and the activity options offer multiple learning opportunities to **observe, experiment, design, and play** with various materials.

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Glacier

3 Culminating discussion

If you could visit a glacier, what would you tell your family about what you saw when you returned home?

Activity option 1

ICE MOVEMENT
This activity will allow children to experiment with ice its properties and how it changes.

Pre-lesson prep:
Teacher prepares multiple ice cube trays and small children one day prior to the lesson.
Teacher provides each group with small cups of lui
Working in small groups, children put pieces of ice
Option to use magnifying glasses to look at the ice
take small cups of warm water and pour over the i
what happens. Children can work together to staci
glacier. Again, pouring warm water over the ice, ob

Follow-up questions:

- What did you notice about the ice when you loc
- What happened to the ice when you poured wa
- What happened to your group glacier when you
- What was the melting process like? Was it fast c
- How is this activity similar to what happens to n

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Ocean Floor



Ocean Floor

Video description
Did you know that the ocean has a bottom? Watch features of the ocean floor.

Objective

- Children will learn about the topographical fe

Key content words
Submersible, Trench, Volcano, Dormant

Skill
Describ
Classifi
Design

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Ocean Floor

Discussion guide

1 Introduction
Children observe the features of the floor around them (or outside).
Guide children to search for bumpy areas, flat areas, inclines, and declines.
Optional: Children make observational drawings to record the different features of the floor.

Questions:

- What do you notice about the floor around us?
- What do you think the floor at the bottom of the ocean looks like?

2 Video discussion
Watch the video lesson with the children. Pause to discuss the following questions:

- What colors do you see on Earth from space? What color do you think the ocean is? What about the land?
- What are you noticing about the ocean floor?
- Light cannot reach the ocean floor so it is very dark there; where are some other places that are dark?

3 Culminating discussion
Would you want to travel to the ocean floor in a submersible? Tell us why or why not.

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2

TEKS Science, Grade 1	MarcoPolo Learning Alignment
S.1.10.A Investigate and document the properties of particle size, shape, texture, and color and the components of different types of soils such as topsoil, clay, and sand.	Compost Earthworm Sandstorm Terracotta Soldiers
S.1.10.C Compare the properties of puddles, ponds, streams, rivers, lakes, and oceans, including color, clarity, size, shape, and whether it is freshwater or saltwater.	Beaver Fish The Dead Sea The Ocean Floor The Water Cycle
S.1.10.D Describe and record observable characteristics of weather, including hot or cold, clear or cloudy, calm or windy, and rainy or icy, and explain the impact of weather on daily choices.	Blizzard Clouds Hail Humidity Hurricane Lightning Meteorologist Rain Rainbow Sandstorm Seasons Snow The Water Cycle Thunder Tornado Weather Tools Wind

TEKS Science, Grade 1	MarcoPolo Learning Alignment
S.1.11 Earth and space <i>The student knows that earth materials and products made from these materials are important to everyday life. The student is expected to:</i>	Video Lessons and Educator Guides support teachers and students in examining the natural world and recognizing how natural processes contribute to everyday products. Lessons highlight examples such as gathering maple syrup from trees or the role of earthworms in breaking down material to enrich soil. These connections help students observe, describe, and explain how humans and nature interact.
S.1.11.A Identify and describe how plants, animals, and humans use rocks, soil, and water.	Clouds Compost Earthworm Pillbug Plants on Your Plate Rain The Amazing Chickpea The Water Cycle
S.1.11.B Explain why water conservation is important.	Rain The Water Cycle
S.1.11.C Describe ways to conserve water such as turning off the faucet when brushing teeth and protect natural sources of water such as keeping trash out of bodies of water.	Plastic

Skills: Organisms and Environment**S.1.12 Organisms and environment**

The student knows that the environment is composed of relationships between living organisms and nonliving components. The student is expected to:

Children are invited to explore diverse environments and the relationships between living organisms, discovering the features and classifications that define living things. From the eucalyptus trees of Australia, where they may observe a sleeping koala, to the savannas of Africa with its prides of lions, **MarcoPolo Learning content immerses children in a variety of habitats while highlighting the unique needs of plants and animals around the world.**

S.1.12.A Classify living and nonliving things based upon whether they have basic needs and produce young.

American Robin
 Baby Pets
 Bald Eagle
 Gray Wolf
 Gibbon
 Insect Food Chain
 Insect Life Cycle
 Koala
 Lion
 Mosquito
 Pine Forest
 Puffin
 Platypus
 Seahorse
 White-tailed Deer
 Western Lowland Gorilla

S.1.12.B Describe and record examples of interactions and dependence between living and nonliving components in terrariums or aquariums.

Fish
 Pet Lizard

TEKS Science, Grade 1	MarcoPolo Learning Alignment
S.1.12.C Identify and illustrate how living organisms depend on each other through food chain.	Arctic Fox Arctic Plants Cane Toad Caribou Compost Food Insect Food Chain Plants on Your Plate The Great African Migration Wildebeest
S.1.13. Organisms and environments The student knows that organisms resemble their parents and have structures and undergo processes that help them interact and survive within their environments. The student is expected to:	Children are invited to explore the family structures of various animals, from insects and reptiles to mammals and birds. Through a blend of real-world footage and engaging CG animation, children can journey through different habitats, life cycles, and discover the unique adaptations that help organisms survive and thrive in their environments. From the life cycle of a tiny insect to the journey of a baby sea turtle, children learn how animals resemble their parents and develop specialized structures and behaviors that allow them to interact with and survive in their surroundings.  A circular diagram illustrating the life cycle of a ladybug. It features four circular images connected by arrows in a clockwise cycle: 'Egg' (a cluster of small yellow eggs), 'Larva' (a small, segmented, yellowish creature), 'Pupa' (a larger, segmented, yellowish creature), and 'Adult' (a fully formed ladybug). In the center of the cycle is a cartoon girl character with pink hair and a blue dress.  A photograph of a baby sea turtle emerging from the sand. The turtle is small, with a light-colored shell and dark stripes. In the bottom right corner of the image, there is a small circular inset featuring a cartoon girl character with pink hair and a blue dress, similar to the one in the ladybug life cycle diagram.

TEKS Science, Grade 1	MarcoPolo Learning Alignment
S.1.13.A Identify the external structures of different animals and compare how those structures help different animals live, move, and meet basic needs for survival.	Arctic Hare Anteater Bald Eagle Bat-Eared Fox Basilisk Lizard Baby Sea Turtle Basking Shark Beaver Chipmunk Cheetah Echidna Frill-necked Lizard Giraffe Harp Seal Hammerhead Shark Hippopotamus Insect Bodies Insect Life Cycle Molting Parrotfish Pufferfish Pillbug Polar Bear Red-eyed Tree Frog Savanna Elephant Sea Otter Sea Lion Spider Monkey Stick Insect Toucan Woodpecker Whale Shark Zebra

TEKS Science, Grade 1	MarcoPolo Learning Alignment
S.1.13.B Record observations of and describe basic life cycles of animals, including a bird, a mammal, and a fish.	American Robin Baby Pets Baby Sea Turtle Coral Reef Fish Harp Seal Insect Eggs Insect Life Cycle Lion Puffin Seahorse Western Lowland Gorilla
S.1.13.C Compare ways that young animals resemble their parents.	Baby Pets Baby Sea Turtle Harp Seal Larvae Kangaroo Koala Lion Nile Crocodile White Tailed Deer



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