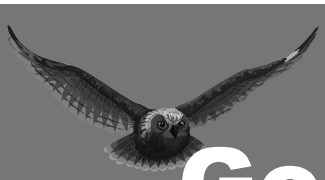


God's Creation Waits

by Anne E. Neuberger

https://anneneuberger.com

Educating children whose lives are and will continue to be affected by environmental damage is a challenge facing all educators, parents, grandparents, and parish staff. It is important not to cause a sense of hopelessness while educating children in the realities of the problems.

As daunting as these problems are,
God is with us.

This booklet will encourage children to develop an awareness for all of nature and to appreciate it as a gift from God. The activities, stories, and prayers will help them to take joy often, even daily, in creation. From that awareness, this resource then strives to encourage a child's curiosity about the natural world, and subsequently, a concern for it. These aspirations are all interwoven with an attitude of joy and thankfulness for a loving God.

God's Creation Waits:

- is a 42-page booklet for children in grades 2-5 and their adults.
- **is** a free resource.
- **is** in a downloadable PDF format.
- can easily be adjusted for younger children for family use.
- can be used as a supplement to a religious education curriculum in parishes and schools.
- is for busy families, a time sensitive way to talk about environmental issues.
- can be a way for grandparents and grandchildren to connect spiritually through art, storytelling, prayers and learning activities.
- is a good resource for anyone wanting to observe the Season of Creation (September 1 –October 4).

Contents

About the Author

Author Anne E. Neuberger writes stories and activities for children on issues of social justice, saints, Catholic Social Teachings, and the liturgical seasons. She delights in being the grandmother of seven. She and her husband, Paul Marincel, live in Minnesota.

Contact Anne at: anneneuberger@gmail.com
or visit her website: www.anneneuberger.com

God's Creation Waits

Introduction for Adults

"Speak to the earth, and it will teach you."
—Job 12:8

Discovering and enjoying God's creation may be the best gift we can give the generations to come. Here you will find many ways to help children notice and continue to observe and care for God's gift to us. Together, speak to the earth and watch for its teachings!

Using this resource:

- **How to Use the Booklet:** This can be used in both the classroom and home; designed for grades 2-5, it can be adapted for multi-age groups.
- **Participation:** The booklet is for students, but adult participation will be beneficial for prayers and discussions.
- **Vocabulary:** When a word needs to be defined, it will be in **bold** to indicate the definition can be found at the end of each section.
- **Quotes:** Each section begins with a quote to help children become aware of all creation. When the time seems right, talk about what the quote means and who said it.
- **Setting the Creation Table:** In the classroom or home, choose a space (a small table or corner) to place symbols and examples of God's gift of creation. At prayer time, gather around this table; you may want to spread a cloth on this table in colors of the liturgical year.
- **Creation Celebration:** Throughout these pages, there are short suggestions for recognizing and rejoicing in creation, to be done outside of the booklet. They require mostly an open heart and the use of the senses.
- **Resources:** Included are suggestions of books, videos, and websites which expand the topics.

SEASON OF CREATION

This booklet can be used at any time of the year, but it will be especially significant during the Season of Creation. This ecumenical celebration raises appreciation and concerns for all creation. Beginning as a day of Prayer for Creation on September 1 in the Orthodox Church, the World Council of Churches extended it through the Feast of St. Francis of Assisi on October 4. Pope Francis made it official in the Catholic Church by putting it on the liturgical calendar in 2015. Now each year, the Season of Creation is observed from September 1-October 4 across the globe. This booklet offers many ways to observe and celebrate this season.

THEME 1

God's Creation Waits

For the creation waits in eager expectation
for the children of God to be revealed.
—Romans 8:19

Setting the Creation Table

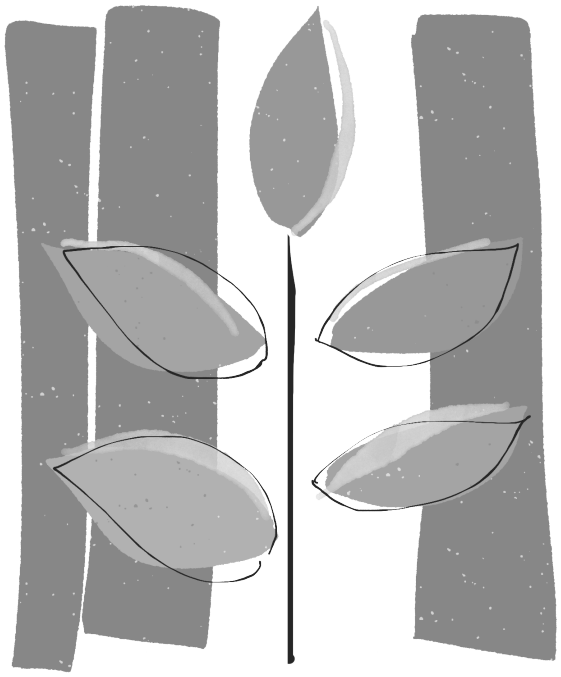
As this is the first session with the prayer table, make this a holy activity. Explain that this will be the place to gather when you will be praying for God's creation. Have items ready and encourage the children to set the table in a quiet and reverent manner. Suggestions: a cloth to cover the table, a candle and holder, a cross or crucifix, an image of St. Francis (briefly mention his love of all creation), a vase of flowers or a plant, some stones, and a small globe or an image of the earth.

Prayer

Ask a child to mime parts of this reading, such as listening (hand to ear), birds (move hands as if they are birds) or God's hand (holding out hands at the reference to God's hands.)
Ask children to listen carefully so they can imagine these words.

Leader: This prayer is from our scriptures,
from the Book of Job.

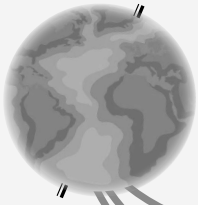
But ask the animals, and they will teach you.
Or ask the birds of the air, and they will tell you.
Speak to the earth, and it will teach you.
Or let the fish of the sea tell you.
Every one of these knows
that the hand of the Lord has done this.
The life of every creature
and the breath of all people are in God's hand.
—Job 12:7-10



THEME 2

Water and Air

"All living creatures are sparks from the radiation of God's brilliance, and these sparks emerge from God like the rays of the sun."
—Saint Hildegard of Bingen.



Setting the Creation Table

Fill a clear container with ice cubes and appreciate water in two forms as the ice cubes melt; add symbols for air such as a balloon or a pinwheel.

Prayer

Light the candle. Bless one another with water: dip your thumb into water and make a cross on foreheads, or dip a twig from an evergreen tree into water and lightly sprinkle the children or family. Encourage them to make the Sign of the Cross as they are blessed.

Leader: Creator God, thank you for water, from the magnificent oceans to tiny water drops!
Do the blessing.

All: Thank you for creating water, Lord!

Leader: *Have children take a deep breath, hold it, and then slowly release it.*
Thank you for the air in our lungs and the wind that spreads seeds.

All: Thank you for creating air, Lord!

Leader: Thank you for all those who use their talents to help care for God's creation, including all the earth and its creatures.

All: Help us to use our talents too! Amen.

Name one way you have seen people caring for God's creation.

_____

Creation Celebration: *Look for ways in nature that show you that God is strong, God is clever, and even that God has a sense of humor!*

Five Popes

A pope has a big job! Every pope has many concerns. For the past 80 years, each pope has worked to protect the environment. They are: Popes Pius XII, John XXIII, Paul VI, John Paul II, Benedict XVI and Pope Francis.

Because he cares greatly about all of God's creations, Pope Francis has written a special letter called **Laudato Si'**.

He wrote it to everyone on the planet! He asks all the people on the earth to protect it. It is the home we all share—our common home.

Talk with someone about the questions below and write your answers:

- What is one thing that you especially love in all of God's creation?

_____

_____

_____

- Imagine you meet Pope Francis. **What would you want to talk about?**

_____

_____

_____

Words

Laudato Si': This is the name of Pope Francis' letter to the whole world. These are Italian words, taken from a prayer by Saint Francis, "Canticle of the Creatures." In English, it means, "Praise be to you, My Lord."

ESSENTIAL

Animals and plants and all living things have different needs but every living creature on earth needs water! Water is, perhaps, our most important resource! Write three ways in which you are thankful for water:

1._____ 2._____ 3. _____

In the Word Find, look for these words that describe water in many forms:

GLACIERS ICEBERG SNOW HAIL FROST RAIN
DEW LAKES RIVERS OCEANS TEARS SALIVA

S	A	L	I	V	A	C	L	N
G	L	A	C	I	E	R	S	Q
R	I	K	H	D	W	A	N	A
O	C	E	A	N	S	I	O	P
X	E	S	I	E	T	N	W	T
H	B	S	L	D	E	W	C	M
A	E	T	S	G	A	A	C	L
I	R	I	V	E	R	S	H	E
L	G	F	R	O	S	T	K	D

The Very Air We Breathe

Some people argue that air is more important than water. God gave us both, and we cannot live without either one! Learn more about air by reading these sentences and finding the words to complete them.

1. The average person breathes about ____ of air per minute.

2. Air can hold tiny water droplets. This is called ___

3. Air is a mixture of many ____.

4. Air is the unseen ____ in which living things live and breathe.

5. ____ is moving air. This contributes to some changes in the weather.

6. Humans and animals need to breathe ____ in the air.

7. In breathing, the lungs put oxygen into the blood and send back ___ to the air.

8. Plants need the carbon dioxide in the air to live. They give off the oxygen that we breathe. Plants and humans need each other. This is called having a ____.

A. Carbon dioxide

B. Gas

C. Gases, dust particles, and pollen

D. Humidity

E. Oxygen

F. Symbiotic relationship

G. Two gallons, which is 32 cups

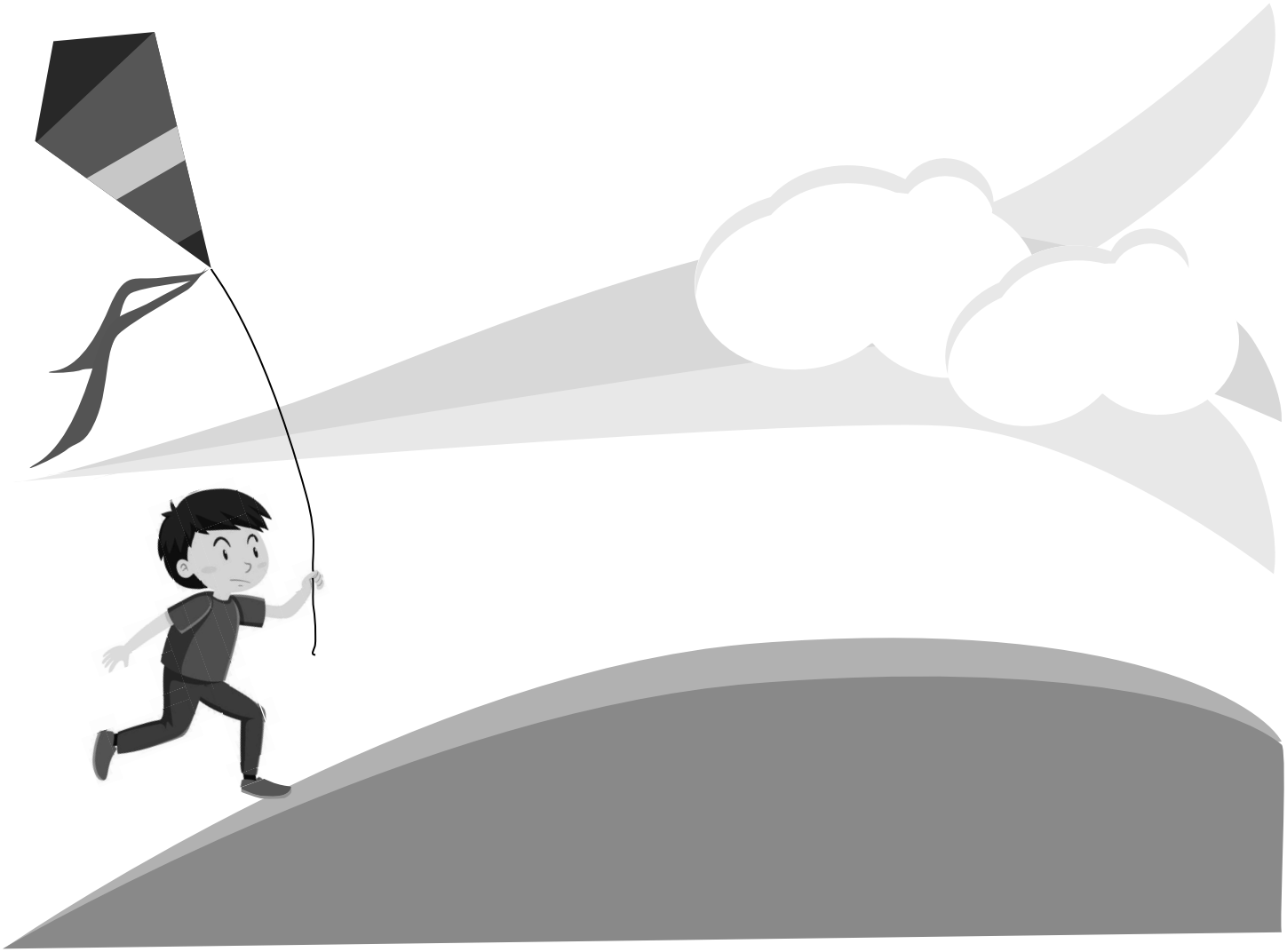
H. Wind

Words

symbiotic relationship: When two different species live close together. This can be good for both (a human and a pet dog) or bad for one of them (mosquitoes biting humans for food.)

carbon dioxide: This is a gas that humans and animals release when they breathe out. Plants use this to make food. That is a symbiotic relationship. However, right now there is too much carbon dioxide, caused by things like driving cars, and this is harmful to life on earth.

oxygen: This is the most common element on or in the Earth; it is the main part that makes up air; all plants and animals cannot live without oxygen.



Creation Celebration *Go outside and take notice of three things you love in nature. Every time you are outside, look for these things again and look for something else too. Pay attention each day to what gifts from God that you really appreciate.*

Hildegard of Bingen

Saint Hildegard (1098-1179), lived when both science and woman's roles were greatly limited. Still Hildegard wrote books about natural science and medicines. She also treated sick people, composed music, wrote plays, painted, and ran a religious community! Most amazing, she had visions which today help us appreciate all creation and understand environmental issues.

A Vision For Today

Hildegard was used to seeing farm animals. And ever since she was three, she had been seeing things that others could not see. Once when she was four, she saw a pregnant cow. She said, "See the calf inside the mama cow? It has brown ears and two patches of brown, one near the neck and one by the back leg." Others laughed. No one could see an unborn calf! But when the calf was born, it looked exactly like Hildegard had described it! The grown-ups were startled for they realized Hildegard had had a **vision.**

She had visions for the rest of her life. These helped her see an amazing force in nature she called "greenness." This force always nourishes the earth and all creatures. It connects everything—even stars and worms are connected! And humans? Hildegard says we are also made up of the things of the earth—each of us is like a tiny earth!

What is this amazing force of connecting "greenness"? Unscramble the words:

Hildegard says that this never-ending greenness is

__ __ __ __ __ __ __ __

s d G o v e o l

Words

Vision: vision is about seeing, but there are different ways we use the word; for this story, a vision was Hildegard's ability to see something in a dream or a trance. She felt God sent her these visions to help her understand His great love.

Hildegard created paintings of her visions. She used rich colors of red, gold, green, and blue. She drew leaves, vines, flowers, circles, rectangles, angels, animals, and people.

Read her words below and think about them. Then draw something that shows what you are thinking about, using the colors and symbols described above.

"Take a good look at yourself. Inside, you've got Heaven and Earth, and all of creation. You're a world—everything is hidden in you."

THEME 3

Bacteria, Fungi and Protoctista

By the mediation of a thousand little mosses and fungi, the most unsightly objects become radiant of beauty. . . . And seen with the eye of a poet, as God sees them, all things are alive and beautiful.
—Henry David Thoreau

Setting the Creation Table

Look online for images of microscopic bacteria, mushrooms, kelp, and slime mold; add an image of Hildegard or one of her paintings.

Prayer: *Gather around the prayer table and light the candle.*

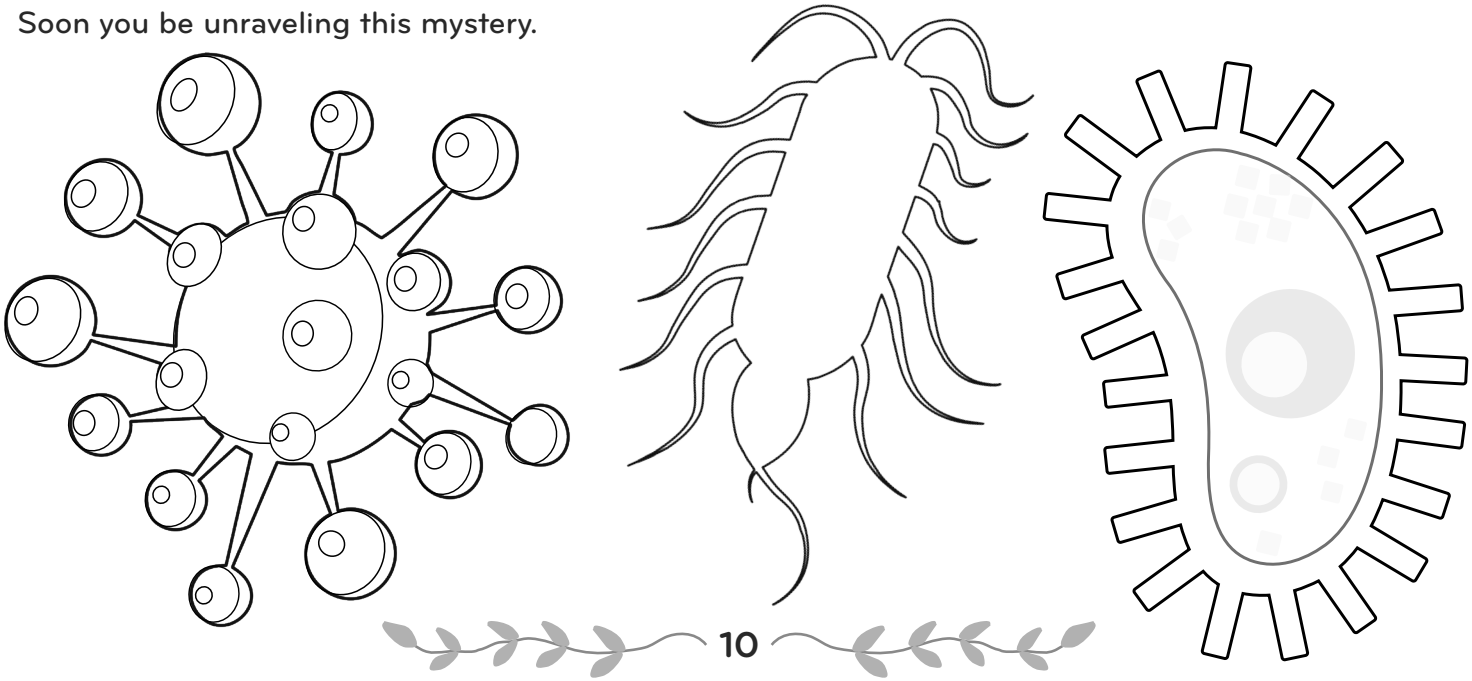
Leader: We encircle our prayer table as our Creator God encircles the earth.

Oh, wonderfully creative God! You have given us mysterious and astounding things for the world. Some are even funny! Help us look for and learn about these gifts from you!

All: Thank you God for all these amazing things! Amen.

Seeing with the eye of a poet!

Here are images of one of the mysteries of creation. Color them using whatever colors you choose. Soon you be unraveling this mystery.

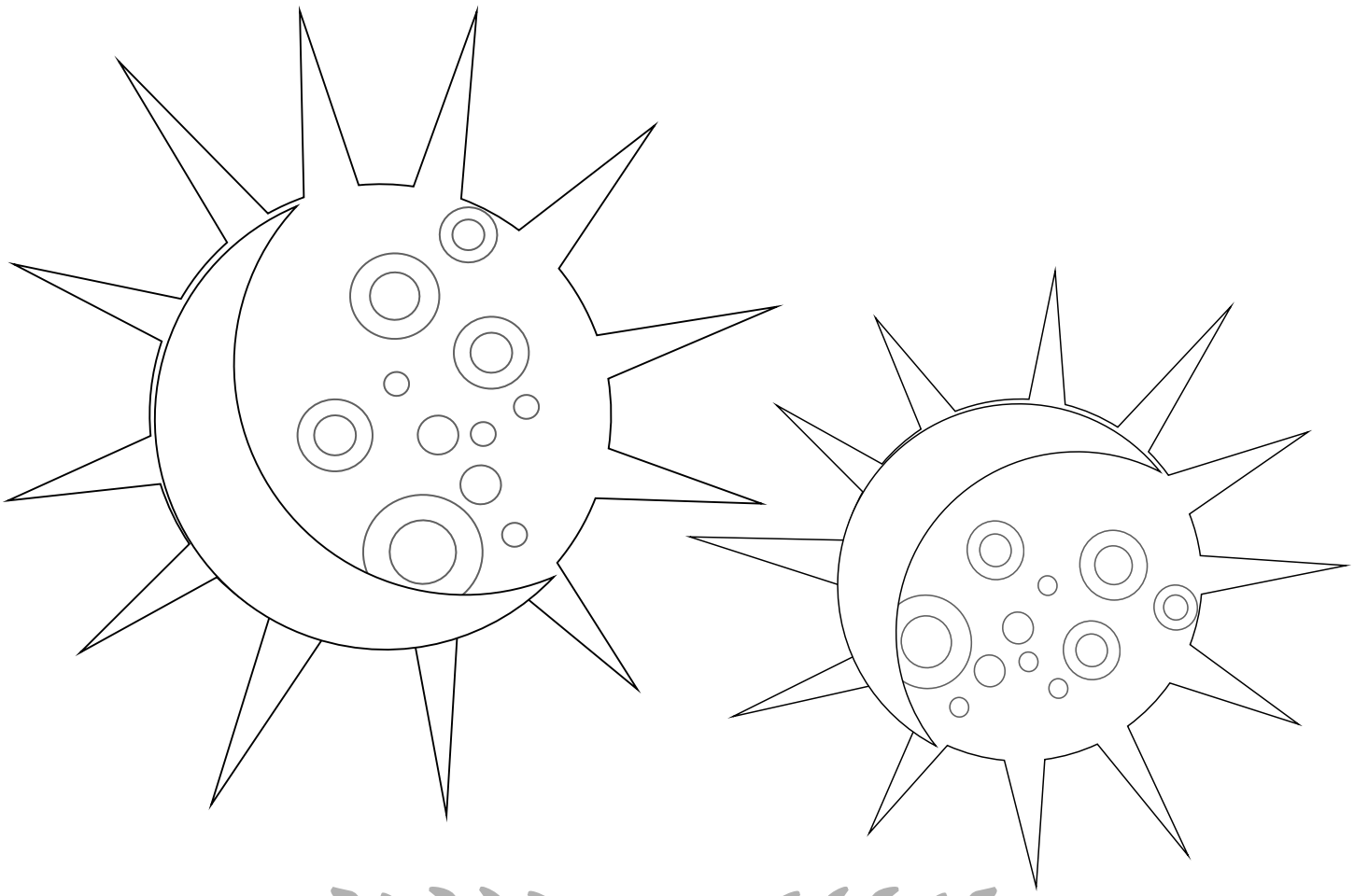


Curiously Tiny and Hugely Important

There is a life form that is very important and yet you can't see it without a microscope. What is it? For the answer, read the sentences about it, and write the letters in bold on the lines below:

- There are **b**illions of these inside of you! They help us digest our food.
- Sometimes these can cause sickness, but often they are good for us.
- This is the sm**a**llest form of life on earth.
- These are so tiny, 1000 of these **c**an fit on the period at the end of this sentence.
- We use these to crea**t**e certain medicines.
- Some of these kill pests that hurt plants we need.
- They are **e**verywhe**r**e!
- They can even help clean up oil sp**i**lls!
- They are one of the oldest living species on e**a**rth.

___ ___ ___ ___ ___ ___ ___ ___



God's Recyclers

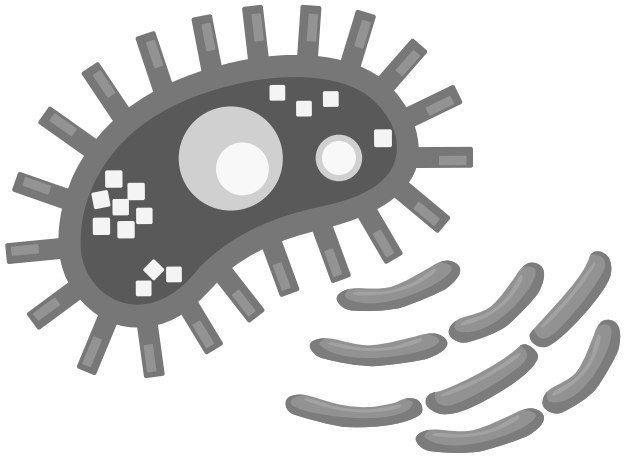
Fungi are living organisms that are neither animals or plants. Some are so small, you can only see them with a microscope, and some large ones stretch for miles! Fungi can be found on land, water, air, and inside plants and animals.

Everything in creation has a purpose. One job God gives fungi is to be the world's recycler. As leaves and other organic matter die, fungi help them **decompose**.

Find and circle four fungi.

Wonderfully Weird!

Every day, we see how creative God is! Slime mold is in a wonderfully weird category of God's work! The category, Protoctista, is made up of one-**celled** organisms. Most live in wet places, and all have a **nucleus**. They are not fungi, not plants, and not animals. Some are as huge as five school buses, some can only be seen through a microscope; some, like plants, make their own foods and others depend on other species for food, like animals.



Learn about slime mold: match the first part of the sentence to the correct ending.

1. Slime mold are a very old species. They have been around for_____.	A. gross and funny names.
2. Slime mold has no legs, but it can move _____.	B. bacteria, yeast, molds, and fungi; this makes them important decomposers and recyclers.
3. Though they have no brains, they have tubes that expand _____.	C. several feet in 24 hours.
4. The organisms feed on _____.	D. 600 million years!
5. Slime molds are not harmful to people, but people give them _____.	E. and contract, giving them a memory of where food is. They can learn and go through mazes too!

Circle the correct classification:

Algae is	bacteria	fungi	Protoctista
Amoebas are	bacteria	fungi	Protoctista
Euglena is	bacteria	fungi	Protoctista

Words:

cell: Cells are the fundamental units of life; all living organisms are made up of cells and depend on cells to function normally. They are too small to be seen without a microscope; human bodies may have from 75 to 100 trillion cells; there are hundreds of different kinds of cells in our bodies.

nucleus: a small egg-shaped structure inside a cell; it acts like the brain of the cell, telling every part of the cell what to do.

Creation celebration: Look at a leaf and see the pattern on it; examine the texture and colors of the bark of a tree; find a flower with at least two colors on it and see the shape of the petals and leaves; watch for a flock of birds in the sky or in a tree; find two different kinds of insects and see how they differ; if it is a warm day, find a stone and hold it in your hand to feel the warmth of the sun captured in the stone. If possible, choose something you can bring to the Creation Table.

Kateri Tekakwitha

St. Kateri Tekakwitha (1656-1680) was born into the Mohawk clan of North America. When she was baptized, she added the name Kateri (Catherine). She was a **mystic** and led many people to know Jesus. In 2012, she became the first Indigenous American saint. Her constant connection to nature and her love of the Creator God makes her a wonderful environmental saint.

Finding the Creator in the Woods

Bump! Tekakwitha walked into a wooden pole, hitting her head and dropping the firewood she had gathered. Her aunt noticed and asked, "Are you alright?" Everyone knew that in bright sunshine, this child's weak eyesight made it impossible for her to see clearly so she sometimes had little accidents. Tekakwitha nodded, rubbed her forehead, picked up the wood and went on with her day.

Her parents and brother had died of smallpox, and Tekakwitha's sight and her strength had been hurt by that illness. She lived with family who loved and cared for her, in a great forest in North America. Often, she went deeper into this wood to be alone and enjoy the smells and sounds, the feel of different kinds of bark, and the shy deer, the playful squirrels, and sometimes even a moose standing in a lake.

There she remembered stories of Jesus, which her mother had told her long ago. She would make a small cross with sticks and stems she found. She recalled the winter times when her uncle told stories of the great Creator. She listened to the wind in the trees and smelled the good earth. She understood God's creativity and power. And she felt God's great love.

Words

Mystic: someone who searched for and found a deep contact with God.

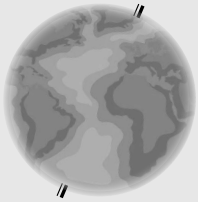
Kateri Tekakwitha

THEME 4

Soil, Seeds, Trees, and Other Plants

The entire material universe speaks of God's love, His boundless affection for us. Soil, water, mountains…. everything is a caress of God.

—Pope Francis



Setting the Creation Table

Gather seeds from bushes, trees, the ground, and the kitchen (seeds of berries, poppy, sesame, sunflower and popcorn). Add a few leaves from a houseplant.

As Saint Kateri Tekakwitha made crosses from sticks, make a cross for the Creation Table. Use sticks found outside and yarn or string to tie them together; also add an image of Kateri Tekakwitha to the table.

Prayer: *Gather around the prayer table and light the candle.*

Leader: Creator God, with Saint Kateri, we encircle the prayer table, as you encircle our earth with your love. Today we celebrate your gift of the soil and seeds that give us life!
All: Thank you, Creator God!

Leader: God who made all things, we are grateful to you for the gift of trees, which help us in many ways and bring us beauty and joy too!
All: Thank you, Creator God!

Leader: And we look around us, at the millions and millions of other plants, the tiny and the towering ones, the colorful ones, the winter ones, the delicious ones! Everywhere we look, we see your great love and care, oh creative God!
All: Thank you! Amen!

Riches in the Soil

Soil is made up of a mixture of sand, clay, and **organic material**. Plants can grow in sand or clay, but they grow much better if a soil has a combination of nutrients. Check the things that make a good, rich soil:

__ fungi
__ leaves
__ eggs shells
__ clay
__ coffee grounds
__ plastic plant pots
__ rabbit manure
__ eggs and larvae
__ candy wrappers
__ sand
__ nematodes
__ cigarette stubs
__ potato peels
__ Styrofoam
__ woody sticks
__ bacteria
__ plastic bottle tops
__ earth worms
__ banana peels
__ dead flowers
__ chicken bones

What is under the soil? Under the soil there are five more layers!

Just under the soil is

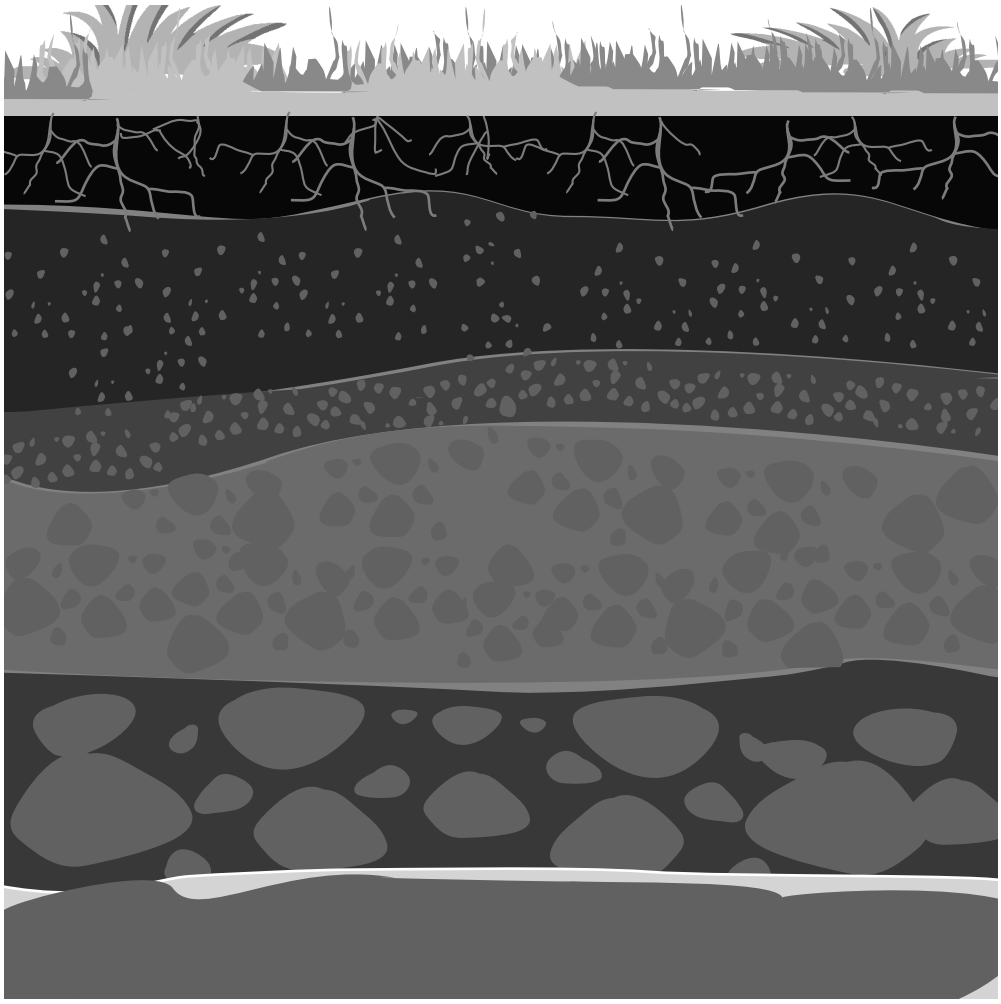
Layer #2
more organic material and minerals, which is where seeds germinate, or start to grow.

Layer #3
is sand and **silt.**

Layer #4
is clay and minerals.

Layer #5
is slightly broken rocks and

Layer #6
is rock.



Draw a line from the description to the level on the picture.

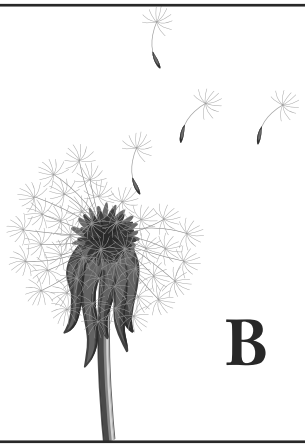
Packages Filled with Life

Our Creative God has given us clever little "packages" -- seeds of many shapes and sizes which bring us all kinds of life, producing much of our food. Plants that came from seeds produce seeds to grow new plants. Where are they? Some hide inside flowers or cones, animals move some, others float on air or water. And others move around by hitchhiking, helicoptering, or parachuting!

Match the seeds to the correct plants

A

B



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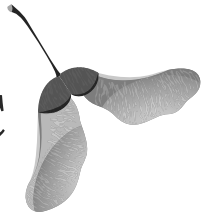
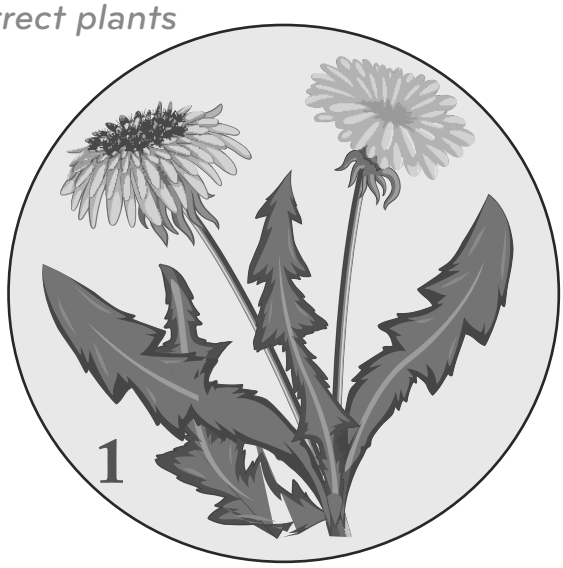
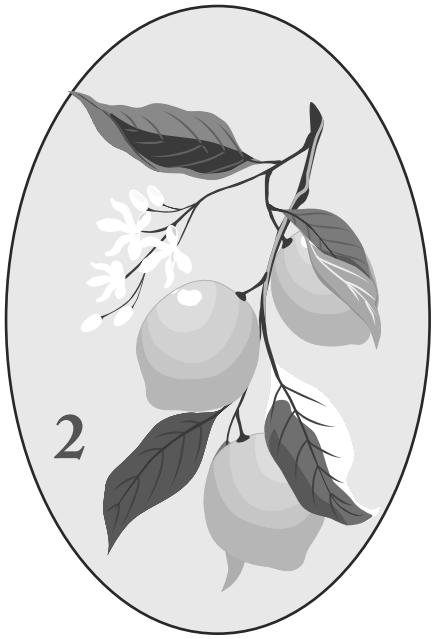
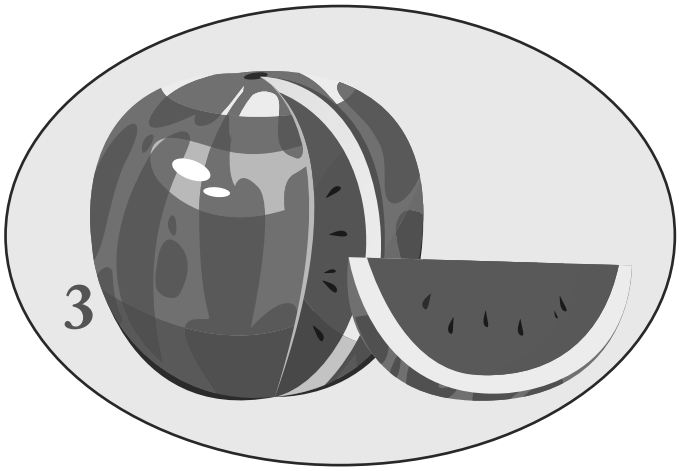


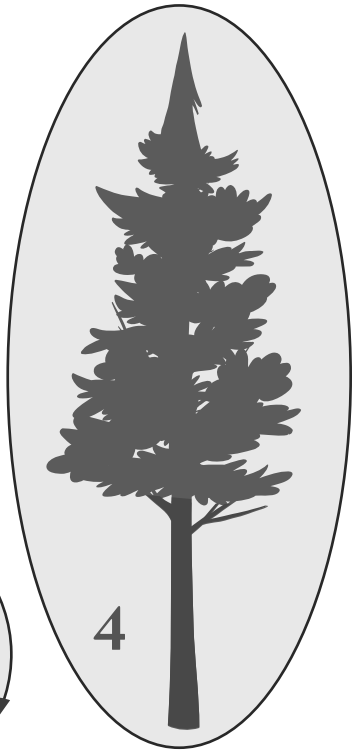
D

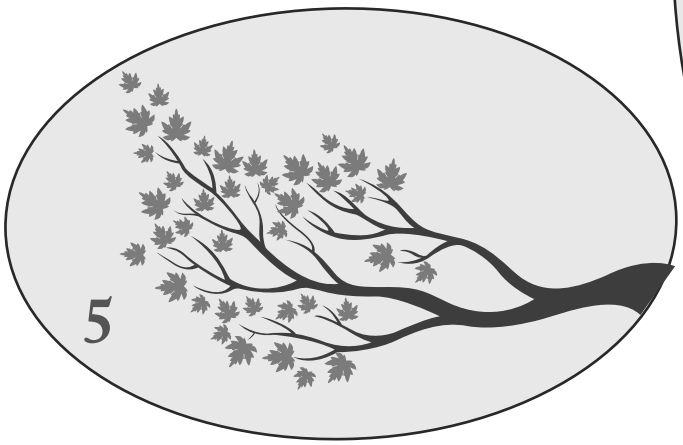
E





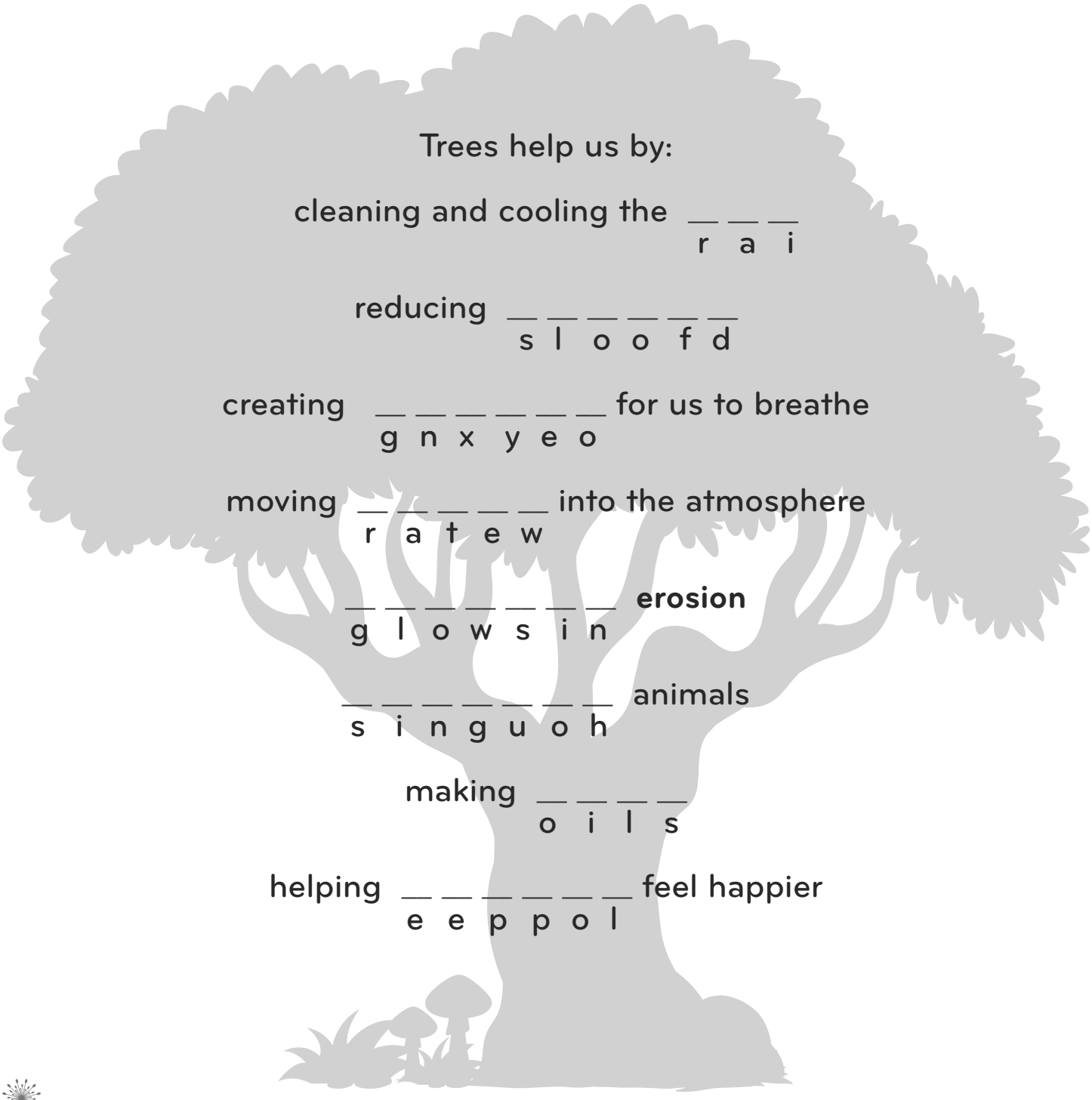






Trees: Our Giant Friends

Trees are a big presence in our lives. They stay in one place and grow large. You can't miss them, but do you notice them? Some people are very drawn to certain trees, as if they were quiet friends. Trees are helpful friends. Unscramble the words to learn how they help.



Trees help us by:

cleaning and cooling the _ _ _ (r a i)

reducing _ _ _ _ _ _ (s l o o f d)

creating _ _ _ _ _ _ (g n x y e o) for us to breathe

moving _ _ _ _ _ (r a t e w) into the atmosphere

_ _ _ _ _ _ _ (g l o w s i n) **erosion**

_ _ _ _ _ _ _ (s i n g u o h) animals

making _ _ _ _ (o i l s)

helping _ _ _ _ _ _ (e e p p o l) feel happier

Creation celebration Like Kateri Tekakwitha, listen to the wind and feel God's presence in the glory of trees and wind!

Just a Few Plants

All trees are plants, but not all plants are trees. Our clever Creator has given us at least 270,000 kinds of plants for our world!

Imagine you are an illustrator who must draw pictures of plants in different settings. Choose two: a vegetable garden, plants in the sea, a farm field, a section of a rain forest, or a desert. Create drawings in the boxes. How many kinds of plants can you put into each drawing?

Imagine that!

Read this quote from author and forester Peter Wohlleben:
"There are more life forms in a handful of forest soil than there are people on the planet. A mere teaspoonful contains many miles of fungal filaments. All these work the soil, transform it, and make it so valuable for the trees."

Take a moment to write a prayer about our valuable soil

Words

Decompose: when **organic material** (leaves, sticks, dead bugs) break down from big pieces into tiny and even microscopic pieces that will be used to help other life grow.

Organic materials: This is from plants and animals that have died and **decomposed**; in a forest, much of the organic material would be from leaves and sticks that fell from trees.

Silt: soil or very, very small pieces of rock, like dust.

Erosion: The wearing away of the land, often by movements of water and wind.

Martin de Porres

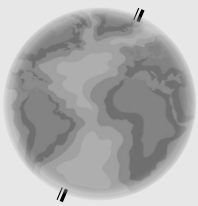
St. Martin (1579-1639) was a humble man who was always generous to others and deeply prayerful. He helped sick people and animals and may have been the first person to have a veterinary clinic! Having helped others in so many ways, he was named the patron saint of different peoples or causes: public health workers, racial harmony, social justice, barbers, and innkeepers! He can also be honored for his care for God's animal creatures.

All in a Day's Work

St. Martin gently bandaged a turkey's leg, saying softly, "It is good you came to me. Your broken leg is healing! Come back tomorrow!" As the turkey limped away, Martin grabbed the basket filled with food, bandages, and medicines he made from plants. Today he had already scrubbed floors, done laundry, and tended to the sick humans and animals upstairs. Now he would go to those too sick to come to him. Of course, he would feed the hungry mice outside too. But suddenly he heard screams and doors slamming. Hurrying to the street, Martin saw people running into buildings. Then he saw why: a crazed bull was rushing full force towards him! It had long, sharp horns and a huge body. Martin stood still. Seeing this, the bull began to slow down. When it was very close, Martin gently said, "Have you gotten out of your field? You must be lost and scared, my friend! Come along. I will take you home." Slowly, the huge animal and the gentle man turned and walked down the road together.

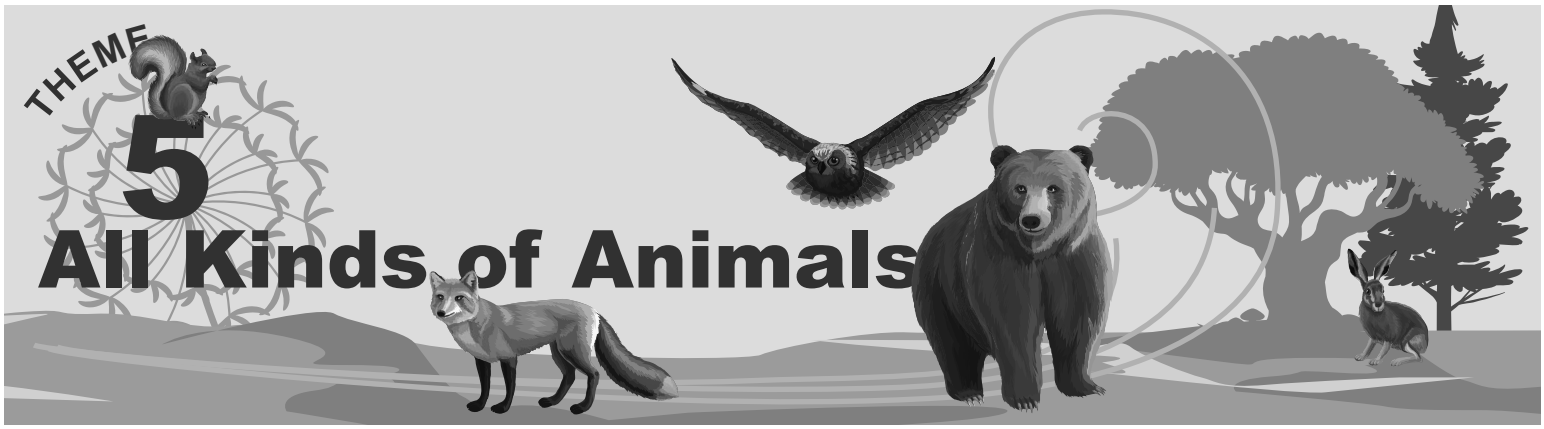
Name five ways St. Martin had helped others the day the bull needed him:

1.
2.
3.
4.
5.



Setting the Creation Table

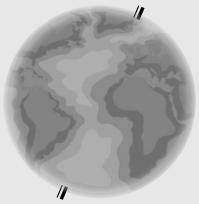
Add an image of St. Martin.



THEME

5 All Kinds of Animals

"Because all creatures are connected,
each must be cherished with love and respect,
for all of us as living creatures are dependent on one another."
—Pope Francis, from *Laudato Si'*



Setting the Creation Table Add stuffed animals, small toy animals, picture books about animals, animal creations made of clay or pipe cleaners; an image of St. Francis of Assisi if one hadn't been included earlier.

Prayer: *Gather around the prayer table and light the candle.*
Encourage children to be thinking of creatures.

Leader: Creator God, we are learning about so many creatures and yet there are millions more! Thank for you the invertebrates, like spiders,
(pause and let a child add to this category).

Leader: Thank you for the fish such as salmon *(pause for children's contribution)*; for birds like hawks *(pause)* reptiles like garter snakes *(pause)*, amphibians like frogs *(pause)*, for mammals like polar bears and us!

All: Thank you! Amen.

Creation celebration Choose a book that celebrates something in nature (see "Resources" for suggestions); read it with someone and talk about what you love in nature, or something new you learned in the book. Then pray together. Either ask for help for an issue that concerns you or give thanksgiving.

Invertebrates

Invertebrates are animals that have an exoskeleton. They do not have a backbone. There are many kinds of invertebrates. In the list, which creatures are invertebrates? Circle T for true, for each one that is an invertebrate, and F, for false.

T/F centipedes

T/F centimeters

T/F spiders

T/F ticks

T/F sticks

T/F snails

T/F octopuses

T/F dolphins

T/F earthworms

T/F leeches

T/F jellyfish

T/F sea stars

T/F sand dollars

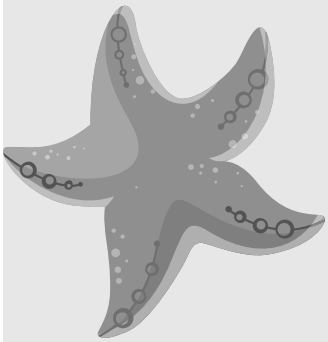
T/F sand box

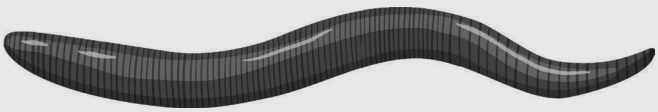
T/F lobsters

T/F tardigrades

T/F beetles

T/F butterflies





Vertebrates, with a Fish Focus

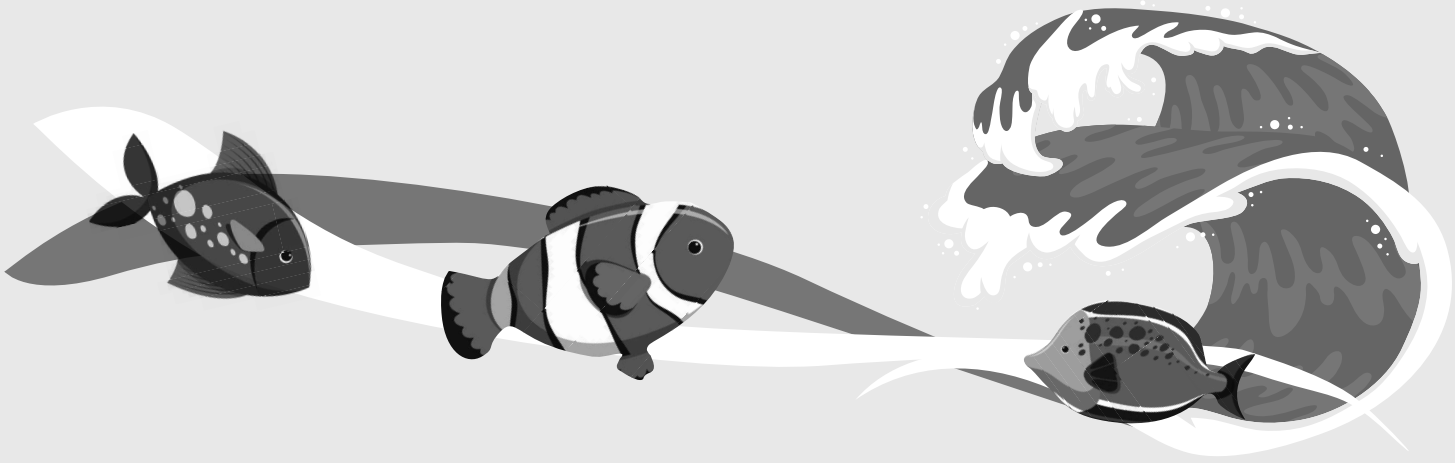
You are a vertebrate because you have a backbone. Of all the kinds of life forms, vertebrates are not the biggest group, but we are most familiar with vertebrates: the fish in an aquarium tank, the frog by the pond, the neighbor's cat, the person in the mirror! Here is a list of species within the vertebrate category. Name one or two examples of each:

Fish _____ Birds _____ Reptiles _____
Amphibians_____ Mammals_____

Fish can be found in fresh water and salt water. Some fish live parts of their lives in both. Here is a list of some fish that do this. Write the letters in bold on the lines below to find out the word for the kind of fish who can live in both kinds of water.

s**a**lmo**n**
sh**ad**
he**r**ring
tr**o**ut
la**m**prey

___ ___ ___ ___ ___ ___ ___ o u s



Birds: Survivors!

Birds are cousins to dinosaurs, but birds survived! Birds are some of the most successful vertebrates on earth, with more than 9,000 species. They are found all over the earth. Become an **ornithologist** for five days to learn about a bird that is common to your area. Choose a bird you have seen often. Read the questions below. Watch this bird for the answers.

- What kinds of food does it choose? _____
- Does it "sing" or "talk"? _____
- Does it seem to be calling to another bird, and if so, have you heard an answer? _____
- Where does it usually perch? _____
- Describe what it looks like—colors, shape of body, color of legs and beak, length of tail. etc. _____

_____

_____

Like the famous artist and ornithologist, John James Audubon, draw a picture of the bird you studied.

Reptiles: (Almost) Everywhere

There are about 11,700 species of reptiles in the world! These animals are cold-blooded, have bodies covered with scales, and have at least one lung. Below are groups of reptiles that are found living together. Each group lives in different places in the world. Match the location to the groups.

____ flapshell turtle, spiny-tailed lizard, saw-scaled viper, yellow-bellied house gecko, sand boa

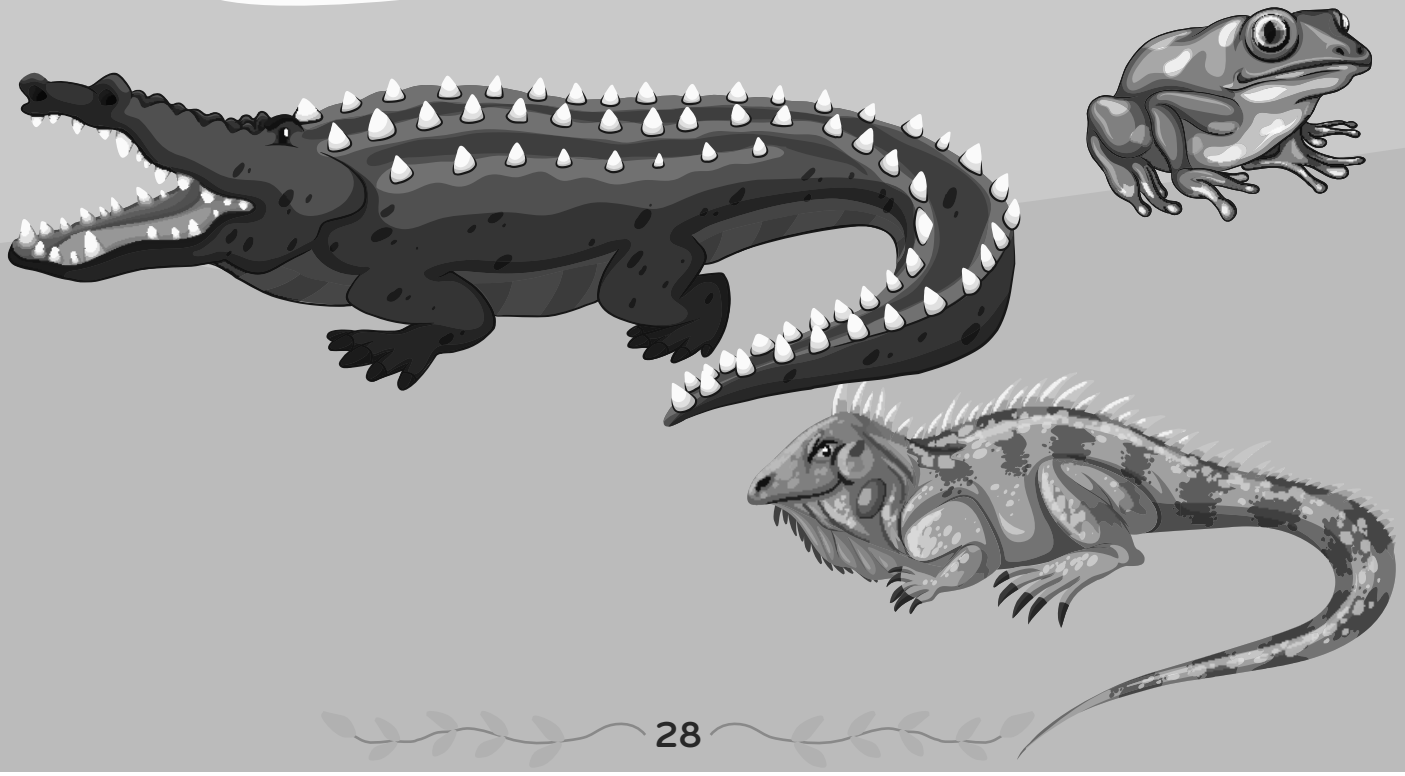
___ snapping turtle, painted turtle, garter snake, adder, viviparous lizard

___ emerald tree boa, green anaconda, green iguana, crocodiles, and alligators

___ no reptiles

___ rock python, black mamba, leopard tortoise, clawed frog, Nile crocodile

A. Boreal Forests of Canada and Eurasia
B. Desert, Pakistan
C. Arctic
D. Amazon Rain Forest
E. African Savanna



Amphibians: Curiosity and Concern

Be curious about amphibians:

- All these cold-blooded vertebrates begin life in water and are born with gills. Their bodies then go through changes so they can also live on land.
- This category includes frogs, toads, salamanders, and newts.
- In comparing them with other animals, it seems they would come between fishes and reptiles.

What is something else you would like to learn about amphibians?

_____

The name "amphibian" is a Greek word. What does it mean?

Color over all the letters **M Q T Z.** *Write the remaining letters on the lines below.*

M D Q T O Z
U Z M Q M B
L E Z T L M
I Q F T E Q

___ ___ ___ ___ ___ ___ ___ ___ ___ ___

Why is this a good name for these animals? _____ _____

And Concern

Be concerned about amphibians:

Amphibians are the most threatened class of animals!

Problems with nature can affect them because both their eggs and their skins are porous, and poisons and diseases can get into their bodies more easily than in mammals or insects.

Some people who are concerned about amphibians work as herpetologists, scientists who focus on amphibians and reptiles. Here are some ways they work:

- to understand the environmental conditions of an area, they study the animals to learn what the animals give to and get from their environment.
- estimate how many animals are in an area, which helps to see if a particular species is in danger.
- study animals in the wild to see if the area is threatened by pollution, invasive species, or disease.
- Plan programs that will help with problems they found.
- Research and write reports to people who make laws to protect a species; write articles and speak at conferences to help others understand.

Circle the jobs that most interest you.

Mammals: A Varied Life

Of all the forms of life, mammals are a rather small group, with about 5,400 species. But is a very diverse and interesting group! Here is a trivia quiz with answers to see some of these differences. Be the mammal 'expert' and have fun challenging someone with these questions.

What is the tallest mammal and some of the smallest mammals?

- Tallest: giraffe; Smallest: shrews and bumblebee bats

What is the heaviest land mammal?

- African elephant, though Kodiak bears, rhinos, and hippos are no lightweights!

What do these animals have in common? The sea otter, snowshoe hare, African elephant, gray wolf, lion, grizzly bear, and jaguar.

- They are all keystone species, which means they help hold a whole ecosystem together. The way these animals live causes many other species to survive.

Name some mammals that live in water.

- Leopard seal, whales, dolphins, and manatees

Name the slowest and fastest mammals:

- Slowest: three-toed sloth, fastest on land: cheetah, in water, dolphin

Name some mammals with especially interesting coloring.

- Pink river dolphins, harp seal, jaguars, zebras, and mandrills

What mammal has a tongue that weighs as much as an elephant and a heart that weighs as much as a car?

- The blue whale

How many pounds of bamboo do adult pandas need to eat in a day?

- Twenty-eight pounds

Cows are good friends with each other. What happens when a cow is separated from others?

- The cow becomes extremely anxious.

Name mammals that sing—other than humans.

- Antelope squirrels, Mexican free-tailed bats, whales, and mice.

Words

Invertebrates: Animals that do not have a backbone or bony skeleton. They can be so tiny a microscope is necessary to see them or as big as a giant squid.

Exoskeleton: A tough, outer covering that protects the bodies of some kinds of animals; many animals without backbones (invertebrates) have exoskeletons.

Vertebrates: Animals that have a skeleton and a backbone inside their bodies.

Ornithologist: a person who studies birds in their natural habitats or in a laboratory.

Cold-blooded: having a body temperature that varies according to the animal's surroundings.

Porous: having extremely tiny spaces or holes which liquid or air get through.

Herpetologist: a scientist who specializes in amphibians and reptiles.

Invasive species: any nonnative species (plants, animals, bacteria or other organisms) that disturbs the ecosystems in which it has been introduced; these harm other living things and may grow and spread quickly.

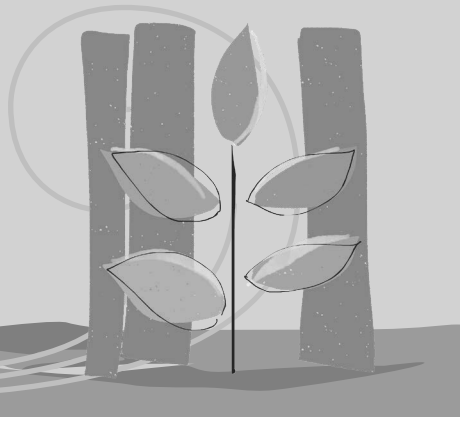
Nonnative: organisms that not naturally occur in an area but are brought in; some nonnative species become invasive.

Creation celebration

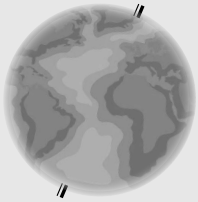
St. Francis of Assisi in Italy is known the world over for his love of God's Creatures. He often talked to them. He also loved to sing. Today, go outside and sing a song for the squirrels and birds and other wild animals. They may not let you know they are listening, and they won't clap no matter how good you are, but that doesn't mean they don't hear you!

THEME

6 Caring for All Creation



"God desires that all the world be pure in His sight.
The Earth should not be injured. The Earth should not be destroyed."
—Saint Hildegard of Bingen, written nine hundred years ago



Setting the Creation Table Use figures or photos of threatened or endangered species.

Prayer: *After learning about some animals on the lists below, have children write their own prayers about these animals. Then, light the candle and share these prayers aloud.*

Our Endangered Friends

Today many people are caring for the earth, but there are reasons to be concerned about how we are treating all of God's creation. Numerous animals and plants are struggling to survive and could become extinct. Here we will look only at the category of mammals. We will use these words and colors to represent them:

- **Critically Endangered:** A species facing an extremely high risk of extinction in the wild. (use red)
- **Endangered:** considered to be facing a very high risk of extinction in the wild. (orange)
- **Vulnerable:** considered to be facing a high risk of becoming extinct (blue)
- **Near threatened:** close to being endangered in the near future (green)

Read the information on page 34. Then with markers for each category, place a dot on the world map on page 35 to show where these mammals are struggling. As you do this, remember this information only shows a few of the many animals and plants that need protection.

If you want to add more to the map, see this list from the World Wildlife Fund:
https://www.worldwildlife.org/species/directory?direction=desc&sort=extinction_status

animal	category	locations
Plains Bison	near threatened	United States plains
White Rhino	near threatened	South Africa, Namibia, Kenya
Beluga whale	near threatened	Arctic Ocean and seas of the north
Giant Panda	vulnerable	China
Black Spider Monkey	vulnerable	South America, areas north of the Amazon River
Lion	vulnerable	Tanzania
River Dolphin	endangered	Nepal, India, Bangladesh
Black-Footed ferret	endangered	North America
Tigers	endangered	Thailand, Japan, Indonesia
African forest elephant	critically endangered	Gabon, Republic of Congo
Amur Leopard	critically endangered	Russia
Bornean Orangutan	critically endangered	Borneo

Read the information on page 34. Then with markers for each category, place a dot on the world map on page 35 to show where these mammals are struggling. As you do this, remember this information only shows a few of the many animals and plants that need protection.

Who Cares?

Who cares for the earth? Many people do and in many ways! Here are descriptions of some kinds of work being done for creation.

1.____ This hero from Sweden learned about climate change at age 8; at age 15, she began trying to get politicians to think about this. Later that led to tens of thousands of other students around the world to also do this! Since then she has become famous, traveling to many countries to speak about climate change.

2.____ This hero is from Vietnam; he works to save an endangered animal, the pangolin. To do that, he works towards stopping illegal poaching. He also founded and works in clinics for pangolins. He also founded schools to teach many others how to care for numerous threatened animals so they can be released into the wild.

3.____ This hero, from Kenya, was the first woman in eastern or central Africa to earn a doctorate degree and became a teacher in veterinary science. Concerned about deforestation, she started groups of women to plant 40 million trees! She was arrested for this work, but later, given many awards for it.

4.____This hero is from the Netherlands. At age 16, he was SCUBA diving in Greece and saw more plastic bags than fish in the sea! Concerned, he used his creativity, technology, and ocean currents and designed the world's first ocean plastic cleanup system. Today he has a company that is doing a great deal of work to clean the waters of the world.

5.____ This hero was born in England and played with her toy chimpanzee, dreaming that someday she would go to Africa to see some of her favorite animals. When she grew up, she did go and learned how best to study chimpanzees. Her work is very famous. Now she works to save chimpanzees and other animals and travels the world to speak of these concerns.

Match the names of these heroes to their work.

A. Boyan Slat B. Jane Goodall C. Thai Van Nguyen
D. Greta Thunberg E. Wangari Maathai

St. Francis of Assisi (1181-1226) is a well-known **Creation Care Saint.** He spent much time praying where nature's beauty surrounded him. He lived simply, in caves or in tumbling down churches, waking to the sunrise and voices of birds praising God. Francis loved all of God's creation: rocks, wind, fish, birds, sheep, and people. Francis talked to all of them, calling them his sisters and brothers. And a story claims that he was greatly challenged to help his brother, the wolf:

Francis and the Wolf of Gubbio

A wolf had come to the edges of the town of Gubbio, stealing chickens and other animals. A hungry wolf is very dangerous to all in a town. The terrified townspeople asked St. Francis to help, knowing he had a way with animals. As Francis approached the wolf, it started to lunge at him with bared teeth. Francis said, "On behalf of Jesus, I command you to not hurt me or any other of God's creatures." The wolf backed off and sat down at Francis' feet! "You must not harm creatures," Francis scolded the wolf. "But I know you are hungry. Promise you will not hurt anyone in Gubbio and I will promise the people will give you food." Francis and the wolf went into Gubbio, where Francis explained. Still frightened, the people listened and saw the wolf put his paw into Francis' hand to show his promise. The townspeople cried with relief and amazement. And they all kept their promises: the wolf was fed each day, and was so trusted, people let him into their homes. And later when the gentle wolf died of old age, people cried again, at the loss of their Brother Wolf.

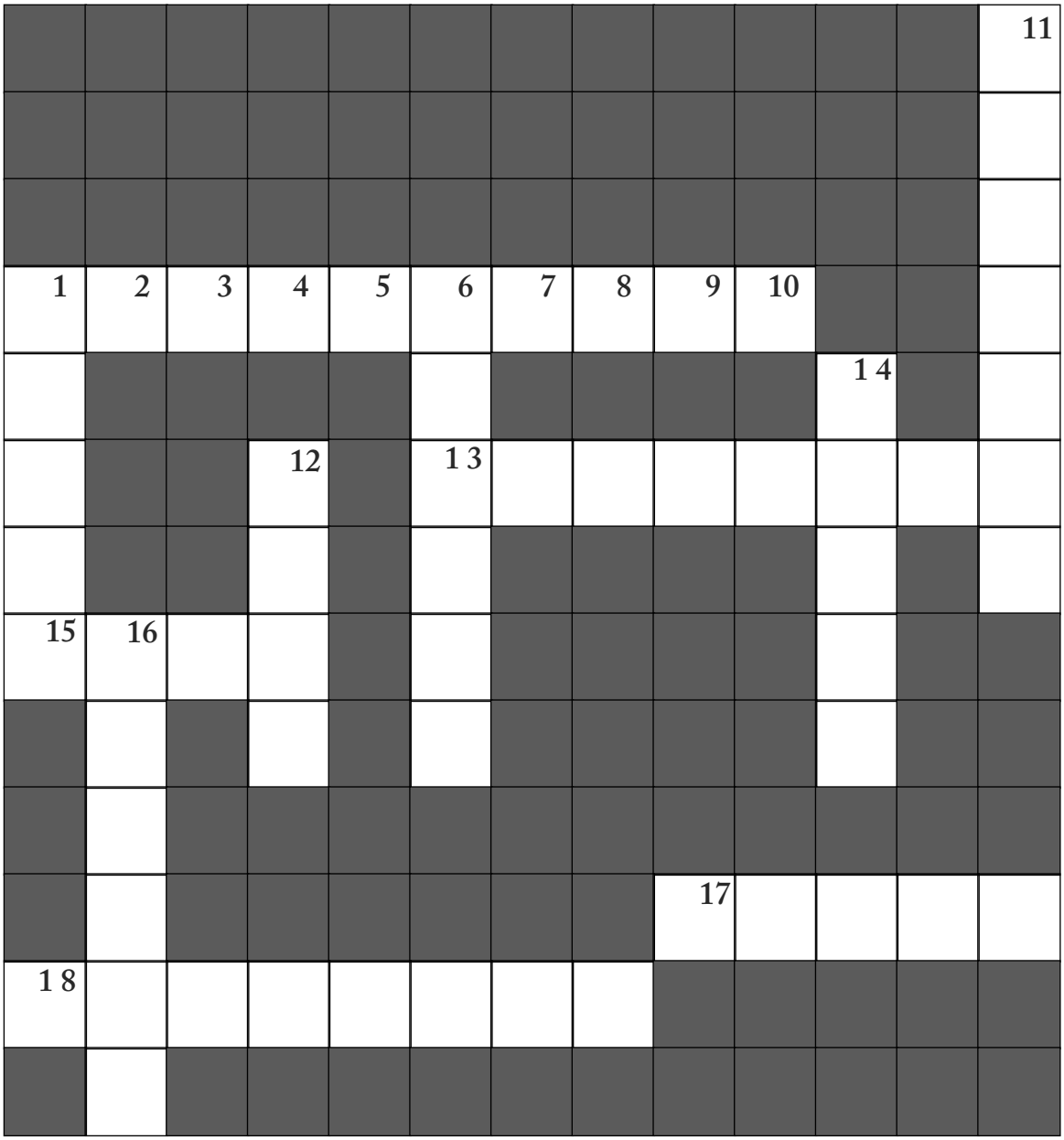
The Wolves of Yellowstone Park

When the great Yellowstone Park was founded in 1872, predators were seen only as problems. The hunting of wolves and other animals were encouraged, so by 1926, there were no wolf packs left in the huge park! And this changed the land and water greatly. Without wolves as predators, the elk population grew too large. The elk came down from the hills to graze on willow trees near the river. With young trees being eaten, songbirds had nowhere to nest, and beavers had no trees to create their ponds, so they left. Without beaver's dams and the shade from trees and plants, water temperatures were too hot for cold water fish. And these were just some of the problems.

Years later, as people began to understand that species need each other to survive, wolves were slowly and carefully brought back to Yellowstone. Scientists were astounded at the changes that gradually happened. Some animals in the park became healthier, and many others returned to the area. Here are some that returned: beavers, beetles, songbirds, eagles, hawks, muskrats, amphibians, lynx, ducks, fish, reptiles, weasels, badgers, and bears. The rivers, trees, and other plants were also helped by the return of the wolves!

Just as the people of Gubbio began to hope that their lives would be good again because they were caring for the needs of a wolf, the changes in Yellowstone Park brings hope to many. It is a hope that other needy places can also be restored when humans work towards God's plan for nature.

Here is a puzzle using words found in this booklet.



Across:

1. Jane Goodall studies this kind of mammal_____
13. All of God's _____
15. _____ is made up of organic material, sand, and clay
17. This is one of our most important resources
18. A herpetologist studies amphibians and _____

Down:

1. All living organisms are made up of these.
6. There are no reptiles here.
11. St. Hildegard experienced these
12. St. Francis worked out a plan with this animal
14. _____ are cousins to dinosaurs
16. The most common element on the earth.

Words

Extinct: the dying out or disappearance of a species from earth; no longer existing.

Climate Change: the long-term changes in global temperatures and other weather issues, seen as being caused by human activity.

Poaching: the killing, trapping, or taking of wild animals or fish without permission.

Deforestation: When forests are cut down and land is cleared for other uses; often this causes serious environmental problems.

Prayers to the God of All Creation

You may choose to mime the motions that the words suggest as part of your prayer, or paint or draw images that come to you through these prayers.

Morning Prayer

As I arise to the morning sun, I thank you, Creator God, for the light of another day, for the call of the morning birds, and the food to break my fast. Show me ways to be kind and caring this day. And may the good saints Francis and Kateri Tekakwitha guide me all my days to take delight in your creation. Amen.

Midday Prayer

With morning passed and evening yet to come, may I pause in my day with your saints Hildegard and Martin to see all your gifts, Creator God. Bless the trees that shelter me and other creatures. Bless the waters that refresh the fields and crash upon the shores. Bless the wind in my hair and the ground on which I walk. And as I walk this day, may I feel that you are with me. Amen.

Evening Prayer

Bless the darkness and the coming light. Bless those who weep and those who laugh this night. Bless the small animals, the quiet ones, the gentle ones. Bless the large animals, the noisy ones, the fierce ones. Creator God, help me feel thankfulness for all you have given this Earth. And as I welcome the night, may I sense you in the holy darkness. Amen.

Creation celebration Be creative about God's creation! First, ask yourself: What do I love about God's creation? What makes me feel joyful when I am in nature? The changes of the seasons? The smell of rain? The sound of a busy bumble bee? And, what colors help me feel happy and full of life? Now get a big piece of paper and markers or paints of many colors. Begin to create God's creation on paper! Make a joyful picture that makes you want to sing!

RESOURCES

Listed by themes

Theme 1: All Creation Waits

Books:

The Sense of Wonder, A Celebration for Parents and Children by Rachel Carson; photos by Nick Kelsh.

God Made That!, Catholic Nature Field Guide, by Kathleen M. Hoenke and William A. Jacobs, Illustrated by Fiona Osbaldstone

https://paulinestore.com/god-made-that.html

Information on species:

wwf.panda.org/discover/our_focus/wildlife_practice/about_species/

Videos:

L*audato Si'* explained to children:

vimeo.com/340405091

An explanation of the different kingdoms of species:

www.youtube.com/watch?v=SIbFuiCfkr8

Theme 2: Water and Air

Books:

One Well, the Story of Water on Earth by Rochelle Strauss

The Global Ocean by Rochelle Strauss

SAINTS FOR CREATION CARE:

Hildegard of Bingen

Videos:

Music by Hildegard of Bingen:

www.youtube.com/watch?v=0YTOiJ-zjP0

Books:

The Secret World of Hildegard by Jonah Winter

Hildegard's Gift by Megan Hoyt

Hildegard of Bingen: Scientist, Composer, Healer, and Saint by Demi

Websites:

visualmelt.com/Hildegard-von-Bingen

Theme 3: Bacteria, Fungi, and Protoctista

Website:

Slime mold:

www.youtube.com/watch?v=mOI-JINcDVs

Kateri Tekakwitha:

Saint Kateri Conservation Center, www.kateri.org

SAINTS FOR CREATION CARE:

Kateri Tekakwitha

Books and Materials for Classroom and Home Use:

Saint Kateri Tekakwitha, Lily of the Mohawks by Anne E. Neuberger

anneneuberger.com/all-books/saint-kateri-tekakwitha-lily-of-the-mohawks/ and anneneuberger.com/people-puppets-parables/saint-kateri-tekakwitha/

Theme 4: Soil, Seeds, Trees, and Other Plants

Books:

A Seed is Sleepy by Dianna Hutts Aston

Can You Hear the Trees Talking? by Peter Wohlleben

THEME 5: All Kinds of Animals

Websites:

Audubon Society for kids:

www.audubon.org/get-outside/activities/audubon-for-kids

Kids and Herpetology:

www.worldwildlife.org/species/directory?direction=desc&sort=extinction_status

THEME 6: Caring for All Creation

Website:

A list of vulnerable and endangered animals:

www.worldwildlife.org/species/directory?direction=desc&sort=extinction_status

Answers to Puzzels

Page 5

S	**A**	**L**	**I**	**V**	**A**	C	L	N
G	**L**	**A**	**C**	**I**	**E**	**R**	**S**	Q
R	**I**	**K**	H	D	W	**A**	**N**	A
O	**C**	**E**	**A**	**N**	**S**	**I**	**O**	P
X	**E**	**S**	I	E	**T**	**N**	**W**	T
H	**B**	S	L	**D**	**E**	**W**	C	M
A	**E**	T	S	G	**A**	A	C	L
I	**R**	**I**	**V**	**E**	**R**	**S**	H	E
L	**G**	**F**	**R**	**O**	**S**	**T**	K	D

Page 6 1= G; 2= D; 3= C; 4= B; 5= H; 6=E; 7=A; 8=F

Page 8 God's love

Page 11 bacteria

Page 13
1=D 2=C 3=E 4=B 5=A

Page 14 all three are Protoctista

Page 18
Do NOT check or add these to soil: candy wrappers, plastic bottle tops, plastic plant pots, cigarette stubs, Styrofoam, chicken bones.

PAGE 20 air, floods, oxygen, water, slowing, housing, soil, people

Page 25 centimeters, sticks, dolphins, and sand boxes are not invertebrates!

Page 26 anadromous

Page 28 B, A, D, C, E

Page 29 DOUBLE LIFE

Page 36 1-D; 2-C; 3-E; 4-A; 5-B

Page 39