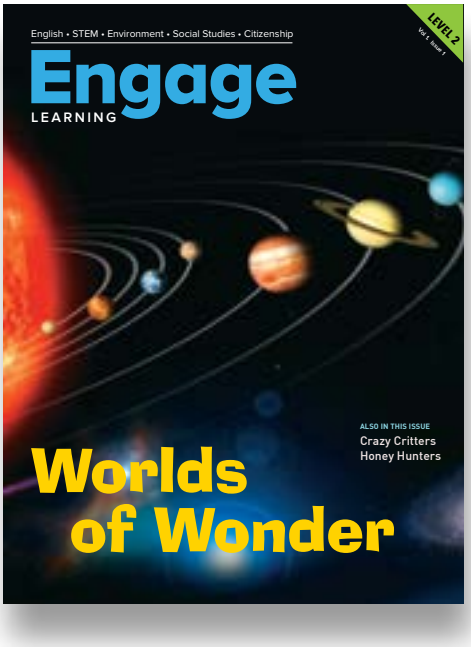
TEACHING GUIDE



For ages 7 to 8 years

English • STEM • Environment • Social Studies • Citizenship

Engage
LEARNING

Vol. 1, Issue 1, Level 2

TABLE OF CONTENTS

Dear Educator,

Welcome to the first issue of *Engage*, a classroom magazine for students from pre-K through Class 6. Depending on the grade level you teach, *Engage* has four reading levels. Since all levels carry the same articles, adjusted for appropriate content load and reading level, you can mix and match levels, or use just one level. All the levels will engage your students with great nonfiction content.

Each of the six annual issues will take your students on amazing adventures around the world. Join scientists as they advance our knowledge of the world and its cultures. Each article is correlated to your curriculum. You can use the articles to engage students in learning or to review what you have already taught them.

The Teaching Guide provides a framework you can use to teach these articles and link them to your curriculum. They can be used for whole-class, small-group and individual instruction.

Each lesson develops students' ELA skills and teaches science concepts. Use all the lessons, activities and worksheets, or pick and choose the ones appropriate to your teaching style.

MEET THESE STANDARDS

- ✓ **Parts of Speech**: Identify parts of speech in a story
- ✓ **Content Vocabulary**: Students learn new content words.
- ✓ **Building Sentences**: Students learn key vocabulary and use them to build sentences.
- ✓ **Space Science**: Students name the planets in our solar system and compare their characteristics.
- ✓ **Life Science**: Students learn about pollination.
- ✓ **Life Science**: Students understand that animals have traits that help them survive.
- ✓ **Social Studies**: Students understand that cultures have unique traditions.

WORLDS OF WONDER

LANGUAGE ARTS STANDARDS

Identify the parts of speech in a story.

SCIENCE STANDARDS

Name the planets in our solar system and compare their characteristics.

BEFORE READING

BUILD BACKGROUND

Prepare a KWL chart with 3 columns. Label each column with the headings given below:

What I **know**	What **I want to know**	What I **have learned**

- Quiz students with questions about the solar system and the planets. Note their responses in the first column. Then ask them what else they want to know about the solar system, and note it in the second column. At the end of the session, fill in the third column with students' responses on what they have learned.

- Explain to students the different objects make up our Solar System. Some of these objects include the sun, the planets, moons, asteroids and comets.
.
- Write on a board the names of the eight planets in the solar system in the following order: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune. The planets are arranged according to their distance from the sun.

- Make a second list: Jupiter, Saturn, Uranus, Neptune, Earth, Venus, Mars, and Mercury. Explain that you have now made a list that shows the planets in order of their size. The largest planet is Jupiter and the smallest planet is Mercury.

- Now make a third list with two columns. In the first column, write: Mercury, Venus, Earth and Mars. In the second column, list the planets Jupiter, Saturn, Uranus, and Neptune. Tell students that the planets in the first column are all small, rocky worlds. The planets in the second column are all large worlds made of gas.

- Explain to students that each list helps them understand something about the planets. Scientists categorize what they study. Making categories helps them understand the planets. Remind students that you have categorized the planets by distance from the sun, size and composition. *Ask*: What other categories can you make? (Answers will vary, but could include colour, temperature, planets with cloudy skies, and planets with clear skies.)

MEMORY BOOSTER

The mnemonic 'My Very Elegant Mother Just Served Us Noodles' helps children remember the order of planets from the sun.

Follow up Activity:

End this part of the lesson by having students complete the 'Planet Parade' worksheet.

READY TO READ

Hand out copies of *Engage* and have students turn to page 2.

- Direct students' attention to the images on the spread and discuss them. Read pages 2–11 from the magazine. Focus on pronunciation and voice modulation. Ask children to repeat each line after you. They can also follow the sentences by tracking the words with their fingers.

- Pause after each page and ask them to observe the colour of the planets and how each planet is different. Tell them that Earth has water so it looks blue. Mars has red dust and strong winds blow the dust into the planet's sky, making it look pink. Discuss the different characteristics of each planet.

- Ask the following questions after reading.
  1. What shape are the planets? (*Spherical*)
  2. What colour is each planet? (*Answers may vary.*)
  3. What are some other ways you can categorize the planets? (*Answers will vary.*)

- Ask probing questions related to the planets in order to develop their thinking skills. For example, Earth appears blue because it has water. Planet Uranus is blue too. Do you think it has water too? Ask children to find out facts related to the planets.

Follow up Activity:
End this part of the lesson by having students complete the 'Planet Puzzler' worksheet.

AFTER READING: EXTENSION ACTIVITIES

LANGUAGE CONNECTION

SESSION FOCUS: READING AND VOCABULARY BUILDING

Learning Outcome

Students understand the different parts of speech.

- After reading, ask students to work in pairs to find verbs, common and proper nouns, and adjectives from the story. Have them mark each part of speech. They can underline nouns, draw a rectangle around proper nouns, and circle verbs. Or they could use different coloured markers or crayons for each part of speech.
- Ask children to say an adjective to describe each planet. For example, it could be 'smallest' or 'fastest' for Mercury, 'beautiful' for Saturn or Earth, 'red' for Mars.

Follow up Activity:
End this part of the lesson by having students complete the 'My Favourite Planet' worksheet

STEM CONNECTION

SESSION FOCUS: GRAVITY

Learning Outcome

Students learn that gravity is a force that pulls objects that have mass.

- Pick up any object and drop it on the floor. *Then ask*: What happened? *(The object fell to the floor.)* Why did the object fall towards the floor and not towards the ceiling? *(Gravity pulled the object to the floor.)*

- Explain that gravity caused the object to fall to the floor. Gravity is an invisible force that all objects have. The more matter an object has, the more gravity it has. So, Earth has more gravity than the object you dropped. An object's gravity pulls other objects toward its centre. If you drop a pencil, it will drop towards the floor and not go upwards because Earth's gravity pulls everything towards the centre of the planet.

SESSION FOCUS: PLANETS SPIN

Learning Outcome

Students learn what causes day and night.

- Tell students that Earth spins like a top. Ask a student to come up to the front of the room and to spin around like a top. Tell students that this spinning motion is called rotation.

- Continue by adding that Earth is spinning more like a top ready to fall over. It is tilted. Have the student lean over by about 23° and spin like a top again.

- Ask another student to come up and stand a few metres from the first student. Tell students that the first student is going to portray Earth and the second student is going to be the sun.

- Have the student portraying Earth spin in place while tilting. Explain that Earth's rotation causes day and night. As Earth spins the sun lights different parts of the planet. The sun lights about half of Earth while the other half is in darkness. It takes Earth about 24 hours, or 1 day, to spin once. This time period is called a day.

SESSION FOCUS: PLANETS GO AROUND THE SUN

Learning Outcome

Students learn what causes a year.

- Explain to students that Earth goes around the sun. The path on which Earth moves is called an orbit.

- Use the same two students to demonstrate how Earth goes around the sun. Ask the student portraying Earth to walk around the student portraying the sun. As Earth goes around the sun, tell students that a planet's movement around the sun is called revolution. It takes about 365 days, or 1 year, for Earth to revolve around the sun once.

SESSION FOCUS: EARTH'S TILT AND REVOLUTION CAUSES THE SEASONS

Learning Outcome

Students learn what causes the seasons.

- Remind students that Earth does not just stand straight up and down. It is tilted at about a 23° angle.

- Ask the student portraying Earth to stand at an angle while rotating and revolving around the sun. Have the student stop when his or her head is pointing toward the sun. Ask students which part of the student is receiving more sunlight—his or her head or feet (*head*). Tell students that the student's head represents the north. The north has summer when it points toward the sun and the south has winter because it is pointing away from the sun.

- Have Earth move half way around the sun and stop. His or her head should now point away from the sun. Tell students the north now has winter and the south has summer.

- In between summer and winter, neither the north nor the south point toward the sun. That is when spring and autumn happen.

- Bring the lesson together by telling students that rotation causes day and night. Revolution causes a year, and the combination of Earth's tilt and revolution causes the seasons.

ACTIVITY 1

Learning Outcome

Students learn the relative sizes of planets.

Watch the following video to make the planets from balloons and rice. https://www.youtube.com/watch?v=QkiQnkG-21k

Rice may be replaced by sand or thermocol balls. Make sure the quantities are similar to the ones given in order to make planets of comparative size.

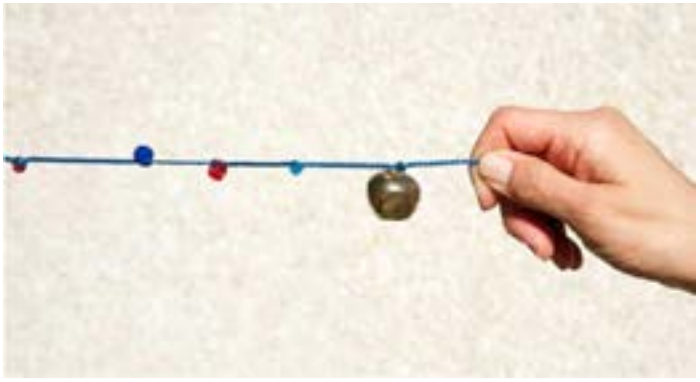
ACTIVITY 2

Learning Outcome

Students learn the relative distance of each planet from the sun.

You need:

1. Beads of different colours and size representing each planet. For example, Mercury – a small grey bead, Venus – a yellow bead, Earth – a blue bead, Jupiter – a brown bead, Saturn – a gold bead, Uranus – a dark blue bead, Neptune – a light blue bead..
2. A thread approximately 3.6 meters long.



***Note**:* This activity demonstrates the relative distance between the planets. It does not show the relative sizes. The beads are not to scale.

To do:

— Take a thread about 3.6 metres long. Thread a big orange bead representing the sun. Make a knot to secure it at one end.

— Now take the grey small bead representing Mercury and thread it. Secure it with a knot 4 cms from the sun.

— Place a yellow bead 7 cm from the sun and secure it with a knot.

— Thread the other beads securing them with knots so they are each 10 cm, 15 cm, 52 cm, 96 cm, 192 cm, and 300 cm from the sun.

— Ask two students to hold the strong model of the solar system so the whole class can see it. Point to each planet (bead) and have the students name it. Ask them to describe what they see. *(The four rocky planets are close together. The gas planets are far apart.)*

Video Hub

Watch these exciting videos:

Exploring Planets https://www.youtube.com/watch?v=nBbTLBNOv3M

How to brush your teeth in space https://www.youtube.com/watch?v=TU9kffoAQ8U

Space food https://www.youtube.com/watch?v=AZx0RIV0wss&list=PLZUBslZxe2r4yvYleQ054nkiYfvGAC2ql

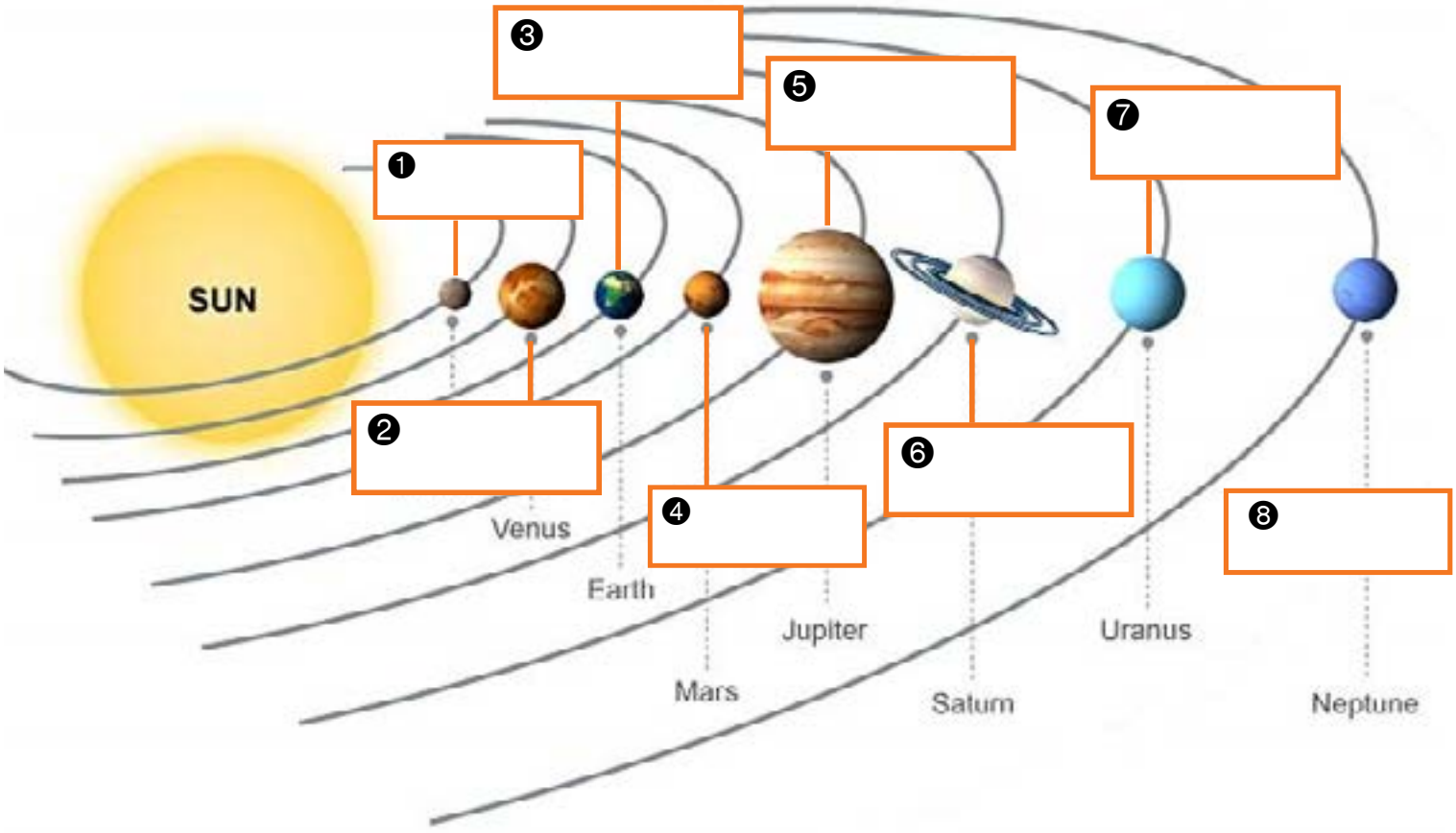
Sleeping in space https://www.youtube.com/watch?v=UyFYgeE32f0=

10 simple things you cannot do in space https://www.youtube.com/watch?v=jGDtreWBhpE

Name _____ Date _____

PLANETS ON PARADE

Refer to the word bank and write an ordinal number for each planet in the space provided.



First Second Third Fourth Fifth Sixth Seventh Eighth

Name _____ Date _____

PLANET PUZZLER

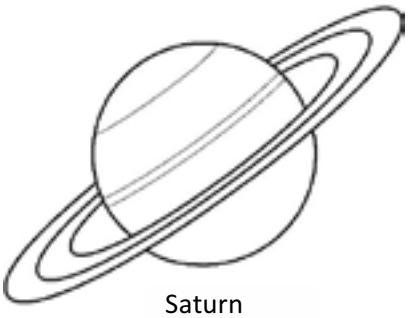
Read the clues. Then use the planet names to complete the crossword puzzle.

Down:

1. This is the hottest planet of the solar system
2. This planet has red dust on its surface
3. This planet is tilted on one side and is very cold

Across:

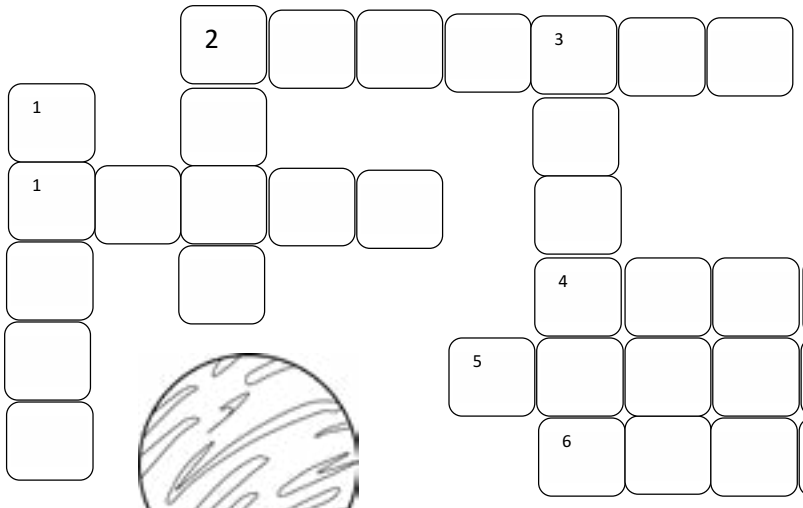
1. This is the only planet with life on it.
2. This planet is closest to the sun
3. Winds on this planet blow backwards.
4. This is the largest planet of the solar system
5. This planet has rings



Saturn

Mars

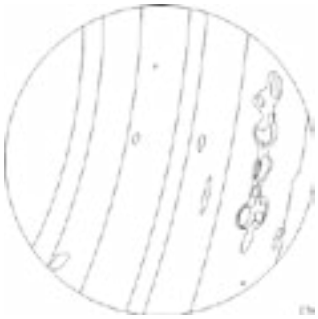
Jupiter



Venus

Earth

Mercury



Uranus

Neptune

THE HONEY HUNTERS

LANGUAGE ARTS STANDARDS
Students learn new content words.

SCIENCE STANDARDS
Students learn about pollination.

BEFORE READING

BUILD BACKGROUND

- Read to the class a poem about bees and pollination. You will find several poems on this website: http://www.canteach.ca/elementary/songspoems53.html. You might read the first one, titled 'Bee'.
- Ask students to repeat the poem after you. Then ask them the following questions:

1. Have you seen a honeybee? Where?
2. What sound does the bee make?
3. What do bees make?
4. What is the structure in which a honeybee lives called?
5. What is nectar?

• Explain that bees have a straw-like, long and sticky tube with which they collect nectar from flowers. This long sticky tube is called a proboscis. The bees store the nectar in a part of their body called the honey sac. They take the honey to their hive. In the hive, some of the bees mix the nectar with chemicals from their bodies and put it into a honeycomb. Then they flap their wings quickly. Wind from the wings dries out the honey. This is how honey is made. Then the bees seal in the honey with beeswax.

• Point out that while collecting nectar, honeybees pollinate flowers. They carry pollen from one flower to another. This pollen is then used by the other flower to make seeds and grow more plants. Without honeybees we would not have many fruits and vegetables.

BUILD WORD POWER

- Prepare flash cards for the following content words and flash them for students to read: honey, bee, beehive, honeycomb, nectar, pollen. Repeat until students can sight-read each word.

- Display the words on the soft board to build the word wall.

- Add more words like ladder, hunter and sting after reading the story.

READY TO READ

Hand out copies of *Engage* and have students turn to page 12.

- Direct students' attention to the photo on the spread and ask them to identify the image. Tell them that the man is called a Gurung. The Gurung are a people from Tibet. Long ago, some Gurung moved to Nepal, where the man lives. The Gurung are also called honey hunters.

- Read pages 14-18 slowly with correct intonation. Children must follow the reading by tracking it with their fingers.

- After reading, ask the following questions
  1. Where do the Gurung live and what do they do?
  2. Do you think it is difficult to climb on high mountains?
  3. Have you been on a mountain trek?

• Discuss how the life of the Gurung is different from the lives of your students.

• Focus on how some people get vegetables and fruits from a market, and how others grow, forage, and hunt for food.

Follow up Activity:
End this part of the lesson by having students complete the 'Honey Hunt Ladder' worksheet.

AFTER READING: EXTENSION ACTIVITIES

GEOGRAPHY CONNECTION

SESSION FOCUS: HIMALAYAS

Learning Outcome

Students locate Nepal and the Himalayas on a map and learn about the Himalayas.

You need:
1. A map of India - physical features (Nepal should be visible)
2. Pointer

To do:
— Show students the location of Nepal on the map. State: Nepal forms a border with India. Ask about other neighbouring countries of India. (Pakistan, China, Bhutan, Sri Lanka)
— Tell students that the Himalayas are mountains spread across five countries. They are India, Nepal, China, Bhutan and Pakistan.
— **Say**: Himalaya means 'Abode of snow' in Sanskrit.
— The highest mountain in the Himalayas is Mount Everest. It is 8,848 metres tall.
— There are many medicinal plants, precious stones and forest products that the people who live in the Himalayas use to earn money..
— Animals like the Tibetan yak, black bear, snow leopard, musk deer and langur live in the Himalayas.

STEM CONNECTION

SESSION FOCUS: PROBOSCIS

Learning Outcome

Students understand how a bee sucks nectar from a flower.

You need:
1. A cup filled with any sweet juice
2. Straw (one for each child)
3. A flower cut-out with a hole in the centre to insert straw
4. Bee head gear

To do:
— Place the paper flower cut out on top of the glass filled with juice.
— Insert the straw in the hole.
— Now invite a child at the activity centre. have the student wear the bee head gear and ask him or her to suck the juice from the glass.
— Show children the link with images to show how a bee sucks honey. https://www.youtube.com/watch?v=rUsTmPZnFlA
— Explain that proboscis is like a straw. Bees have mouths like this to suck nectar from flowers.

CITIZENSHIP CONNECTION

SESSION FOCUS: THE BEE FAMILY

Learning Outcome

Children will be able to identify different types of bees and their roles.

• Discuss the role of each member of the bee family. The Bee family has 3 types of bees: the queen bee, drones and the worker bees.

• The worker bees are mostly females. They clean, repair and defend the hive, and also feed royal jelly to the queen bee. They build the honeycomb from wax and gather nectar, pollen and water. The queen bee's job is to lay eggs. The drones give eggs to the queen bee.

• The worker bees live only for 5-6 weeks and produces upto a 12th of a teaspoon of honey. The queen bees live upto 5 years and can lay upto 2,500 eggs.

• They do the 'waggle dance' to tell other bees where the food source is. They move their bodies at an angle to show the direction of the food source.

• Discuss what different members of a bee community do.

• Discuss the various jobs people do in a community. Then ask how this helps everyone in the community. Be sure to include police, firefighters, as well as other workers.

- Then discuss roles of family members at home and how they help each other. Ask students what they do to help around the house. Tell students that in the honey bee family even the youngest bee does some work. Similarly, they can also help by putting away their toys after playing, or helping lay the table.

- Discuss the various jobs that they could do in the house.

Follow up Activity:
End this part of the lesson by having students complete the 'The Busy Bee Family' worksheet.

MATHEMATICS CONNECTION:

SESSION FOCUS: THE SHAPE OF THE HONEYCOMB

Learning Outcome

Students identify the shape of a honeycomb.

- Show students the shape of a honeycomb. It has hexagonal cells which are arranged close to one another. A hexagon has six sides.

- Draw a hexagon shape on the chalkboard and let students draw it on rough sheets of paper.

- They can draw a few hexagons close to each other to resemble a beehive. Once they have drawn their honeycombs, ask students to colour them.

STEAM CONNECTION

SESSION FOCUS: THE STRUCTURE OF A BEE HIVE

Learning Outcome

Students understand the structure of a beehive and the importance of the hexagon shape.

You need:

1. 8 strips of yellow paper, 2.5 cm wide and 48.3 cm long. The strips should be marked with a rule at every 2.5 cm
2. Glue

To do:

— Split the class into 4 groups.
— Give each group 8 strips of paper.
— Ask students to fold the strips every 2.5 cm.
— Then ask them to stick together the third side of two strips.
— Next, they should stick every 4th side.
— After that, stick the 3rd strip of paper in such a way that it forms a hexagon.
— Once the beehive is made explain how sturdy the structure can be.
— *Ask*: Why do you think honeycombs are hexagons?
— *Explain*: Honey bees need space for storing honey as well as to live. When hexagons are placed together there is no wasted space. The six sides provide a lot of surface area that the honey can stick to. Many architects have used the honeycomb structure design to create sturdy structures for domes, aircrafts, rockets and packaging materials.
— Show them the following video to help them understand beehive architecture.
https://www.youtube.com/watch?v=QEzlsjAqADA-

ENVIRONMENTAL SCIENCE CONNECTION

SESSION FOCUS: POLLINATION

Learning Outcome

Students understand the importance of honeybees as pollinators.

- Ask students if they know how plants produce seeds, fruits and vegetables.

- Many plants have flowers. For plants to produce seeds, they require pollen. This pollen is carried by the wind and by animals from one flower to another.

- When a bee visits a flower to collect nectar, pollen sticks to its body. When she visits another flower, this pollen rubs off onto it. The pollen helps to fertilise the eggs of the flower and produce seeds. This is how plants make fruits and seeds.

- Honeybees are responsible for pollinating many fruits and vegetables. Honeybees pollinate vegetables like cabbage, cauliflower, broccoli, fruits like papaya, red pepper, orange, cucumber, lemon and lime

LANGUAGE ARTS CONNECTION:

SESSION FOCUS: QUEEN BEE GAME

Learning Outcome

Students are able to spell content words.

- Have the children sit in a circle on the floor.
- Appoint a child to be 'the queen bee'.
- The queen bee walks around the circle tapping children on the head and saying, "Buzz, buzz, buzz", with each tap.
- Each child tapped spells the word asked by the teacher.
- If the child is unable to answer he/she gets out of the circle and follows the queen around.
- When the queen calls, "Go make honey" those tapped run off with the Queen bee to an empty spot. The last one to the spot is the new 'queen bee'.

MOVIE WATCH

"Bee Movie" by DreamWorks Animation

Video Hub

Watch these exciting videos.

About Bees https://www.youtube.com/watch?v=dA05LOfPblY

How is Honey made https://www.youtube.com/watch?v=iT6IQx26eHk

How Honey is made https://www.youtube.com/watch?v=nZlEjDLJCmg

Family of Bees https://www.youtube.com/watch/?v=bArNmKbYVm8

Why do we need bees https://www.youtube.com/watch?v=mdfMkr1pXrM

What will happen if all the bees die? https://www.youtube.com/watch?v=JilYBVrFiLA

Name _____ Date _____

MEET THE BUSY BEE FAMILY

Write the task that each honeybee performs.

The Queen Bee

_____

_____

_____

The Drone

The Housekeeper

_____

_____

_____

The Guard

The Hive Builder

_____

_____

_____

The Nanny

The Explorer

_____

_____

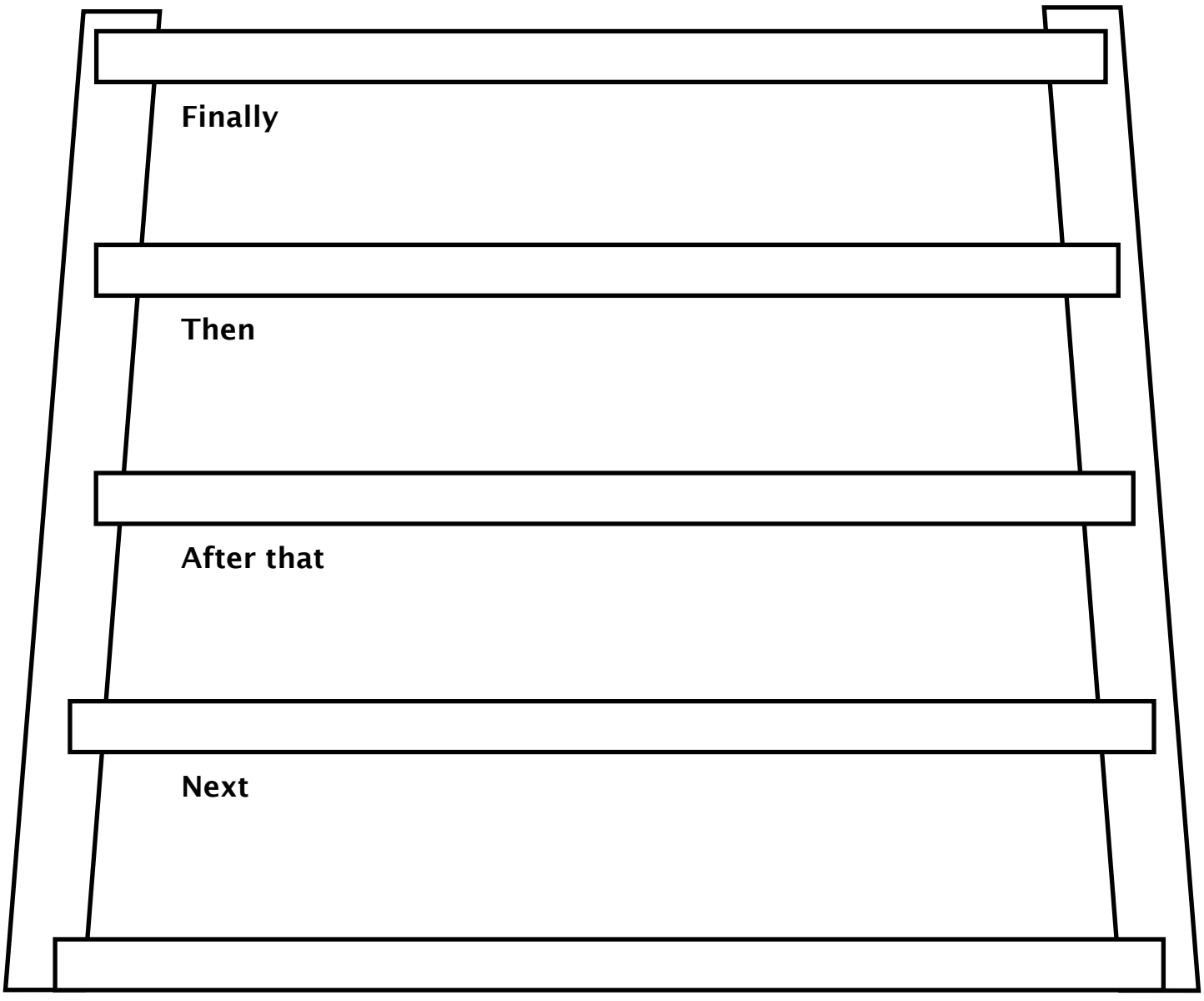
***Fact File*:**
The Guard, the Explorer, the Nanny, the Hive Builder and the Housekeeper are all worker bees.

Name _____ Date _____

HONEY HUNT LADDER

Read the sentences below. They describe how honey hunters collect honey. Place a number (starting from 1) to show the correct sequence of events. Write the sentences in the ladder as per the sequence.

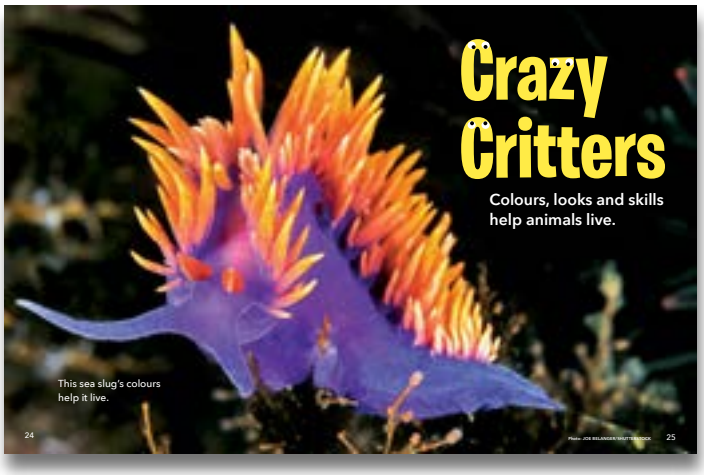
- ❑ The honey hunter cuts the comb with a tango.
- ❑ They walk upto 3 kms on high cliffs to find the honeycombs.
- ❑ They build smoky fire to calm the bees.
- ❑ They collect the honey and walk back home.
- ❑ One honey hunter climbs a rope ladder to reach the comb.



CRAZY CRITTERS

LANGUAGE ARTS STANDARDS
Students learn key vocabulary words and use them to build sentences.

SCIENCE STANDARDS
Students understand that animals have traits that help them survive.



BEFORE READING

BUILD BACKGROUND

- Play a game of 'hide and go seek.' Appoint a child who is the 'catcher'. The 'catcher' shuts his or her eyes while all the other students hide.

- Tell children that they have to make sure that they are not seen by the 'catcher'.

- After the game ask children: What did you do to hide from the 'catcher'?

- *Ask*: "Do you think animals play hide and go seek?" Why would animals want to hide? (Possible answer: so that no one can eat or hunt them.)

- Some animals hunt other animals for food. They are known as predators. In order to protect them selves from predators, prey hide. They hide by either blending in the environment or changing their body colour. The chameleon is one such animal. Even bright colours can help animals blend in. Take butterflies, for example. Brightly coloured butterflies blend in with bright flowers.

ACTIVITY: CAMOUFLAGE

You need:
Several colourful sheets of paper

To do:
— Cut the paper into small pieces.
— Take children to an open area, such as a garden. Scatter coloured paper on the ground.
— If the activity is conducted in the garden, you could hide the green paper amongst the leaves, brown in the mud. There should also be paper of different colours (example, red, yellow, blue) that can be easily spotted. If the activity is conducted indoors, take some pieces of paper that matches the flooring and others that are easy to find.
— Ask children to pick up as many pieces of paper as they can in 20 seconds.
— After the activity, ask students which colours they most easily found. Ask why? (*Because their colours are different than the environment in which they were placed.*)
— Ask students to find some papers that were difficult to spot. Ask why they were difficult to find. (*They blended into the environment.*)
— Similarly, animals blend into their environments so that they are not easily spotted by the predators. This is a trait called camouflage.

READY TO READ

Hand out copies of ***Engage*** and have students turn to page 24.

- Direct students' attention to the photo on the spread and ask them what it shows.

- Let students observe the colours of the sea snail. Ask them to guess where it lives and why it has beautiful colours.

- Continue reading the other pages directing children's attention to the animal and its special adaptation feature.

BUILD WORD POWER

- Read the story again, focusing on words like prey, warning, snout, glide, predator and camouflage.

- One at a time, write each word on the board. Tell students what the word means. Then ask students to use each word in a sentence. Call on several students to say aloud their sentences.

AFTER READING: EXTENSION ACTIVITIES

STEM CONNECTION

SESSION FOCUS: BODY ADAPTATION TO SURVIVE

LEARNING OUTCOME:

Children will be able to explain the various adaptions.

- Ask children what kind of clothes people who live in very cold places wear in winter?

- Explain that in order to keep their bodies warm, people wear woollen clothes. Similarly, some animals grow more fur in winter to keep them warm.

- Ask them to think of animals that live in a very cold climate. Good examples include the polar bear, foxes, bison and snow rabbits. Show them a picture of a polar bear. A polar bear is white so that it is not easily spotted in the ice, and its body is covered with thick fur to protect it.

- Now show them a picture of a penguin. Tell them that a penguin has a special layer of fat under its skin known as blubber which protects it from extreme cold climates.

ACTIVITY: BLUBBER AND HOW IT WORKS:

You need:

1. glass of chilled water
2. thin plastic
3. play dough

To do:

— Take a glass of chilled water.
— Invite a student and wrap a thin plastic around his/her finger.
— Ask him or her to dip the finger in water. Now, cover his or her finger with the play dough and wrap the plastic around it. Have the student wrap the dipped finger in the chilled water.
— Conduct the experiment with as many students as possible.
— *Ask*: When did they feel the cold? (When their finger was covered with the play dough or without it?)
— Explain that the play dough acted like blubber, protecting their finger from the cold.

STEM CONNECTION

SESSION FOCUS: BIRD BEAKS

LEARNING OUTCOME

Students explain how a bird's beak has adapted itself to eat its food.

You need:

1. Tweezers (dove beak),
2. Pliers (for birds like sparrows,)
3. Skewer or a toothpick (for wood pecker, heron etc.)
4. Spoon (for duck beak)
5. Rubber bands (to represent worms)
6. Cheese (to represent Insects)
7. Ground nuts or any type of nuts
8. Rice grains
9. Beads, etc.

To do:

— Set up stations with the listed equipment and suggested items to represent food.
— Explain to students that the tools represent bird beaks. The other items represent food. Ask them to make three columns on a sheet of paper. Head each column with the words: tools, easy, hard. Have them write the tools in the tool column. Then have them predict

which food item is easiest and hardest to pick up with each tool. Have them write the foods in the other two columns.

— Have students take turns to pick up the different food items with the tools. After the activity, have students check their predictions. Ask them to compare results.

— Explain that the tools are sort of like bird beaks. Certain bird beaks can easily pick up some foods and cannot pick up others at all.

— Show students pictures of bird beaks and ask them to match the tools with the beaks that are most similar.

INFOGRAPHIC: http://www.infovisual.info

LANGUAGE ARTS CONNECTION

SESSION FOCUS: STORY READING

Read any story from the following titles and discuss animal adaptations:

— *The Mixed-up Chameleon* by Eric Carle
Claws, Coats and Camouflage by Susan.E. Goodman

— *What Do You Do With A Tail Like This* by Steve Jenkins,

— *What Do You Do When Someone Wants To Kill You* by Steve Jenkins

— *Exploding Ants* by Joanna Settle.

Video Hub

Watch these exciting videos.

A Chameleon https://www.youtube.com/watch?v=UftzbFan9hw

Animals with winter coats https://www.youtube.com/watch?v=0N7FGPeykfE

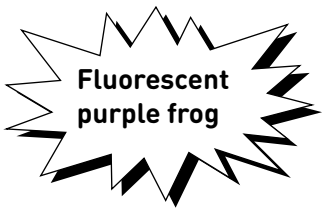
If you had animal teeth https://www.youtube.com/watch?v=MqHr51mHBDo

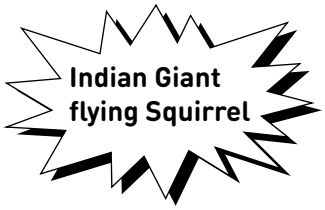
Desert adaptation https://www.youtube.com/watch?v=WViUUMClAUQ

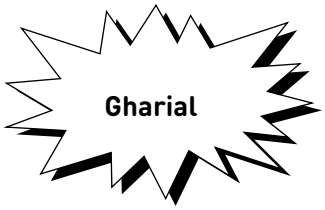
Name _____ Date _____

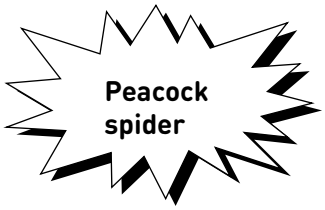
CRAZY CRITTER TRAITS

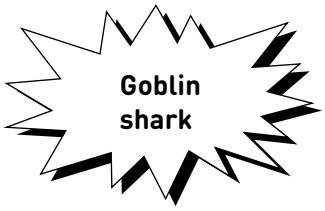
Recall the traits of each crazy critter from the magazine and write in the space provided

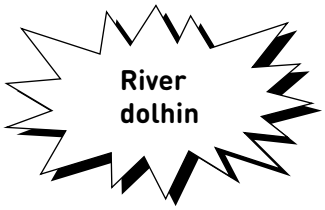












Name _____ Date _____

WORD WISE

Match the words in column 1 to its meaning in column 2.
Use three words to make meaningful sentences.

Trait	Hide or disguise by changing the look or covering itself
Prey	The projecting nose or mouth of an animal
Predator	Give notice of danger
Camouflage	A characteristic of a living thing
Snout	An animal that lives by killing and eating other animals
Warning	An animal that is hunted and killed for food

1. _____
_____
_____

2. _____
_____
_____

3. _____
_____
_____