

Butterfly Creek – Links to the NZ Education Curriculum

Science

Strand: Making Sense of the Living World

Achievement Objectives

Level 1 –

1. share their experiences relating to the living world, and group the living world according to some of its attributes
2. observe and identify parts of common animals and plants
3. investigate and describe the changes in a particular plant or animal over a period of time

Level 2 –

2. investigate and understand the general functions of the main parts of animals and plants
3. investigate and understand the changes that take place in animals and plants during their life cycles

Level 3 –

1. distinguish between living things within broad groups on the basis of differences established by investigating external characteristics
2. investigate special features of common animals and plants and describe how these help them to stay alive

Level 4 –

2. investigate and describe special features of animals or plants which help survival into the next generation
3. investigate and describe patterns in the variability of a visible physical feature found within a species

Educational Experiences at Butterfly Creek

Butterfly Creek, located one minute from Auckland Airport, is a great place to visit on your next school trip.

Butterfly Creek is home to:

- The tropical butterfly house with over 700 free flying exotic butterflies
- Buttermilk Farm, a 'child-friendly' farm featuring pigs, goats, rabbits, ponies, chickens, and guinea pigs
- Bugs About insect area: tarantulas, weta, mantids, stick insects, cockroaches...and more. (Opening beginning December 08)
- Saltwater Crocodiles : arriving in early 2009
- Baby gators and other reptiles : arriving December 08
- The Red Admiral Express Train
- Tractor Hay Ride
- Working Wetlands

A trip to Butterfly Creek supports classroom studies of insect life cycles, as well as providing an opportunity to interact with many farm animals.

See the following page for links to the NZ Curriculum.

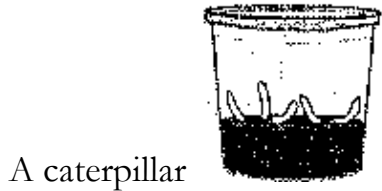
We also have classroom resource kits which include information for teachers and activities for the classroom

For further enquires, please don't hesitate to contact Marama Roberts at m.roberts@butterflycreek.co.nz, Ph. 09 275 8880 or fax 09 275 1110.

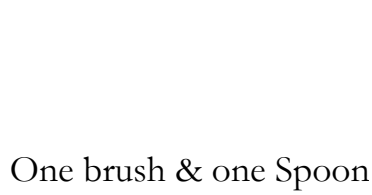
We look forward to hearing from you.

Let's Grow Butterflies!

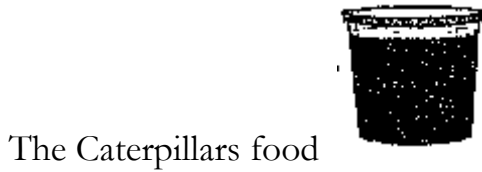
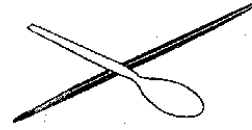
You will need these things:



A caterpillar



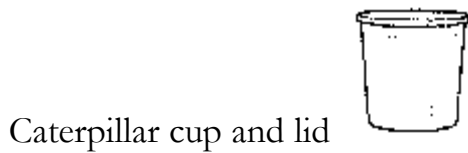
One brush & one Spoon



The Caterpillars food



Butterfly Garden



Caterpillar cup and lid

Step 1: Use the spoon to put the caterpillar's food into the cup. Fill the cup one third full. Push it to the bottom of the cup.



Step 2: Carefully, pick up the caterpillar with the brush and tap it into the cup.



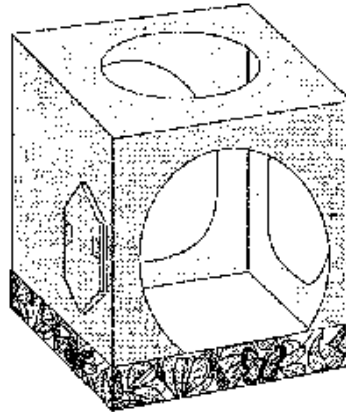
Name: _____

Let's Grow Butterflies!(Continued)

Step 3: Put the lid on the cup. The caterpillar now has a home and food. Your caterpillar has enough air in his new home.



Step 4: Put the Butterfly Garden box together. Your teacher can help. This will be the home for your butterflies. Put the caterpillar cup on the floor of the Butterfly Garden if you wish. Write your name on the lid of the cup.



While you watch your caterpillars grow, **here are some things to remember:**

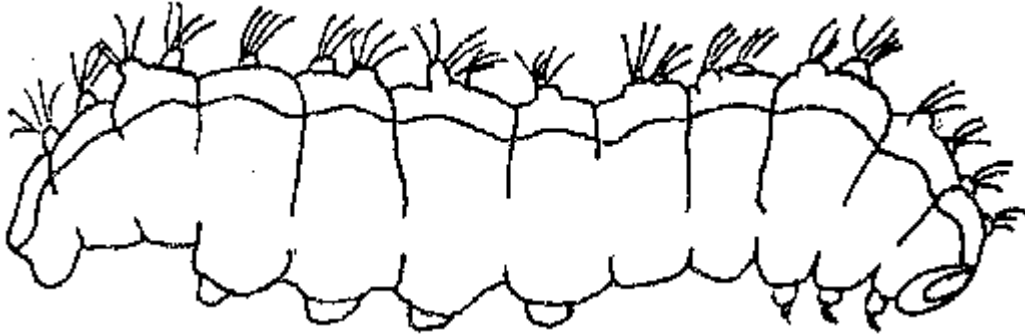
- You must not turn the caterpillars upside down.
- Try not to drop your caterpillars.
- Do not keep the caterpillars too hot or too cold.

Name: _____

Activity Sheet – Lesson 2

The Caterpillar

Step 1: Look at your caterpillar very carefully.



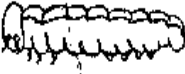
What do you see?

Step 2: Draw a picture of your caterpillar.

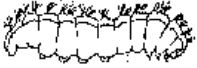
Can your caterpillar walk? _____

How do you know? _____

Can your caterpillar eat? _____

Does your  do other things? _____

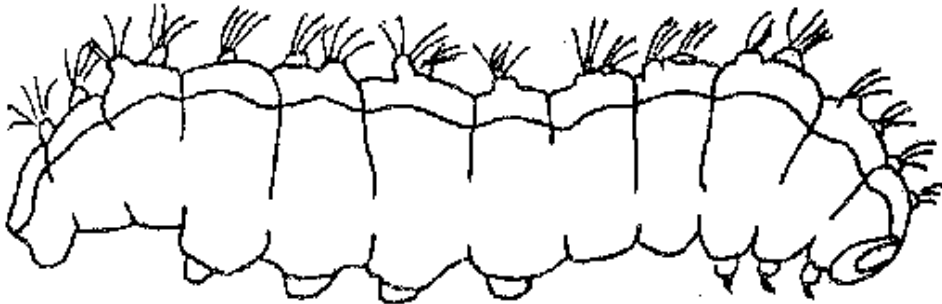
Find the Parts of Your Caterpillar

A  has many parts.

Each part helps the caterpillar.

Each part does something.

Draw a line from the word to the part on the



Head Eyes Mouth Body Fur Tail

Do you have the same parts? _____

Do you have the same number of legs? _____

Talk about your ideas.

The Jobs the Caterpillar Parts Do

Draw a line from the part to what it does.

Eye

Mouth

Fur

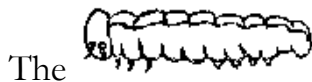
Legs

eats food and spins silk

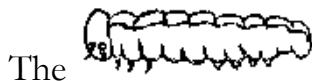
keeps birds from eating it

looks for food and things

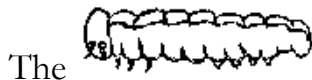
moves the insect



has _____ legs.



has _____ eyes.



has _____ mouth.

Do you have the same number of:

Eyes? _____

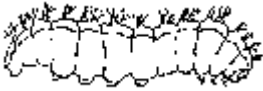
Legs? _____

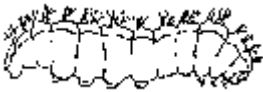
Mouths? _____

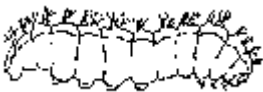
In what ways are you and the caterpillar different?

Talk about your ideas.

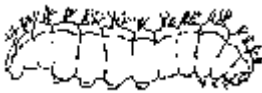
Does Your Caterpillar Grow?

Watch your  every day.

Does your  eat?

Does your  grow?

Who grows the fastest? _____ Who grows biggest? _____

Does the  need good food to grow?

Do you need good food too? _____

What are some good foods for you to eat?

_____	_____	_____
_____	_____	_____
_____	_____	_____

Should you eat a good breakfast? _____ Why? _____

What did you have for breakfast this morning? _____

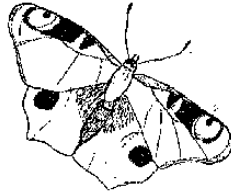
Talk about good foods.

Name: _____

Name the Stages of a Butterfly

Draw a line from the name to its picture.

Egg



Caterpillar



Chrysalis



Butterfly



The caterpillars of butterflies make chrysalides. The caterpillars of moths make cocoons. A Cocoon has silk around it. A chrysalis doesn't have silk around it.

Print these words:

Egg _____

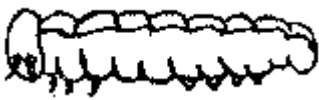
Caterpillar _____

Chrysalis _____

Butterfly _____


Watch for these stages as your Caterpillar grows!

Does Your Caterpillar Change?

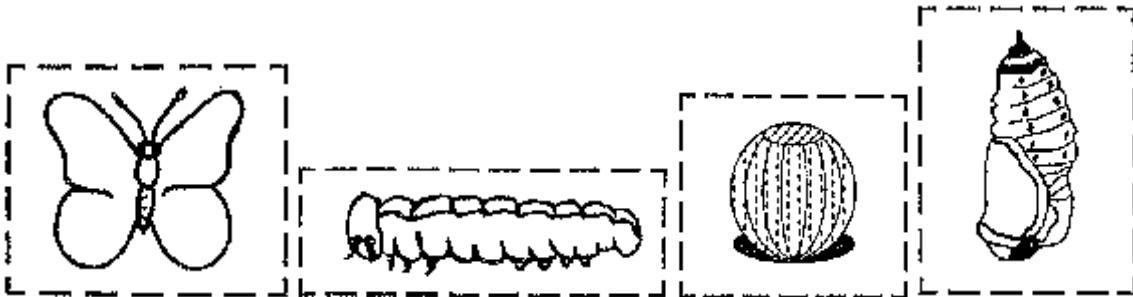
A  is an insect.

Most insects change as they grow.

We call these changes stages.

The stages in the growth of a  are the egg, the caterpillar, the chrysalis and the butterfly.

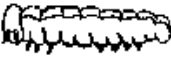

Number the pictures below, in the order of which happens first, second, third and fourth?



Talk about your ideas.

How many Days from Caterpillar to Butterfly?

A  must eat and grow before it can become a 

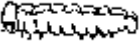
How long do you think it takes a  to become a 


Put the day of the month you received your caterpillars here:

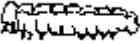
Next, put the day of the month your caterpillars changed into chrysalides here:

Now put the day of the month your butterflies came out of chrysalides here:

Answer these questions:

How many days before the  became a chrysalis? _____

How many days before the  became a butterfly? _____

How many days before the  became a butterfly? _____

Which stage of the butterfly lasted longest? _____

Which stage was the shortest? _____

Which stage did you like the best? _____

Name: _____

Caterpillars Spin Silk



Caterpillars spin silk from their mouths.

When the caterpillar moves its head from side to side, it is spinning silk.

Look at the silken threads with a magnifying glass.

See how the threads cross each other.

Draw a picture of the silken threads.

Caterpillars walk on the threads like a ladder.

The caterpillar's feet have tiny hooks which hold on to the threads.

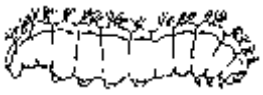
Would the silk keep the caterpillar from falling?

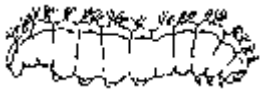
Can you think of another insect that spins silk?



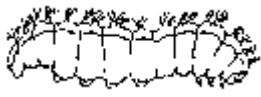
Do we use silk for anything?

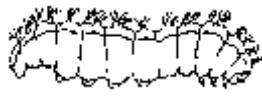
Caterpillars and Butterflies need Rest.

Watch your  closely.

Write down some of the things the  does.

Is your caterpillar quiet sometimes?

When the  is quiet, he is resting or asleep.

The  needs rest.

Do you need rest sometimes?

What happens when you do not rest?

Everyone needs rest and sleep. When we are resting or sleeping, our bodies can grow and change.

Does your caterpillar's body grow and change?

When your butterfly comes out of the chrysalis, watch to see if it rests sometimes.

Name: _____

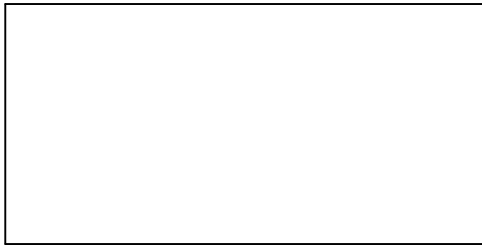
Do Caterpillars Protect Themselves?

Caterpillars have enemies.

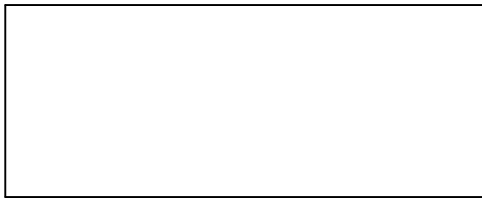
Can you think of any caterpillar enemies?

Caterpillars need to protect themselves.

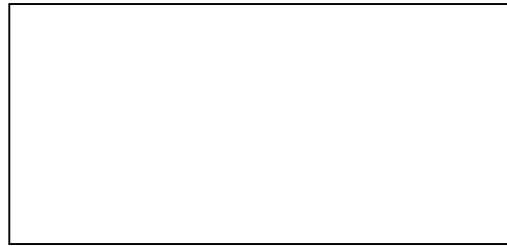
Draw some pictures to show how caterpillars protect themselves.



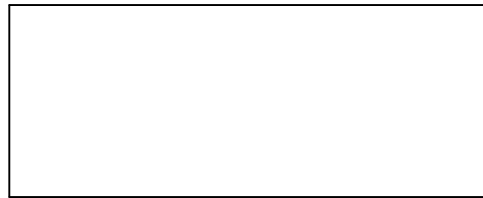
This orange and brown
Caterpillar tastes bad.



Some brown caterpillars
Look like brown twigs.



This caterpillar has big horns
Which frighten enemies.



Some caterpillars are hairy and hard
For birds to swallow.

Name: _____

What happens to the Caterpillar?

When your caterpillar gets big, watch him carefully. Your caterpillar will crawl to the top of his cup and hang down.



Next, the skin splits along his back.

Under the skin is the chrysalis. Soon the chrysalis becomes hard and changes to a pretty golden or silver color.

Take the lid off the cup.

Put the lid with the chrysalis into the box very carefully. This is a waiting time for you, but the butterfly is very busy.

When the butterfly comes out of the chrysalis, what parts will it have? Circle them.

- | | | |
|-------|----------|-------|
| Eyes | Antennae | Wings |
| Mouth | Legs | Head |

Did the caterpillar have all of these parts?

Name: _____

Activity Sheet – Lesson 13

Butterflies Get Hungry!

Your butterfly will want to eat.

Step 1: Put the cotton wick in the paper flower in your Butterfly Garden box.

Step 2: Make some sugar water and put it on the wick with an eyedropper.

For more food for your butterfly, fill an empty jar lid with sugar water. Fold a kitchen-roll and put it in the lid.

Change the sugar, water and kitchen-roll every two days.

How does the butterfly eat? _____

Does the butterfly have a long tube? (proboscis) _____
Where is the long tube when the butterfly is not using it?

Can a butterfly eat the same food a caterpillar eats? _____

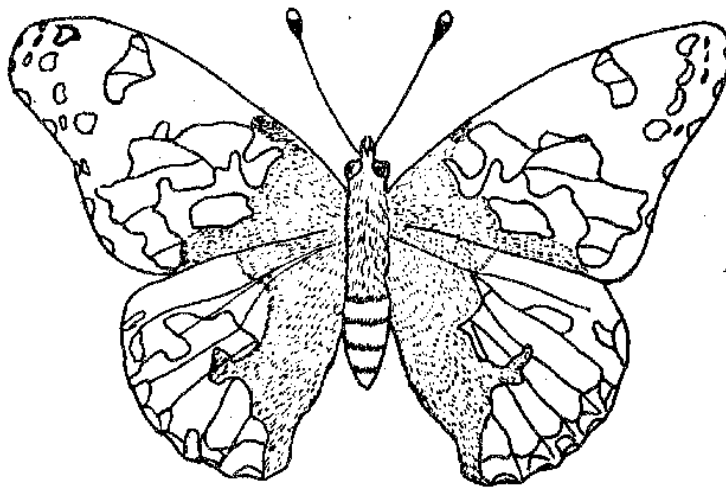
Can a caterpillar eat the same food a butterfly eats? _____

Name: _____

Find the Butterfly Parts

Look closely at the Butterfly.

Draw a line from the butterfly part to its name.



Wing

Antennae

Body

Eye

Head

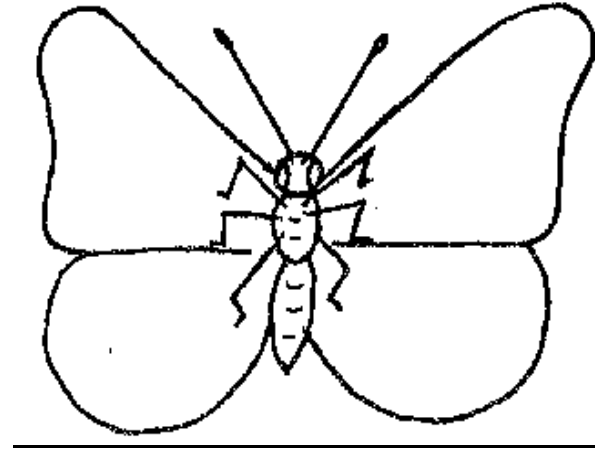
Do you see any other parts? _____

What do the butterfly parts do? _____

Talk about your ideas.

Name: _____

Butterflies are Insects

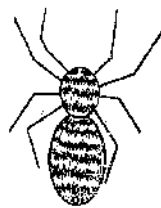


Not all animals are insects.

An animal is an insect if it has these things:

- 6 Legs
- 3 Body parts (head, thorax and abdomen)
- 4 Wings (when it has wings)
- 2 Antennae
- 2 Eyes

Is a butterfly an insect? _____ Why? _____



Here is a picture of a spider.

Is the Spider an insect? _____

Explain your answer. _____

Name: _____

Butterfly Wings

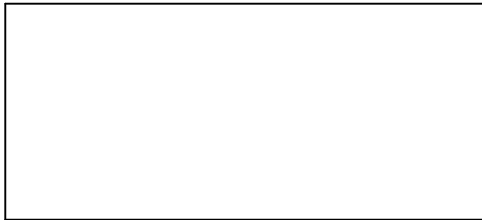
Butterflies use their wings for many things.



Can you think of a way a _____ uses her wings?



Draw some pictures showing how _____ use their wings.



This butterfly is using her
Wings to fly to flowers.



This butterfly is opening her
Wings so other butterflies
Can see her



This butterfly is flying away
From a bird

This butterfly has wings
which look like a leaf. She is
Fooling enemies.

Are the butterfly's wings important to her? _____

Name: _____


Different Kinds of Butterflies



Look at some pictures of butterflies

Do they look different? _____



Is it important for a  to find its own kind of butterfly?

Butterflies must find their own kind of butterflies before they can lay their eggs.

How can a butterfly know the right kind of butterfly? _____

Name some kinds of butterflies: _____

What is your favorite kind of butterfly? _____

Name: _____

Activity Sheet – Lesson 18

Are You Like a Butterfly?

Answer these questions:

I have how many?

A Butterfly has how many?

Legs
Eyes
Wings
Arms

Does a butterfly need Wings? _____

Does a butterfly need Arms? _____

Do you need arms? _____

Do both you and a Butterfly need Eyes? _____

Do butterflies need special parts to find food and get away from enemies? _____

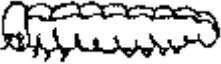




What parts does a butterfly use to find food? _____


Name: _____

Activity Sheet – Lesson 19

Write a Story About a Butterfly

A  lays eggs which hatch into tiny caterpillars.

The furry caterpillar eats leaves, and grows big. When the  is big, it turns into a chrysalis. The beautiful  comes out of the chrysalis. The  stretches its wings and is ready to fly. The  drinks the sweet nectar from the flowers. The  lays eggs on leaves which hatch into caterpillars.



Write a make-believe story about a  you like very much! Use the other side if necessary.



Name: _____



Activity Sheet – Lesson 20

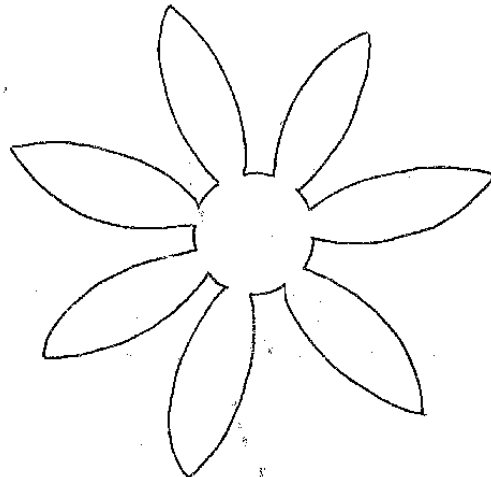
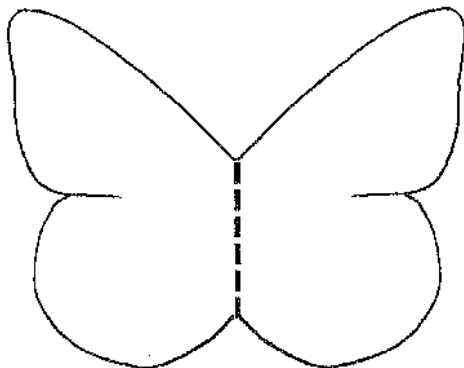
Colour and Cut Out a Butterfly

Step 1: Colour the  and the  with pretty colours.

Step 2: Cut out the  and the .

Step 3: Bend the  along the dotted line and paste it on the .

Step 4: Paste the  with the  to a piece of coloured paper.



Name: _____

Activity Sheet – Lesson 21

A Butterfly Poem

Do you like poems?

Most students like to read and write poems.

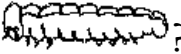


Here is a poem about a _____.

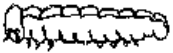
Furry and brown
On the ground
Caterpillar inside
A leaf you must hide

So no birds will spy you
But fly on by you
Quietly now you lie
“Till one day I see...a Butterfly!

Chris R. Lids

What colour was the ? _____

Where did the  hide? _____

What enemy did the  have? _____

What did the  finally become? _____

Name: _____

Activity Sheet – Lesson 22

Good insects and Bad Insects

Some Insects are good and some insects are bad.

Some insects do good things, like:

Eat bad insects



Pollinate Flowers



Make Honey



Change dead plants and animals into soil.

Some insects do bad things, like:

Eat our food



Bite us



Make us sick



Here are some insects. Tell if they are **good** or **bad**.

Ladybug _____

Ants _____

Mosquito _____

Grasshoppers _____

Honeybee _____

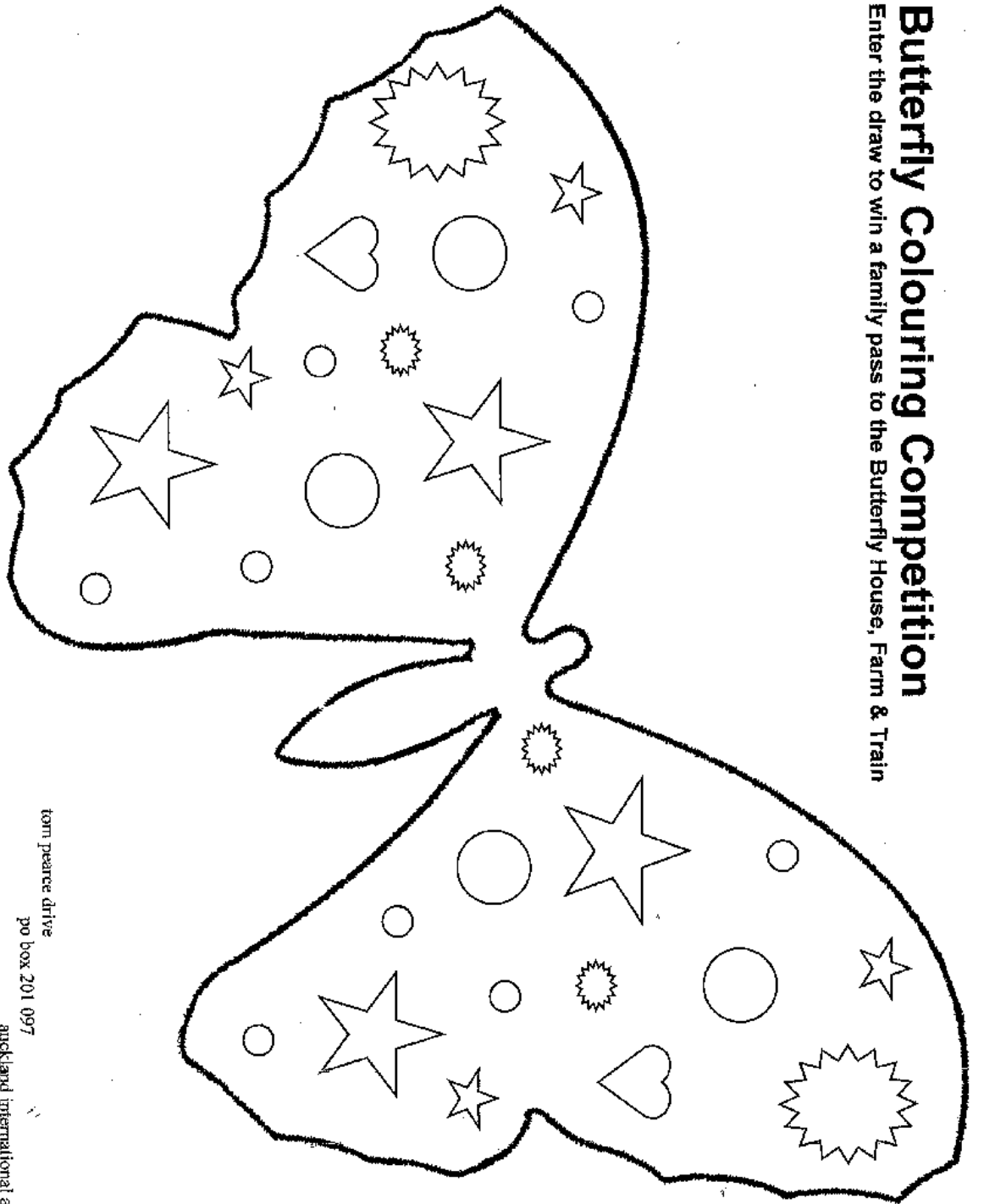
Praying Mantis _____

Can you tell why they are good or bad? _____

Can you think of any other good or bad insects? _____

Butterfly Colouring Competition

Enter the draw to win a family pass to the Butterfly House, Farm & Train



tom pearce drive
po box 2011 097
auckland international airport
telephone 09 275 8880
www.butterflycreek.co.nz
facsimile 09 275 1110

Name Telephone number.....

Parents email address.....

Date of birth.....

TEACHER'S GUIDE

Make a word box and include new words in it as you proceed in these activities.

Lesson 1

Students should be cautioned to handle the caterpillar cups carefully. The nutrient will sometimes dislodge and crush the larvae. Pack the nutrient snugly in the bottom of the cup to prevent this.

The caterpillars can take a fairly wide range of temperatures. Keep the cups out of direct sunlight and don't let them freeze.

Transfer the chrysalides into the Butterfly Garden box after they form and harden. If the chrysalides have dropped from the lids of the cups, gently pick them up and make the transfer. To give the newly emerged butterflies a good foothold to hang while expanding their wings, a two-inch strip of paper toweling can be taped to the sides next to the bottom of the box. The butterflies will not be hungry immediately after emerging. Like a baby chick, they have food stored in their bodies for the first day or two after emergence. Pick the warmest part of the day and preferably release them near some flowers.

Lesson 2

Encourage the students to look carefully at their caterpillars through the transparent cups. Notice the first three pairs of legs (true legs) look different from the stump-like legs (false legs) found on the back half of the body. The tiny eyes are located just above the mouth on either side of the head. The body of the caterpillar is divided into sections (segments).

Lesson 3

Self-explanatory.

Lesson 4

It is important for the students to realize that the caterpillar parts help the caterpillar successfully live in its environment. The specially developed legs allow it to hold onto leaves. The special kind of mouth is perfect for eating the edges of a leaf. The fur (setae) make the caterpillar difficult for a bird to swallow. The parts of our body are much different, but just right to help us live successfully in our environment.

Lesson 5

The emphasis here is on the right kinds of food. Without the right kind of food, the caterpillar could not grow and would die soon. Caterpillars are much more finicky about their food than are people. We eat a variety of foods necessary for us if we are to grow and stay healthy. The food plants, thistle, is the principal ingredient of the nutrient on which the caterpillars are feeding. This is the only food needed by the caterpillars.

Lesson 6

The metamorphosis of a butterfly is a source of fascination for students. With this interest it is fun to learn the names of the different stages in the butterfly's development. Through this motivational source, practice in letter formation and spelling can result.

Lesson 7

Read the information contained in Lesson 17 to the students before asking them to do this activity. This lesson requires reasoning and some background information on the stages of a butterfly's life. Try to lead the students reasoning and some background information on the stages of a butterfly's life. Try to lead the students' reasoning from arranging the stages in a single row to the more complex, but total idea, of placing the stages in a circle. The students realize that one stage was produced from a prior stage while at the same time giving rise to the next stage.

Lesson 8

Entry dates for the arrival date of the caterpillars, their transformation to chrysalides, and finally the butterfly emergence, must be places in the spaces provided. This activity will be completed approximately 17-20 days after the arrival of you caterpillars. The students are really interested in knowing how long it takes for a caterpillar to become a butterfly. Both addition and subtraction are involved in computing the answers to these questions.

Lesson 9

Almost all caterpillars spin silk. Some spin more freely than others. The important fact for the students to realize is that this is but another characteristic to make silk cloth from the silken threads spun by the silkworm.

Lesson 10

All living things need rest. Animals rest in different ways. Many small animals often rest for a few minutes and are then active for a few minutes. Larger animals often need extended periods of rest or sleep. These long periods of rest are often followed by long periods of activity. The important point is that we all need rest and sleep to give our bodies time to restore needed nourishment, repair tiny damages to our bodies, and to give us a chance to grow when we are young.

Lesson 11

In nature, all animals have developed means by which they protect themselves from larger animals. Such ploys as body colours resembling their surroundings (chameleons), mimicking the appearance of other animals which are not good to eat (Viceroy butterfly mimics the Monarch), making themselves look bigger or more ferocious than they really are (cats make themselves appear larger by making their hair stand up), being able to run very fast (rabbits and deer) are just some of the ways animals protect themselves. Caterpillars use some of these ways to protect themselves, too. The better an animal is at protecting itself, the more efficient the animal using it as food must become in capturing it. This makes both animals more nearly perfect. Nature is designed to create the best possible living things!

Lesson 12

Self-explanatory

Lesson 13

Self-explanatory

Lesson 14

Emphasize the usefulness the butterfly parts have in making the butterfly successful in its environment. The wings carry the butterfly quickly over long distances to find food and certain plants on which to lay eggs. The legs are built especially to hang onto flowers or leaves. The taste buds are even on the tips of the second and third pairs of legs! This allows the butterfly to find out whether there is a source of nectar in the flower without uncoiling the long proboscis. The long, flexible proboscis can be worked into the smallest opening to reach the flower nectar. The eyes see colour very well and with them the butterfly can very successfully find flowers. The eyes also see movement very well and can quickly dodge a would-be predator.

Lesson 15

This lesson gives the students the knowledge necessary to tell whether an animal is an insect. Spiders, ticks, pill bugs, centipedes, and millipedes are some animals confused with insects. These are closely related arthropods.

Lesson 16

This activity is meant to inform the students that butterfly wings serve not only to carry the butterfly wherever it wants to go, but also are used to attract other butterflies, to escape from enemies, and to conceal the butterfly when it is resting. The wings sometimes have large eyespots used to fool the butterfly's enemies.

Lesson 17

There is purpose in the differences between species of butterflies. The primary reason that each butterfly looks the same as other members of its own species and different from any other species is recognition for mating. Wing design and colouration may also serve as camouflage or for frightening would-be enemies. The buckeye butterfly has large eyespots on the wings which cause birds to confuse them for a larger animal. Some butterfly wings resemble a leaf when they are folded together. Some butterflies are brightly coloured (Monarch) and taste bad. A bird attempts to eat the butterfly but once thereafter, the bright colours are remembered as bad by the bird.

Lesson 18

This lesson contrasts the butterfly parts with our own body parts and as a corollary part of the lesson, the reason for these differences.

Lesson 19

In writing the story about a butterfly, encourage the students to give some details; i.e., the colour of the butterfly? What time of the year was it? What did you see the butterfly do? Suggest that the students draw some pictures for the story.

Lesson 20

Self-explanatory.

Lesson 21

This simple little poem tells the story of a butterfly. This should be enjoyable for your students.

Lesson 22

Like most large animal groups in Nature, there are those species regarded as beneficial and those which are harmful. Our standard for determining this is what direct effect their activities have upon us. In a raw, natural setting in which modern man is not included, many of the so-called bad insects would fit nicely into the scheme of Nature and would actually compliment it. Ask the students what we do about bad insects. Sometimes we have to spray them with poisons to kill them. Sometimes we can spray them with their own diseases to kill them. Poisoned baits are used for some bad insects. Many times good insects, like lady bugs, come and eat the bad insects.



Attractions Visiting (please tick)

Date of Event:	Start time: (approx)	Finish time: (approx)
Number of Adults:	Number of Children:	

Contact Name:	School/Organisation name:
Address:	
Contact details: (i.e. Phone/fax/email)	

Category/Pricing	Train & Farm Combo	Butterfly House	Butterfly House/Farm/Train	Ratio
Early Childhood Child	\$4.00	\$4.50	\$6.00	
Early Childhood Adult/Supervisor	\$6.50	\$10.00	\$14.00	1 Adult to 6 Children FREE
Primary/Intermediate Child	\$4.50	\$5.00	\$6.50	
Primary/Intermediate Adult/Supervisor	\$6.50	\$10.00	\$14.00	1 Adult to 10 Children FREE
Secondary/School holiday programme Child	\$5.00	\$5.50	\$7.00	
Secondary/School holiday programme Adult/Supervisor	\$6.50	\$10.00	\$14.00	1 Adult to 10 Children FREE

Terms & Conditions

- All school visits must be in week-days and outside school and public holidays (unless holiday prog)
- Pony rides are **\$3.50** extra per child and **24 hours notice must be given if you require them.**
- To receive special school discount rates, groups must be 10 paying people or more
- Children 2 years and under are FREE.
- Children are permitted to bring their own pack lunches if arranged with Butterfly Creek prior to visit, however adults requiring food and drinks can purchase it from Papillon Bar & Café.

To avoid queues please pay full amount on arrival by school cheque, credit card or eftpos.

This form is purely to give Butterfly Creek an idea of numbers visiting on a day and arrangements can be changed or cancelled by school on day without incurring a penalty. Please feel free to contact Chris Sanders on (09) 275 8880 or events@butterflycreek.co.nz if you have any further enquiries.

Information for schools about Health and Safety at Butterfly Creek

- Butterfly Creek is a safe environment with full wheelchair/pushchair access
- We have 3 public toilets, 1 of which are for those with wheelchairs
- There is a first aid kit on site
- Butterfly Creek is fully fenced
- There are barriers along elevated walkways
- Much of Butterfly Creek is out doors, we recommend children and adults wear hats and sunscreen on sunny days
- Visitors must wear shoes
- Our staff are fully trained in case of an emergency and we carry out regular fire safety drill training.
- There are 10 emergency exits located throughout the facility

Butterfly Creek Feedback Form

This questionnaire is used to help Butterfly Creek to better meet the needs of visiting schools and teachers.
All information provided will remain confidential.

1. Year level(s) of your group _____

2. How did you FIRST find out about Butterfly Creek?

↑ Talking to other teachers

↑ Smartfax or email to your school

↑ Magazine advertisement, state which _____

↑ Radio advertisement

↑ Brochure

↑ Other, please state _____

3. How would rate the facilities at Butterfly Creek?

↑ Excellent

↑ Good

↑ Poor

↑ Very Poor

Please comment on your rating

4. How would you rate the educational value of Butterfly Creek for your class?

↑ Excellent

↑ Good

↑ Poor

↑ Very Poor

Please comment on your rating

5. What was the highlight of your visit to Butterfly Creek?

6. Was the visit to Butterfly Creek value for money?

↑ Yes (why is that?) _____

↑ No (why not?) _____

7. Would you recommend Butterfly Creek to other teachers?

↑ Yes (why is that?) _____

↑ No (why not?) _____

8. Do you have any other comments about your experience at Butterfly Creek?

Thank you for taking the time to complete this questionnaire. By completing the form and sending it back to Butterfly Creek, you will enter the draw for a **\$50 Butterfly Creek Voucher** for your class. The winner will be notified in writing.