

Mini-beasts: Teacher's topic guide

God is Creator (Creation Day 6) Year 2

Spiritual Awareness

God created mini-beasts after their own kind, on day 6 along with other land animals.

The instinctive habits of mini-beasts teach us valuable lessons in life. We see community insects, working together with cooperation, serving one another with willingness. We see the ant with its wisdom to store food during plentiful times. We see the spider with its unique ability to spin a web, with patience and perseverance.

Through the creation, God shows us the wisdom of ordered communities. The community living of ants and bees are amazing examples to us in the way they work together. We see the wisdom in distributing tasks, an illustration of how the body of Christ works together. The Bible says, 'Consider the wisdom of the ant.' We not only see wisdom in its social behaviour, but also in the way it prepares for the future, storing food for the necessary time. This is an illustration of our need to plan ahead.

Values: Our response to 'God is Creator'

- **Thankfulness** to God for His supernatural ability to create and provide the things we need to live.
- **Trust** in a mighty, supernatural God. Recognize that He is in control of all He has made.
- **Stewardship**: showing care for the universe He has created.
- Act responsibly during outdoor investigations.
- Treat living things in a responsible way.

Outcomes: Students will

- understand the role mini-beasts play in the ecosystem
- understand that mini-beasts know what to do by instinct, an attribute given to them by God, (Job 27:10)
- understand stages of various life cycles
- discover information about food and habitats
- study way in which some mini-beasts live in communities and the roles members play
- Understand that all animals have a life cycle that includes being born, developing into an adult, reproducing, and eventually dying.
- Understand that the details of life cycles vary from one organism to another.
- Understand that some insects develop new body parts (like wings) and change body shape as they go through different stages in their life cycle.

Bible stories and passages

Genesis 1-2 The Creation

Proverbs 6 – the wisdom of the ant in preparing food for the winter.

Proverbs 30:24-32 – the lessons we can learn from God's creatures

Psalms 150:6 - - Praise the Lord, all living creatures.

Acts 17:28 - In Him we live and move and exist.

Bible verses

Proverbs 6:6 – Lazy people should learn a lesson from the way ants live. They have no leader, chief or ruler, but they store up their food in summer, getting ready for winter.

Psalm 150:6 – Praise the Lord all living creatures!

Job 12:7-10 – Even the birds and the animals have much they could teach you; ask the creatures of the earth and sea for their wisdom. All of them know that the Lord's hand made them. It is God who directs the lives of His creatures. (GNB)

Key Questions

How do little creatures know what to do?

About community insects

How do community insects such as ants and bees serve one another?

How do animal builders such as spiders and bees show patience in building their homes?

What can we learn about wisdom from the ant?

How can we be prepared for the future?

About butterflies and moths

Where did the egg come from?

What changes does the caterpillar go through on its way to becoming a butterfly?

What do you think a female butterfly does before she dies?

How long do the changes take?

Where do the babies live?

Where do the adults live?

Do the babies eat different things than the adults?

Activities

- Go on nature walks
- Search for mini-beasts in various places e.g. hollow trees, under rocks.
- Build a suitable home for mini-beasts and observe their behaviour e.g. earthworms, ants, caterpillars, tadpoles, silkworms.
- Use a magnifying glass to make observations.
- Classify mini-beasts into families e.g. insects, spiders, snails.
- Classify according to locomotion.
- Classify according to where they are found.
- Make paper insects and spiders for classification and language games e.g. place the blue beetle under the red butterfly.
- Draw and label mini-beasts.
- Research information on habitat, food, homes, defense mechanisms, life cycles.
- Gather information using information cards that can be set up in work centres. Cards give information on community roles, mating egg laying etc.
- Draw and label the body of a community insect.
- Discuss the control of garden pests.
- Discuss the usefulness of some mini-beasts to man.
- Discuss whether biting and stinging insects were part of the original perfect Creation.

ACTIVITIES FOR COMMUNITY INSECTS:

- Describe the habitat and community behaviour of ants, bees and wasps.
- Make regular observations of ants in the school ground.
- Set up sources of sugar or honey to attract the insects.
- Research community roles, mating, and egg laying.
- Record information.
- Draw and label community insects, including queen and workers.
- Observe the wisdom of the ant community in preparing for the future and discuss how this can be applied to our own lives.
- Observe the instinct used by community insects and relate this to God's gift of wisdom i.e. knowing the right thing to do.
- Observe the wisdom of insect communities in being able to work together in an organized fashion.
- Observe the serving nature of community insects, each member serving another.

ACTIVITIES FOR LIFE CYCLES

- Observe animal life cycles. Keep a diary to record changes.
- Collect tadpoles or caterpillars, set up homes for them and observe life cycles.
- Sequence picture cards showing stages in life-cycles of butterflies.
- Draw life cycles of butterflies.
- Make a chart showing food and habitat.
- Observe the changes that occur during the growth and development of insects.
- Make and record observations.
- Represent and communicate ideas and findings in a variety of ways such as diagrams, drawings and simple reports.

Assessment

- Draw a diagram to show the life cycle of a minibeast. Use arrows to link drawings. Add labels and captions.
- Present information on one mini-beast using drawings and text.
- Submit a diary of your observations of mini-beasts.
- What have I learned from the study of mini-beasts about God and the Bible? about doing what God wants me to do?

Learning Connections

English: Write about mini-beasts and make books.

Art: Make colourful butterflies using tissue paper for wings.

Make a giant beehive from hexagons; make paper mache ants or bees. Make paper mache spiders and spider webs from wool and sticks; or make 2D spider webs by 'drawing' with paper strips on a contrasting coloured piece of paper.

Mathematics: Count the legs of ants and bees, counting by sixes; discover the stability of the hexagon shape.

Beacon Media research cards: Minibeasts

Make-your-own books: Insects, Butterflies and moths; Spiders

Year 2 Values education

God is Creator

Care for Creation

Take care of the earth, and the people, plants and animals who live on it

Take care to turn lights off.

Take care to turn the tap off.

Take care to put litter in the bin.

Take care of plants.

Take care of animals.

Activity

Draw pictures of ways you can care for the earth and living things.

What does the Bible say about caring for the earth?

Genesis 2:15 God put man in charge of the Garden of Eden.

Psalm 24: 1 The earth is the Lord's.

Psalm 95:1-11 A Psalm about God the creator

Hebrews 1:10 You, Lord, laid the foundation of the earth in the beginning, and the heavens are the work of your hands.

Psalm 150:6 Let everything that has breath praise the Lord.

Practical Science Year 2: God is Creator

Topic: Minibeasts

Observing Ants

What you need:

- Ants
- Honey or sugar water for ant bait
- Small piece of wood or building block (the obstacle)
- Notebook and pen

Directions:

- Find some ants that are moving in a line. You will most likely find them moving between their anthill (their home) and a source of food.
- Ask the students where they think the ants are coming from and where they might be going.
- Place honey or sugar water nearby and watch the ants' reactions. After a while, you should see one ant come to investigate the bait and report back to the others. The rest will soon follow.
- Now make things a bit more difficult for you're the ants. Place the obstacle between the ants and the bait. How long does it take for them to find an alternative path to reach the bait?
- Remove the obstacle after some time and observe the ants' behavior again.
- Ask your child to note how smoothly they react to changes in their environment and seem to have such a good memory for routes and paths.
- If possible, encourage him to make draw and decorate ant pictures in the notebook.

<http://www.schoolofdragons.com/how-to-train-your-dragon/science-activities/science-activities-kindergarten>

Practical Science: Minibeasts

Observing Earthworms

What you will need:

- Plastic bag
- Magnifying glass
- Paper
- Pencil

What to do:

1. Collect some worms and keep them in a container in moist earth in the classroom.
2. Discuss worms, their lifestyle and their role in the ecosystem with the class.
3. Discuss where you might find worms.
4. Have the students observe the shape and color of the worms and draw a worm on paper.
5. Let the students use magnifying glasses to observe details about the worms' bodies and movements
6. Discuss the findings with the class.
7. Record findings using drawings and short sentences.

Art Year 2

God is Creator

Topic: Minibeasts

Biblical connection: God made all living creatures.

Bible art as a wall display: Psalm 150:6 – Praise the Lord all living creatures!

1. Construction

- Make colourful butterflies using tissue paper for wings.
- Make a giant beehive from hexagons
- Make paper mache ants or bees.
- Make paper mache spiders and spider webs from wool and sticks
- Make 2D spider webs by 'drawing' with paper strips on a contrasting coloured piece of paper.

2. Drawing and Painting

- Observe minibeasts and draw them. Make sure you draw the right number of legs.
- Draw insects with wings in crayon or oil pastel. Use food dye to colour in the wings.
- Paint or draw butterflies with symmetrical wing patterns.
- Paint minibeasts in a flower garden.

Thinking Skills Creator Year 2

<p>Minibeasts 1</p> <p>Think of 5 things you can do to keep mosquitoes away.</p>	<p>Minibeasts 2</p> <p>Think of as many minibeasts as you can that start with "s".</p>
<p>Minibeasts 3</p> <p>What is the same about a butterfly and an ant? Make a list.</p>	<p>Minibeasts 4</p> <p>What are the differences between a spider and a cockroach? Make a list.</p>
<p>Minibeasts 5</p> <p>Invent a way of stopping snails from eating your plants, without using poison.</p>	<p>Minibeasts 6</p> <p>a) Pick the odd one out: butterfly, spider, ant, bee, fly</p> <p>b) Pick the odd one out: worm, snail, slug, butterfly</p>

Insects

God is Creator

A book to make

Insects have three parts to their bodies. They have a head, a chest and a stomach.

Insects have six legs.

Some insects have wings.
Some do not have wings.

Butterflies have wings. Bees
have wings.

Some ants have wings. Some
ants do not have wings.

There are many kinds of insects.

Some insects help us. Some insects eat other little insects on our plants. A ladybird beetle is one of these.

Bees help us. They make
honey.

Some insects do not help us.
Flies carry germs on to our
food.

Mosquitoes do not help us.
They bite us.

All insects have babies. Baby insects come from eggs. Insects lay their eggs in many places, like on a leaf.

Words to learn:

head

chest

stomach

wings

butterflies

ladybird

beetle

bee

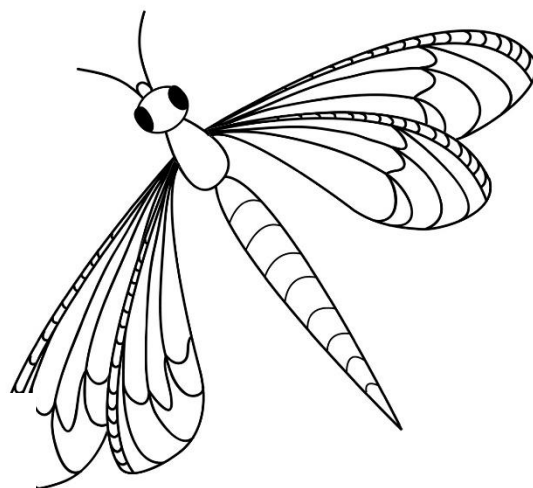
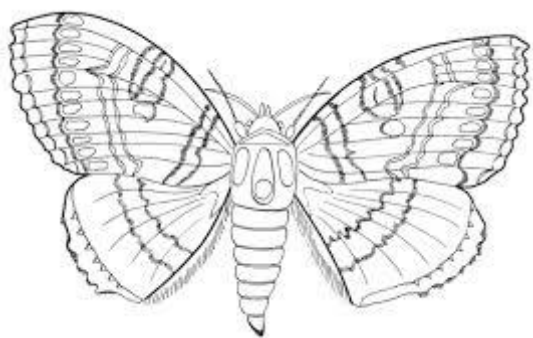
honey

flies

germs

mosquitoes

Picture collection



Butterflies and moths

God is Creator

A book to make

Butterflies and moths have six legs. They are insects.

Butterflies have knobs on the end of their feelers. Moths have feelers that look like feathers.

Butterflies rest with their wings together. Moths rest with their wings apart.

Butterflies come out during the day. Moths come out at night.

Butterflies and moths start life as tiny eggs. Caterpillars hatch from the eggs. The eggs are on a leaf.

The caterpillars eat the leaves
and grow bigger.

When it is big enough the caterpillar hangs upside down from the leaf and makes a hard case around its body. This is a cocoon.

Inside the cocoon the caterpillar's body changes to become a butterfly or moth.

After about six days the case splits open and the butterfly pulls itself out.

The butterfly holds its wings
out to dry in the sun.

The butterfly flies away. Soon she will lay eggs on a leaf and some new baby caterpillars will hatch.

Words to learn:

butterfly

knobs

feelers

feathers

night

caterpillar

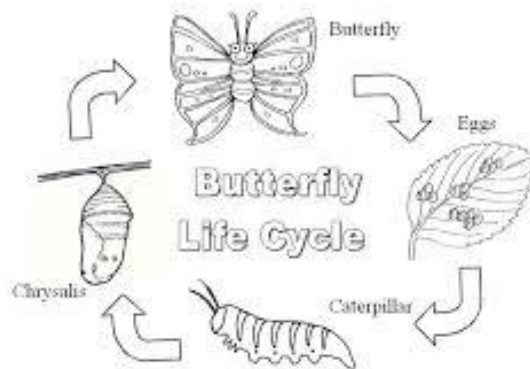
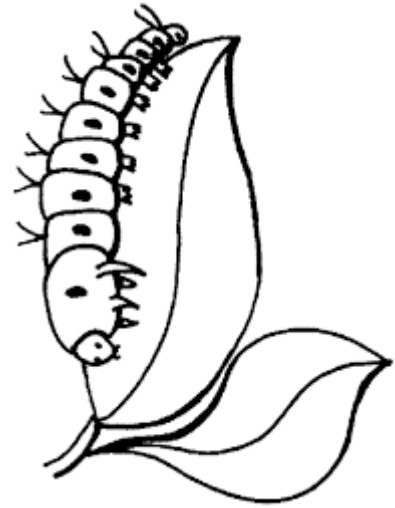
hatch

leaf

leaves

cocoon

Picture collection



Spiders

God is Creator

A book to make

Insects have six legs but
spiders have eight legs.

Spiders have two parts to their bodies. They have a head and a chest in one part. The head and chest are in the other part.

Many spiders can bite. They bite the insects they catch.

Most spiders spin a web made of silk. The silk comes from tiny holes at the back of the stomach.

Spiders catch food in their web.

Some spiders don't make a web. They must catch their food in other ways.

Some dig holes in the ground
and jump out to catch insects.

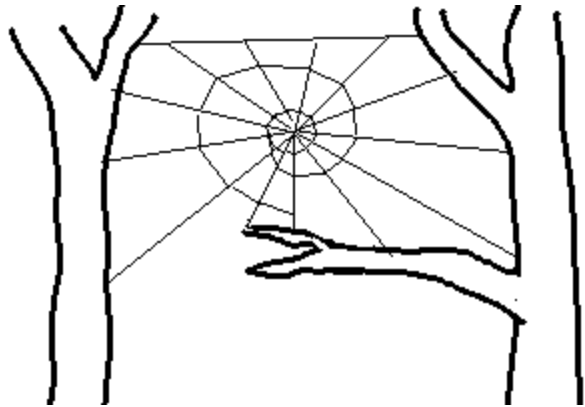
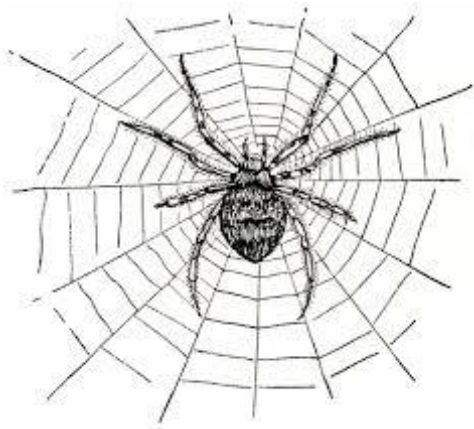
Some very, very big spiders live in Africa and South America. They can even eat small birds.

Words to learn

spider

insects
head
chest
catch
silk
stomach
ground

Picture collection



Trap door spider

