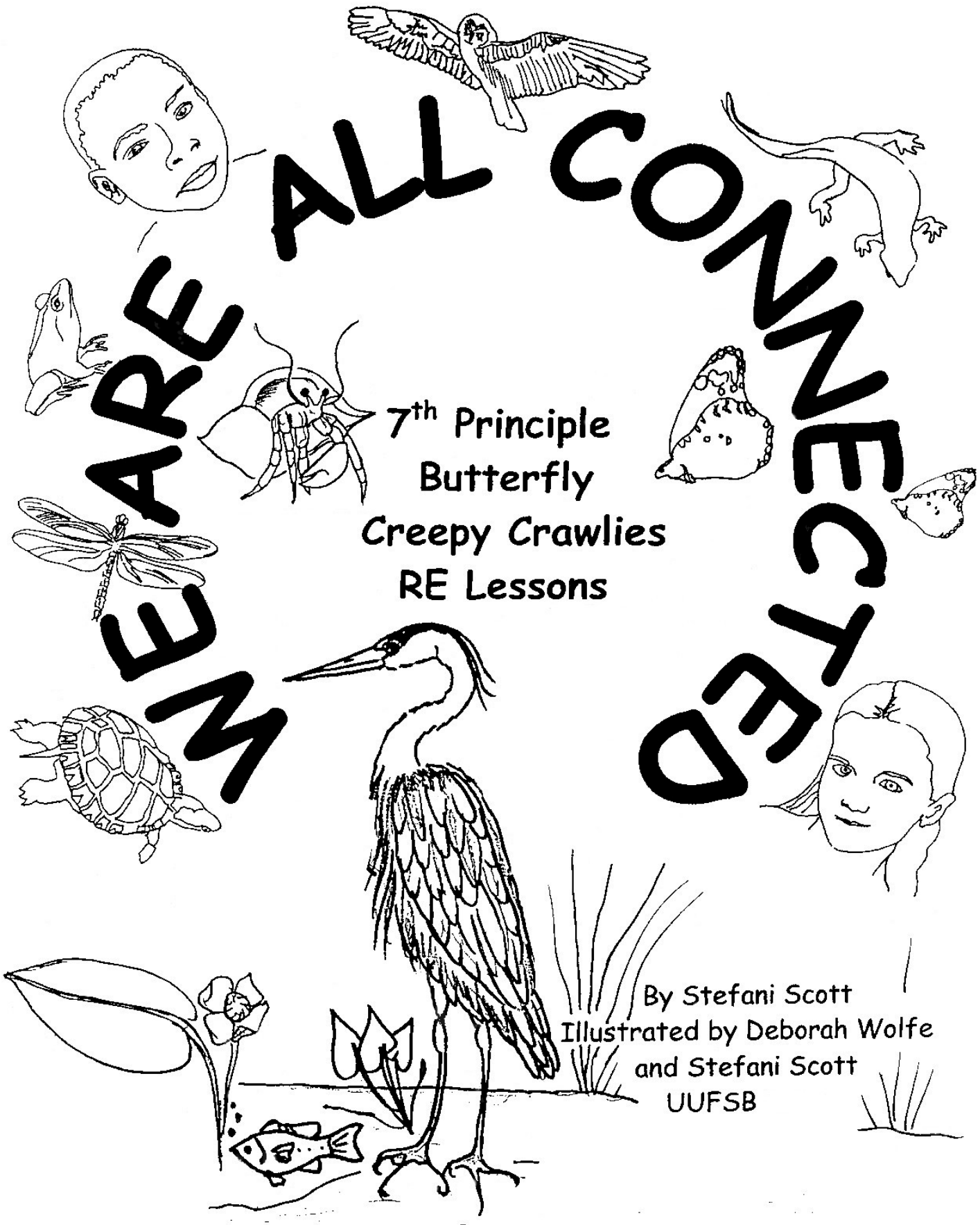

7th Principle
Butterfly
Creepy Crawlies
RE Lessons

By Stefani Scott
Illustrated by Deborah Wolfe
and Stefani Scott
UUFSB

We Are All Connected: 7th Principle Butterfly Creepy Crawlies RE Lessons
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http://uuministryforearth.org/

Unitarian Universalist Ministry for Earth is an independent organization related to the Unitarian Universalist Association.

Our mission is to facilitate and support the work of Unitarian Universalists, by affirming and promoting the seven principles of the Unitarian Universalist Association, including the seventh: "to affirm and promote respect for the interdependent web of all existence of which we are all a part." We do this by focusing on the theological, spiritual, and ethical aspects of human values and activities that affect the health and sustainability of living Earth. Our vision is that Unitarian Universalists recognize and embrace the moral imperative to live in covenant with the web of life through personal, congregational, and denominational practices.

As you use these materials, we hope that you will make an opportunity to educate yourself and others about the important mission and work of Unitarian Universalist Ministry for Earth. Please feel welcome to contact us at office@uuministryforearth.org for information about our current programs.

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Thank you for your commitment to Earth ministry. Working together, we will transform our individual and congregational lives into acts of religious witness, discarding our harmful habits for new behaviors and practices that will sustain life on Earth.

This resource and additional materials are available on the UU Ministry for Earth website at http://uuministryforearth.org/. You are welcome to adapt the materials in this resource to design a curriculum for your congregation. If you use or adapt the materials, please credit the original authors/artists/songwriters when applicable and reference UU Ministry for Earth in any reprints or adaptations. No part of this publication may be transmitted or copied in any form for use outside of the congregation without the written permission of UU Ministry for Earth.

This Good Earth and the 7th Principles

We live in a unique place in the universe, this Good Earth.
In this Good Earth's tide pools, we can watch two hermit crabs struggle
for a dead oyster drill's shell and wonder:
"Why do they struggle, aren't there enough shells in the sea?"

Along this Good Earth's rivers, we can hear frogs peeping as
they hide in the cattails and wonder:
"What does a frog hiding in cattails hear?"

On this Good Earth's mountaintops, we can walk through a shaded forest
and smell the pine needles and wonder:
"How does the pine tree make that amazing smell?"
We can mistakenly walk into a spider web and feel its stickiness
on our face and wonder:
"How does a spider spin this miracle?"

Life depends on life.
A web more fragile than any spider's silk connects us all.

Humans depend on all this Good Earth from its oceans to its deserts and
its "Children" for food, shelter, medicine and the spiritual.
Each year more of this Good Earth is endangered
because of human activities.

The fragile web starts to break.
It is important for us to care for this Good Earth by living the 7 Principles.
We can start by learning more about its "Children" no matter if
they are as small as a butterfly or as great as a whale.
I dedicate this resource to all this Good Earth's "Children".

Stefani Scott
2007

"If I had influence with the good fairy who is supposed to preside
over the christening of all children,
I should ask that her gift to each child in the world be a sense of wonder so indestructible
that it last throughout a life, as an unfailing antidote against
the boredom and disenchantments of later years,
the sterile preoccupation with things that are artificial,
the alienation from the sources of our strength."

Rachel Carson

Acknowledgements

UU Ministry for Earth gratefully acknowledges the generous donation of this Resource by Stefani Scott of the Unitarian Universalist Fellowship of Stony Brook. Stefani is a Worship Associate and was a co-chair of the 7th Principle/Green Sanctuary Projects for UUFSB. A portion of the initial sales of this resource supported the Earth ministry work in Stefani's Fellowship which included providing funds for children to attend Camp Sophia Fahs.

The creative illustrations were provided by Deborah Wolfe and Stefani Scott.

Contents

Introduction by the Author

As you know, some children come willing to Religious Education (RE) and some do not. Almost all children love nature and animals though, including butterflies, but many do not like the other creepy life like worms or spiders. However, their curiosity is great, they love adventure, and I truly believe each and every child is born with a spiritual nature. Adults, who are often so overwhelmed with their daily lives, often don't nurture their own spiritual selves. Children have the beautiful capacity to look at life in the most extraordinary ways and by doing so, bring us back to our own spirituality. If you can catch any child's enthusiasm for the wonder of nature, they will have a love of learning that will last them a lifetime. They will always find solace in nature when times are the most difficult for them.

I have been a science/interdisciplinary curriculum writer for over 30 years in grades K-12 and since 2003 have been writing summer RE lessons for the UU Fellowship of Stony Brook (UUFSB). I am dedicated to the 7th Principle, which I believe encompasses all of the other Principles. These lessons were developed from science lessons into RE lessons for elementary-age kids, but the older "kids" will enjoy them as well. I know this because I have had 17-year-old high school science students jump up and down with joy when they found a praying mantis in the Wildlife Garden at my school. Each year for the past 10 years, my high school students have enjoyed being the "teacher" to 2nd grade children while I looked on. They grew in self esteem as they showed the younger children about creepy crawlies; so I think it is worth a try to get your YUUth's help in teaching the younger children. (See Lesson 7 for another summer suggestion for your YUUth's 9-12.)

> ***The Seventh Principle***
>
> *We, the member congregations of the Unitarian Universalist Association, covenant to affirm and promote….*
>
> *Respect for the Interdependent web of all existence of which we are a part.*

Goals

The goals of the Butterflies/Creepy Crawly lessons are:

- To help children feel welcome and an important part of the group
- To help children see that they have creative gifts they can share while they are having fun learning.
- To nurture the spiritual selves of the children
- To encourage children to practice the 7 Principles with emphasis on an understanding that we are connected to *all* of Good Earth's "children"
- To help children take responsibility for taking care of all life

Settings

Begin by putting Children in Worship Circle.

This is really important for three reasons:

1. Some of these lessons are based on myths from the Native Americans who sit in a circle at meetings because they believe in equality and the democratic process (UU Principles 2 and 5). Everyone is allowed to have their say and by sitting people in a circle no one individual is at the head, although the RE teacher is the leader.
2. Circles make everyone feel like they belong and this gives them a feeling of worth (UU Principle 1).
3. It will begin with quiet and this will help to center the children in the lesson and have less distractions.

In the middle of the children's Worship Circle at UUFSB, we have a box covered with a cloth, which was made and decorated by the children with symbols of all religions. On the table there is a chalice, candle, matches and bell or chime, because many of our lessons start out with the Sounding of the Bell and the Lighting of the Chalice. Usually the "birthday" child lights the chalice with the help of our RE director, Linda Volkersz.

At the end of each lesson, before refreshments or snack, the children can be called back to the circle for closing words and to extinguish the chalice or to share thoughts.

Activities

There is an activity for each lesson, which may involve Language or Literature, Music, Art, Science, a game, and/or "Principles in Action".

Some of the lessons, especially **Principles in Action*** activities, might require more than one Sunday to complete, and could even take an entire summer if extended, but you can easily shorten any lesson.

Wildlife Habitats

Encourage the adults in your congregation to help the children build a wildlife habitat.

One of the most important Eco-Social Actions (Principles in Action) your UU Congregation can do to teach the children and youth about stewardship and to demonstrate how as adults we also practice the Principles, is to build a wildlife habitat together.
*Go to: **http://www.nwf.org/schoolyard/** for information or See the Pre-Lesson, Lesson 2, To Feed a Butterfly and Lesson 6, The Little Blue-Green Creepy Flyers, which include information on how to make small container wildlife gardens and a wetland as small as a toddler's swimming pool.

Lesson Tactics

Use recycled materials.
Another way to show children you care is to use recycled materials for art activities. UUFSB uses recycled paper, cloth and other materials from the Materials Resource Center on Long Island in Ronkonkoma, NY for many of its art projects and bulletin boards. There may be similar nonprofit organizations in your area or just look around your home. I have made many butterflies from magazine photos of flowers and skies glued to cut out cereal box cardboard.

Collect Plants and Animals Responsibly.
We are teaching children to care for creation; so it is very important if you use live creatures for any of these activities that you return them back to nature. I have a license for collecting animals for educational purposes. You need to check your own state laws.
Be passionate, engaged, or even silly.

When reading a story or doing a lesson, it is important that the lesson become part of "uu" if possible. When reading a story, read it several times out-loud. Rehearse it to get the right emphasis and pacing. If possible, tell or act the story from memory (get your congregation's YUUth involved). It helps if you can "see" the characters and "movement" of the story in your mind's eye. If you want the children to do art, make a garden or dance, etc…you must be willing to also do the activity even if you aren't really gifted that way. Youth and older children will feel less uneasy if you as an adult are "silly" and show them you aren't afraid to experiment.

Use materials and copyrighted materials responsibly.

I made bulletin boards, posters, and other visuals to use for these lessons from images gathered from the Internet, old Audubon, National Geographic, Ranger Rick magazines and old books that were either bought at yard sales or gathered from trash left on curbs. I used lightweight corrugated plastic (the same material used in sign making) to make the bulletin boards so they can be stored and used over and over again. I tried my very best not to use copyrighted material in the lessons or on the bulletin boards. You must only use the material in these lessons for educational purposes. Some references have been lost over 30 years of teaching. I highly recommend that you make informational butterfly and caterpillar, ladybug, spider, or hermit crab posters, etc…because as you do them, you will learn about the animals and have information in your brain to expand the lessons.

What if you don't know the answer?

Children are always so curious and asking questions about animals. Unless you are a science teacher like I am and somewhat knowledgeable, or just are interested in knowing facts like "Where do butterflies go in the winter? Or, "How do you know if a horseshoe crab is a male or female?", you just don't know the answers to all their questions. Almost all the answers are at your fingertips now because of the wonderful world of the Internet. So you can always say: I don't know, but I will try to find out. Also see the Resources chapter at the end of this book.

Pre-Lesson: It Is the Season for Beginnings

Timing: Ideally, this lesson is done in the late spring. See Lesson 2 as a substitute lesson.

Class Preparation

Read the summaries of the stories below.
Choose which one to use for your class. The one you choose may depend on which one you can find in your library.

Materials

1. Paper cups with holes punched in bottom
2. A shallow pan to hold the cups and plastic wrap or bags to cover the cups (or recycle the clear plastic lettuce/salad containers from when you buy salad greens or cherry tomatoes)
3. A small creamer is just the right size for watering the cups each week.
4. Wildflower seeds (Suggestions: sunflower and milkweed flower seeds are large and easy to grow for the youngest. I collect milkweed seeds from pods in the late spring along the roadside. You can find information on the best butterfly wildflowers at your library or doing a search on the Internet. There are also many experts on this subject within your own community or perhaps within your own congregation.)

Directions

1. Opening the Circle with Sounding of the Bell

Allow one of your children to ring a Chime, Bell, or Triangle and ask the children to concentrate on the sound until it can no longer be heard.

2. Opening Circle Words to Light a Chalice

"This light stands for the 7th Principle which shows us that all life on Earth is connected so we should practice peace, treat everyone and everything with kindness, be accepting of one another's beliefs and care for the Earth."

3. Read one of these books out loud to the class.

The Garden of Happiness by Erika Tamar, ***Miss Emma's Wild Garden*** by Anna Grossnickle Hines or ***Lily's Garden*** by Deborah Kogan Ray.

- ***The Garden of Happiness*** is a beautifully illustrated book and a tribute to the pride found in multicultural neighborhoods all over the world. This story takes place in New York City. When Erika goes to plant in the neighborhood garden, there isn't any room left. She plants a seed in a crack in the sidewalk, having no idea what kind of plant it will grow into. The growth of the plant is watched over by the whole neighborhood and makes differences in their lives, demonstrating that the

contributions of one person can make a difference. This book demonstrates the importance of the inherent worth of individuals and encourages children to think about the value of working together to solve community problems as well as help the Earth. It also shows the importance of diversity.

- Young Chloe in ***Miss Emma's Garden*** notes that her neighbor's garden is not like her father's, who grows things very symmetrically. Miss Emma's garden is wild, and things grow any way they please. This is a wonderful intergenerational story as well as a nature lesson. And can lead to wonderful relationships between the elder members of your congregation who like gardening and the young. Have one them read it to the class. The website http://www.aghines.com/missemma.htm has coloring pages and many suggestions for expanding the lesson. Click on "Things To Do" at the bottom of the page.
- ***Lily's Garden*** is colorfully illustrated and has anecdotal information on the things Lily is doing in her garden (there is a short history of oranges, how to make maple syrup, and different kinds vegetables in Lily's Garden.) Lily's garden grows and changes month-by-month so the joys of the seasons and the excitement of gardening can be seen. Lily's grandma is involved so again this is an excellent intergenerational story.

4. After reading one of the books, discuss the story.

Have students describe how the story made them feel. Ask them how growing things make people happy. Was giving involved?

Other questions for discussion:

- Ask how the neighborhood in ***The Garden of Happiness*** was made better by what the people did by making a garden.
- How was Chloe, Lily or Erika made into better people because of growing things?
- How do plants and animals depend on each other? How do we depend on plants and animals?
- What happens to the animals when we cut down forest to build roads, shopping centers, housing developments and parking lots?
- Suppose you were one of the wild creatures in Miss Emma's garden or a flower or vegetable in one of the other gardens. Which one would you be? And WHY?

5. Tell the children that they are going to begin to make a garden for butterflies and other creepy crawlies

Plant some flowers (and/or vegetables) just like one of the children did in their gardens because that is one way we can care for the Earth and its animals. The flowers will become part of your butterfly garden or containers for summer lessons (Lessons 2 and 5).

6. Have the children plant wildflower seeds in paper cups.

(I would not label with names in case some don't grow. After all, it is a community effort. That is why I like the plastic lettuce containers which are great for sowing lots of seeds and have their own covers.)

- Punch a few holes in the bottom of a paper cup.

- Put potting soil (use potting soil instead of compost to avoid microorganisms that could damage the seeds) into the cup until it reaches about 1 ½ inches from the top.
- Plant a seed by laying it on top of the soil in the paper cup. Cover the seed lightly with about another ½ inch of soil. Do not pack the soil down.
- Add enough water to the soil to make it moist, but not wet. Cover with plastic wrap or put the cup into a plastic bag and place in a warm sunny place.
- The seed should sprout in a few days to a week. Check each week and water.
- When the flowers become seedlings and have their own leaves you may plant all of them in a larger container or in a sunny spot outside. You can garden in any space even if you only have a small window box.

7. Gather the children back into the Circle

Use these Unison Closing Words (based on Song, *From You I Receive*) or sing them.

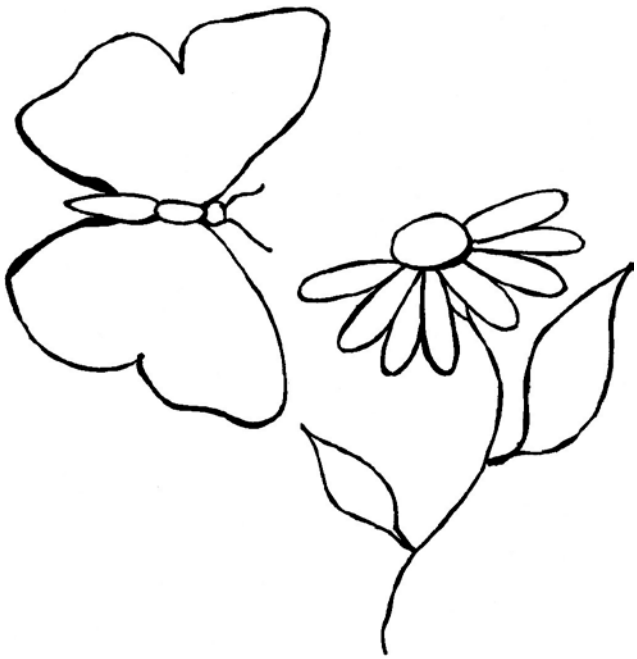
From the Garden we receive,
To the Garden we give.
Together we share,
By this we live.

Another closing song which is perfect for this lesson is by Malvina Reynolds *Let It Be*
http://www.wku.edu/~smithch/MALVINA/mr089.htm

8. Suggested snack for this activity

Fruit and sunflower seeds. You may also try to plant some of the seeds from the fruits. Sometimes they sprout and make nice house plants, especially citrus like oranges, limes and grapefruits.

Note from the author:
At UUFSB the children plant seedling flowers in May for the Butterfly and Rainbow Gardens at UUFSB, and this year we hope to plant some vegetables and harvest them for the local Food Kitchen. We just started a compost pile. I plant herbs on my deck each year in terracotta pots and other containers. I do not use any pesticides or herbicides (go to www.grassrootsinfo.org or www.audubon.org for pamphlets to give out to your children's parents about pesticide risks for children and wildlife. Jerry Baker's book, called **Giant Book of Garden Solutions**, has 1,954 natural ways to solve gardening problems. See also the website: www.jerrybaker.com.



Lesson 1: Do UU know How Butterflies Came to Be?

Class Preparation

Read through all the Directions and the Lesson.
Read the Story found at the end of this lesson. The story was adapted by Stefani Scott from a very well-known myth of the Papago People of the Southwest.

Materials

1. Flute or recorder
2. 2 opaque pillow cases of the same color, age, etc…
3. Green leaves and pine needles
4. Bright colored flowers
5. Yellow corn meal
6. Construction paper* butterflies. (Use Stefani's Butterfly Pattern)
7. Colored markers
8. Clear tape

**You can also use any "used" paper from wallpaper books, greeting cards and the colorful envelopes recycled from greeting cards can be used instead of construction paper for backing. The children can color the one of the sides.*

Before class
Hide one pillow case with the construction paper cut outs in the shape of butterflies near a window.

Directions

1. Opening the Circle with Sounding of the Bell

Allow a Child to blow a recorder or flute and then ask the Children to concentrate on the Sound until it can no longer be heard.

2. Opening Circle Words to Light a Chalice

We light this chalice because we believe in having respect for all living things and searching for the truth. (Or you may use the same words from the pre-lesson.)

3. Read or tell the story.

Read "How Butterflies Came to Be" found at the end of this Lesson. Telling the story is better. Or you can get Older Children or the YUUth in your congregation to act out this story for the younger children.

4. At one point in the story you will stop (it is marked in the story).

Mix the following into one of the bags in front of the children (this is called the "bag of molecules from stardust" in the story): leaves and pine needles, bright colored flowers, yellow corn meal and shake the bag. (Most living things have Carbon, Hydrogen, Oxygen and Nitrogen –CHON- for you non-biology teachers. You can make this comment: We are all made of stardust. We even have elements in us that were once part of dinosaur molecules. That statement really gets them interested.)

5. Then walk the bag to a window (or some light source).

Say now we will let the light shine on the bag (even if it is raining there will be some outside light coming through a window.)

6. Now ask this Essential Question: How does seeing a butterfly make you feel?

Let all children answer who want to share.

7. Finish the story.

Return to the window and make the switch for the other bag and say "Let's see what's in our bag?" Let all the butterflies "fly". (Many of the older children will of course understand the trick. I like a little theatrics, but I do confess the trick if the children ask. I say I was just trying to act out the myth…This sometimes leads to the question on "What is a myth?" I use all kinds of examples from all religions including Christianity to explain what a myth is if asked.)

8. Color the butterflies

The children can pick up the butterflies and use markers to color their faces on the plain construction paper side. Tape the butterflies to the window with the story.

9. Now ask this question. How do spiders make you feel?

Do you feel the same way about spiders as butterflies? Again, let all children answer who want to share.

10. Read this statement.

Our 7th Principle teaches us that we are all connected and dependent on each other. (What does this mean?) We receive so many gifts from all animals, including creepy crawly insects, and even spiders. Human beings have created images about animals based on whether or not a particular animal is beautiful or endearing to them. Animals have not evolved in their appearance or behavior to appeal to humans, but to survive. When it

comes to our appreciation of animals, “beauty is in the eye of the beholder and truth is only revealed when we look beneath the surface.” (1st and 4th Principles).

There are about 200,000 individual insects for every one human being. Scientists are estimating that because human beings are cutting down forests (deforestation) at an alarming rate and are filling in wetlands (What is a Wetland? We will find out in later lessons), that we are losing 1000 species each year.

Living in balance means RESPECTING all life, using only what is needed, conserving what we use and recycling as much as we can. (Reduce, Reuse, Recycle and Respect) Giving thanks to complete the circle of giving and receiving is also important.

11. Unison Ending Words (before snack)

Gather the children back into circle and All Read Together the words printed on a poster and then one child blows out the chalice:

All things in this world

Have souls or spirits.

The sky has a spirit,

The clouds have spirits:

So have animals, trees, grass, water stones,

Everything. ----- *from the Hidatsa Native Americans*

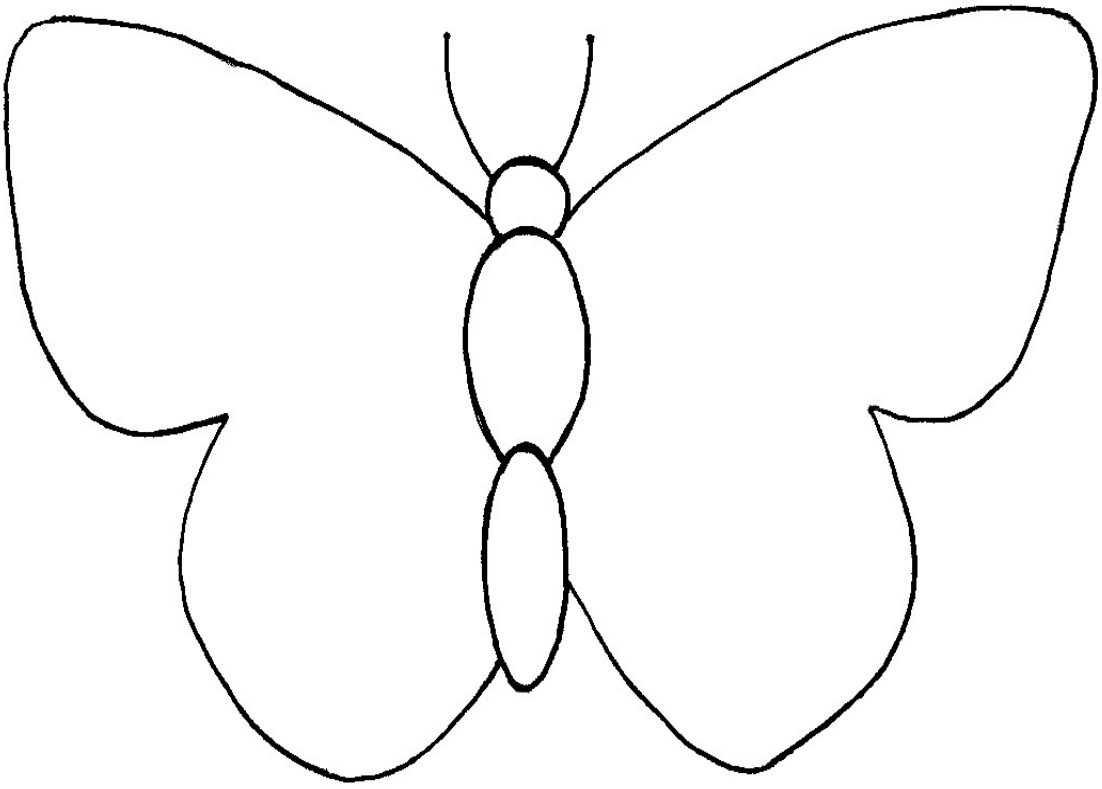
12. Snack suggestions

UUFSB tries not to use too many sweet snacks for their children, but this particular lesson calls for gummy worms (caterpillars) or bugs. Perhaps a dedicated teacher would be willing to make a carrot cake in the shape of a butterfly. For most of the lessons there will not be snack suggestions. Your congregation may not even have snacks for RE classes.

13. Principles in Action Extension

Ask the children to start saving plastic jar tops for Lesson 2, and greeting cards and colorful envelopes to bring in to use for other projects. You can even start making a recycled materials resource closet. In clear bins, start collecting “junk” like buttons, tops of drink bottles for making eyes, yarn, and ribbon from packages.

Stefani's Butterfly Pattern



(UU can get other patterns from birding.about.com/library/blclip-**butterflies**.htm)

How Butterflies Came to Be

(Adapted into a story by Stefani Scott
from Papago Southwest Native American Myth)

One day, after the Earth was made from the molecules found in the stars, Earth-Creator was sitting and watching the rain in a village, and saw the children playing in the mud with joy.

Earth-Creator saw all the new life, the trees and wild flowers blooming, that came with the rain.

But then Earth-Creator realized that all of these things would change. He knew that the children would all grow old someday. The leaves would change colors and fall from the trees, and the beautiful flowers would wither and die.

The days would grow short and the nights would become cold. Everything would sleep for a while and it would be lonely.

Earth-Creator's heart grew sad.

As he watched the mothers of the children grind cornmeal and watched the wind make the tree leaves dance in the golden sunlight, he said, "I will capture some of this joy to make children's hearts dance forever. The children will remember today when they become sad, and they won't be sad anymore."

So, Earth-Creator took out a special "bag" made from stardust with all its magic and began to gather blue from the sky, and the yellow from cornmeal and the sun. He took the green from the tree leaves like pine needles and oaks. He gathered the color from the flowers that grew wild in the fields.

And, last, Earth-Creator put in the songs of birds flying around him. Then he shook the bag and laid it in the sun to get warm.

(Stop here and mix your ingredients in the bag, place it in the sun, and now ask the Essential Questions before continuing the story)

He called the children together. He told them to open the bag and there would be a surprise for them.

So they opened the bag, and beautiful Butterflies flew out and danced in the wind! They were the colors of the flowers, sun and sky. They flew all around the children, and the hearts of the children and the Earth-creator soared.

Then, the butterflies began to sing the songs of the birds as they flew.

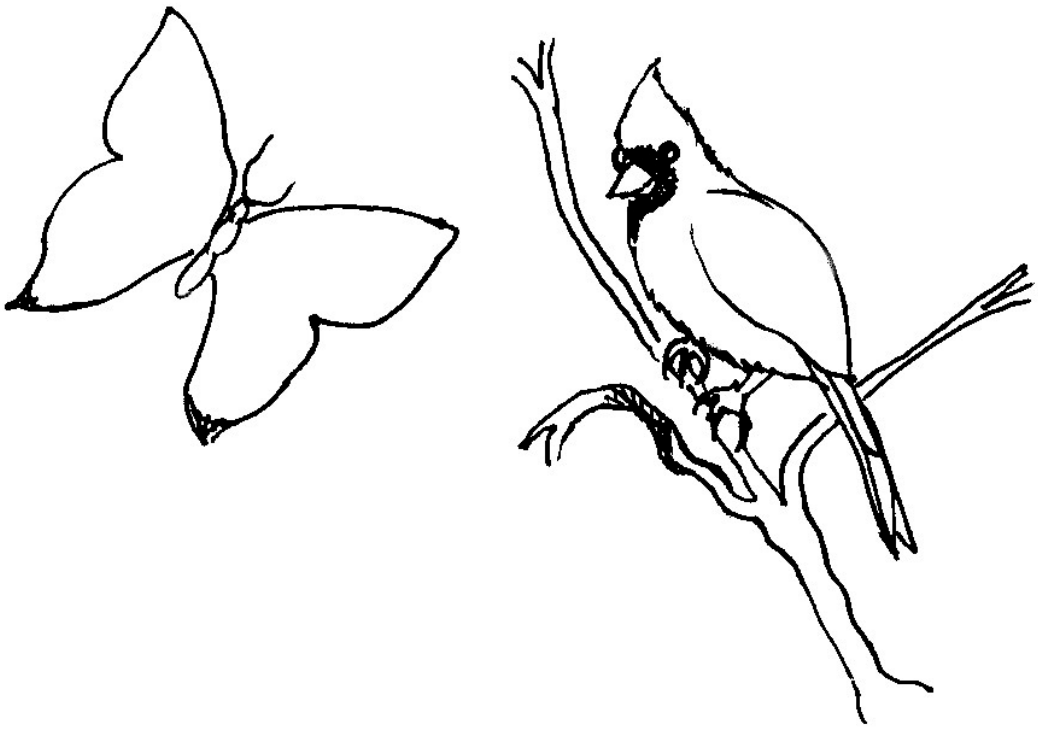
But then the song birds were sad. They flew onto the Earth-Creator's shoulder and said to him 'We were given the songs and it is fine with us that you gave them bright colors like us but it is not right that you also gave them our songs."

Earth-Creator said, "You are right.
I made one song for each of Earth's birds, and I must not give them away to any other."
So butterflies were made silent, and to this day they are still silent.

But their beauty brightens the day of all the People, and brings out songs from their hearts.

And that is how it was meant it to be.

The End



Lesson 2: To Feed a Butterfly

Class Preparation

Read all the Directions and through the Lesson.

Materials

1. A butterfly bush* *(Buddleia sp.)* in bloom *or other shrub/s* with flowers *appropriate to your climate* that attract butterflies and can be planted outside or in large containers (I use clusters of garden pots on my deck, but I have also seen bathtubs, deep wheel barrows and old boats used.),
2. Trowels
3. A shovel
4. Plates or plastic jar tops for making butterfly feeders
5. Yellow, orange or red plastic kitchen scouring pad
6. Twine or rope
7. Homemade butterfly nectar
8. Colorful silk flowers
9. Copies of the recipe for nectar to send home

Make decorated posters of the opening words.
The children will make up their own closing words for this lesson.

Author's note:
There are many websites that teach about how to make a butterfly garden. If you don't have one at your congregation like we do at UUFSB and or you are in the city, you can still attract butterflies with small container gardens. The best time to start a butterfly garden is in May in our area. See the Pre-Lesson for information sources.

**Buddleia* comes in many colors, but I have found the purple varieties best, not white. It will grow quite large if you cut it back each year.

Directions

1. Opening the Circle with Sounding of the Bell

Allow a Child to ring a Chime, Bell, or Triangle and ask the Children to concentrate on the Sound until it can no longer be heard.

2. Opening Circle Words

(No chalice lighting today because the children will be going outside, but keep children in circle until then.)

"This light stands for the 7th Principle which shows us that all life on Earth is connected so we should practice peace, treat everyone and everything with kindness, be accepting of one another's beliefs and care for the Earth."

3. Read a butterfly poem.

There are hundreds of butterfly poems. One of my favorite ones is called A BUTTERFLY HOVERS CLOSELY (author unknown) and can be found at http://www.rosebriar.uk.com/garden/butterfly.html Others can be found at http://www.poemhunter.com/poems/butterfly/ AND at http://www.tooter4kids.com/LifeCycle/poems.htm

4. Say to the children:

We will plant some flowers today for the butterflies and other insects and hang a homemade feeder to honor them and to practice the 7th Principle. Do you know what the 7th Principle says: "We believe in caring for our planet Earth, the home we share with all living things." (Or your interpretation) Let's learn it. Repeat it after me.

5. Show the children your homemade feeder

Have them make a small one to take home.

How to Make a Feeder

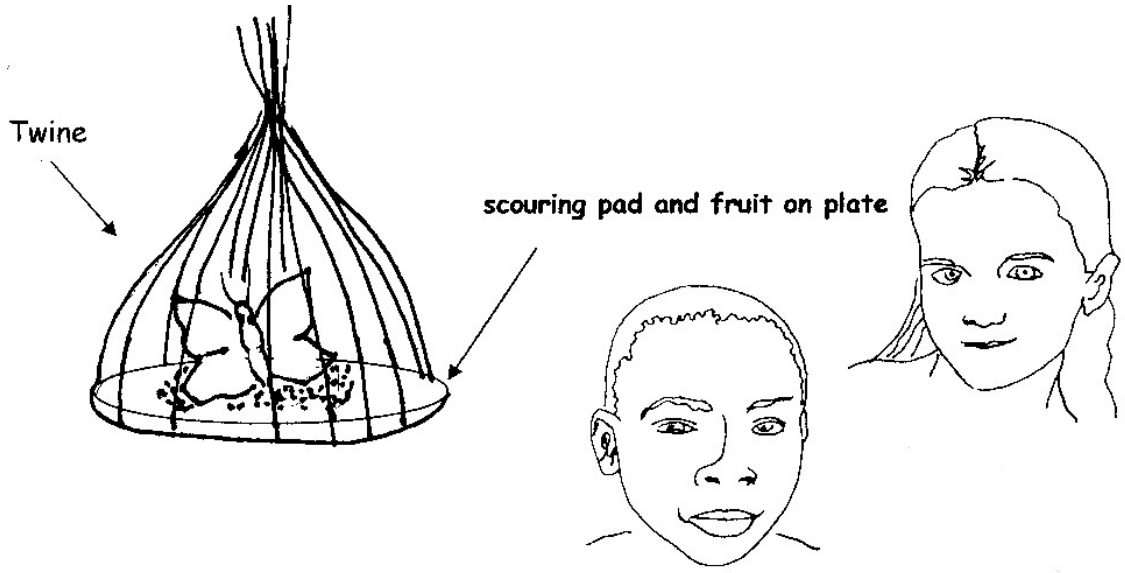
Homemade feeders can be made with a flat plate or saucer (bought from yard sales) or plastic container tops (red tops from peanut butter jars are great), etc… and a yellow-orange-red plastic kitchen scouring pad. Suspend the plate with a braided style holder made from household twine or (red) yarn. In addition you can have the children wind stems of red silk flowers (I bought all the ones I used at yard sales) around the twine to decorate the butterfly feeder and make it visually appealing to butterflies. Or try keeping the feeders about 6 inches higher than your butterfly bush or tallest flowers. The flowers will attract the butterflies and the feeders will stand out offering an alternative food source and water. Always wash the dish with soap and water and change the solution at least once per week.

Recipe for Nectar

Mix 4 parts water with 1 part white granulated sugar, boil the solution for several minutes until the sugar is dissolved, and let the solution cool. Pour solution over scouring pad. Store extra solution in the refrigerator, it will keep for up to a week. Add slices of over-ripe fruit. You can sprinkle a little fruit juice or water over the fruit slices if they dry out too much. Butterflies like mushy, rotting, very over-ripe fruit the best so don't throw

away those bananas and plums that get too ripe. Replace the fruit if it dries out or becomes moldy.

Butterfly Feeder



6. Take the children outside.

Plant flowers in your butterfly garden corner or in containers. Have the older children help the younger ones dig holes.

7. You can play the following game outside.

After planting the flowers, if you have time, or anytime this summer, play this game.

Outside Butterfly Game of Hide and Seek

Butterfly Hide and Seek is a quiet game. It was considered a gift of good luck by the Native Americans if you stayed so quiet that a butterfly would trust you and land on you. One child should cover his/her eyes and sing this song several times to the tune of *Twinkle, Twinkle Little Star*: "Butterfly, butterfly, go and hide." All the other children should quickly and quietly hide. The singer has to find all of them without saying another word. Butterflies are silent and in Lesson 1 the children learned why.

8. Call the children back inside.

After all have washed their hands, re-form the circle. Use this reminder (before snack) from Lesson 1 as a closing thought.

Realize that living in balance with the Earth involves learning about all kinds of life, using only what is needed from the Earth, conserving what we use and recycling as much as we can. That is why we made the Butterfly Feeder mostly from used materials instead of buying one. (Reduce, Reuse, Recycle and Respect) Making a place for butterflies to feed like we did today completes the circle of giving, which makes us stewards of the Earth.

9. Closing Words

Have each child say one thing given to them from nature or insects for which they are thankful. (rain, beauty, honey, flowers, sunshine).

10. Principles in Action Extension

If you have time or want to extend the lesson, have the children write their own Haiku-like poems.

(Go to http://www.gigglepoetry.com/poetryclassdetail.aspx?LessonPlanID=20 for learning about Haiku)

If you write a poem on a topic that matters to you, whether it be caring for the environment, or the 3rd Principle which is one of the ones we are exploring today, you can send it to lungar@clfuu.org for KidTalk. KidTalk is an online page that is part of the website for the Unitarian Universalist Church of the Larger Fellowship: www.uua.org/clf

Lesson 3: Butterfly Circle Dance

Class Preparation

Read through all the Directions and the Lesson.
If you want to get the older children or YUUth to help with the dance, you may have to give them a copy of the CD and lesson a couple weeks before class starts. Ask them to be leaders. Help them to pick a song and choreograph a dance to teach to the younger children. There are many, many songs out there. This is where it helps to have Rhapsody **(www.Rhapsody.com),** a subscription music website, which aids in searching for appropriate music. You can download music from this site for a fee and burn to a CD.

Materials
James Galway CDs (See Number 6 of this lesson.)
A "boom" box or some other player
Old scarves or different colored gauzy cloth to cut into long, thin scarf sizes or colored ribbons about 2 feet long. (Red, purple, orange, yellow are good color groupings. Another grouping is blue, turquoise, purple, sea green). Tie the ribbons together in a knot.

Directions

1. Opening the Circle with Sounding of the Bell

Use an instrument like a comb or ribbed soup can and stick to imitate the sound of a cricket. Use a recorder or a flute to represent the flutter of a butterfly. Ask the Children to concentrate on the sound until it can no longer be heard.

2. Opening Circle Words

(No lighting of the chalice today because of the dance, but keep chairs in a circle.)

We believe that we should accept one another and keep on learning together and growing spiritually. This is our 3rd Principle.

3. Sing a little song to the children using your insect instrument.

Find lots of easy butterfly songs which the children can learn at http://www.canteach.ca/elementary/songspoems26.html or for more advanced songs, see http://www.geocities.com/butterfly3ss/page1poems.html. As you sing a song, take the gauzy material or the ribbon and wave it through the air. If you are like me and feel that you don't sing well, you might want to get a recording of Martina McBride's song SHE'S A BUTTERFLY or use the James Galway CD.

4. Query the children

"Music can be spiritual and one of the many ways people express themselves and communicate. Spiritual growth is important to Unitarian Universalists. It helps us live our First and Third Principles." What does it mean to feel spiritual? (Accept all answers because as we know the meaning of being spiritual is different for as many different people there are in the world.)

5. Now tell the children we are going to dance

Invent a BUTTERFLY CIRCLE DANCE. Have them stand up from the circle and move to a larger area and line up.

6. Play a CD of any of James Galway's music,

I especially like his CD titled *Flute for Relaxation,* because it has one composition called the *Red Dragonfly,* and another called *Blessed Spirits,* which I consider all animals to be. Another good CD to use is called *Seasons.* Ask children to act out the music with dance using the gauzy material to represent the fluttering of butterflies with one of these pieces of music as the background. Now follow the leader, doing the dance, going in one direction and then in the other. (Yes, some of the boys might balk at this but when they see everyone dancing they usually will do it. This is where an older boy Yuuth really helps, when a younger boy sees an older boy dancing it takes away all there inhibitions.)

7. Now say we are going to "butterfly" in a circle.

Have the children form a circle around the outside of their chairs and tell them to move and make their butterfly motions as you move around the circle. As each child stops at their chair, if they wish they may go into the center of the circle and dance briefly before sitting down.

8. Closing Circle Thoughts (before snack)

All great artists and musicians will tell you that nature is an inspiration (spiritual) to them. Think about how, on an early spring evening, crickets call to each other. (Use the comb or scrapper again.) Think about the songs of birds (use the recorder) and calls of frogs (have the children making croaking sounds). Even the quiet flutter of butterfly wings (wave the gauzy material) makes a beautiful sound, if you have very good ears and you listen closely. The sounds of nature are the sounds of wonder.

9. Snack

Lesson 4: We Are All Caterpillars

Class Preparation

Read through all Directions and the Lesson.
This lesson may require art preparation before class, depending on the ability of your children and how much help you have. It may require the children drawing and coloring the props and looking at the caterpillar on the first Sunday and then the following Sunday will be needed to act out the book. Or you may divide the story up into two Sundays doing just half the story each Sunday. The children are actually illustrating the book and making it into a puppet show. See the templates and art directions at the end of the Lesson

Materials

1. Copy of Eric Carle's Book, *The Very Hungry Caterpillar*.
2. Scissors
3. An egg carton
4. Construction paper
5. Cardboard for other puppets and props
6. Popsicle sticks
7. Glue
8. Pipe cleaners or curly ribbon
9. Buttons for eyes (optional)
10. Poster board for "hands" butterfly
11. Real fruit, apple plums, etc… cut into pieces to share or as fruit salad. (Mint leaves are very good, or some edible flowers like clovers and dandelions (which are sweet if picked young) can be introduced to the children.)

Also, you will need a live creepy caterpillar in a jelly jar or bottle habitat. (See Lesson 5 on how to make bottle habitats.) In the summer, they can be found most anywhere there is a vegetable or flower garden. If you need to, you can always buy meal worms at the pet store as a substitute. They are easy to keep and great for a Metamorphosis Lesson, but they will not develop into a butterfly.

Directions

1. Opening the Circle with Sounding of the Bell

Allow a Child to ring a Chime, Bell, or Triangle and ask the Children to concentrate on the Sound until it can no longer be heard.

2. Opening Circle Words

We light this chalice today because we want to practice the 1st and 7th Principles, which are: We believe that each and every person is important, and we believe in caring for our planet earth, the home we share with all living things.

3. Show the beginning of Eric Carle's classic book and read this part.

"In the light of the moon a little egg lays on a leaf." So begins, "The Very Hungry Caterpillar". Show the Moon and the little egg (templates at the end of this Lesson from free clip art or make your own) glued to a popsicle stick.

4. Tell the story.

The children probably know the story already, but tell them that the book follows a ravenous caterpillar's path as it eats her way through one apple on Monday, two pears on Tuesday, three plums on Wednesday, and so on, until Saturday (make props of Saturday's food like sausage) - until she is really fat and has a stomach ache.

5. Hold up a live caterpillar and ask the children this question:

Do you think caterpillars are creepy? Why? Allow all answers.
Let's watch it "walk" for a minute. (We use terms like walk because humans walk. It makes children feel more empathetic.) Can you mimic its walk? Let all or one of the children demonstrate the squeezing wave movements of caterpillar movement. Caterpillars and worms have powerful muscles that contract and relax just like ours for movement.

6. Continue by saying:

Before we can act out *A Very Hungry Caterpillar*, we must make the puppets and props (caterpillars, sun, leaf, etc…), but instead of making pictures or illustrations of the apples, plums etc… we have real fruit for you to eat your way through as we read the story. (Teacher notes: you might bring in something other than meat (cheese, eggs) for "Saturday food", because we want to encourage vegetarianism as another way to care for the Earth.)

7. Make the simple egg carton caterpillar and handprint butterfly.

Use the directions attached at the end of the lesson. When the children are done with the popsicle props and the "hand" butterfly and caterpillar puppet, have them wash their hands, because now you are ready to read the book.

8. Read the book slowly.

Let different children hold up different puppets as they appear in the story and move the caterpillar to pretend that it is eating its way through the week. Every time the caterpillar eats, allow each child to have a piece of the fruit or a spoon of fruit salad.

9. Shared Thoughts

Ask some of these questions:

How many of you think caterpillars are funny now and not so creepy? Why? What did you learn from this story? Do humans go through changes, too?

Now you can't see this easily but every caterpillar and butterfly is unique, just like there is no one in the room like you, no two caterpillars or butterflies are the same.

10. Closing Words

We all start little as caterpillars
But slowly grow and change
Until one day
We are butterflies.

All insects go through change from eggs to larvae and to adults. This change is called metamorphosis. Caterpillars, which are the larvae of butterflies, grow to 27,000 times the size they were when they first emerge from their little eggs! Inside the chrysalis or cocoon, a pupa transforms into the beautiful butterfly. As human beings, we constantly go through changes, too. And that is something good to remember – no matter what we are going through today, tomorrow will bring a new day.

11. Install Art

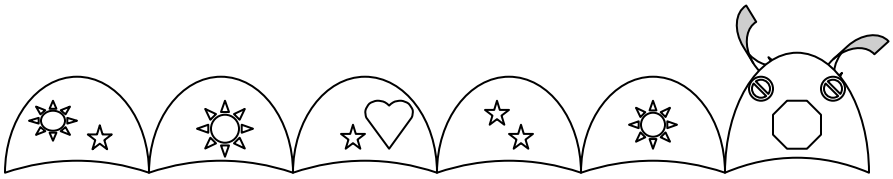
Put all your art on a bulletin board, the window or hang it from ceiling lights.

12. Lesson Extension

Read Eric Carle's ***The Lamb and the Butterfly.*** A lamb and a butterfly meet in a meadow and the lamb has many questions. "Where is your mother?" "Where is your home?" "Where do you sleep?" All of the butterfly's answers have the same subtle message that it is different than the lamb; it is a free spirit, who doesn't even need a mother to protect it. But when it starts to rain, the butterfly stays for a brief time with the lamb until its wings are dried and it is time to migrate south. This is a good starting point for many UU discussions, and can lead into Monarch Migrations, the Day of the Dead Celebrations in Mexico, etc. I would use this as a lead to a lesson on "What happens to butterflies in the winter?" for an October/Halloween Lesson.

Moon and Leaf Paper Props

Moon and Leaf Paper Props are from a free clip art website. Cut out and glue to popsicle sticks.
These are more props and other excellent ideas for teachers to extend the lesson.
http://www.brainybetty.com/bwART2004/BEAUTIFUL_moon_and_stars.jpg
http://www.dltk-teach.com/books/hungrycaterpillar/felt_fun.htm



Egg Carton Caterpillar Puppet

1. Separate 6 -12 cups from an egg carton. If you have lots of kids, make more than one caterpillar puppet.
2. Using the point of a scissors, an adult should make 2 small holes at one end for the antennae.
3. Insert pipe cleaners for the antennae.
4. Add button eyes and a mouth.
5. Have the children decorate the cups with water color markers.
6. Tie strings at the end to make the puppet.

Handprint Butterfly

This is a simple craft made from a child's handprint cutouts.

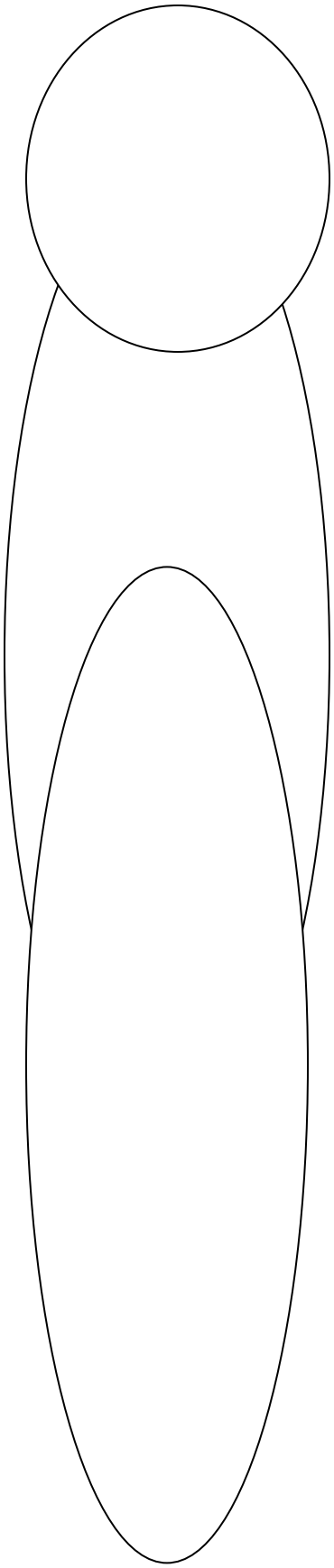
1. Trace one hand from each child on a few pieces of construction paper. You will need an even number of hands. These will be the butterfly's wings. Have the children decorate the wings (handprints) with markers.
2. Cut out the tracings.
3. On a piece of construction paper, draw a butterfly's body as big as you can or use the template from the next page.
4. Glue the handprint tracings in two groups, one to represent the upper wing and the others to represent the lower wing to the body with the fingers pointing outwards.
5. Folded pipe cleaners can be the butterfly's antennae. Attach two pipe cleaners in a **V** shape. Curl the ends a bit or wad them into balls. Glue the antennae to the head. Or use curly ribbon to make antennae. Curly ribbon can be hole-punched and tied to the head.
6. Either draw eyes on the butterfly's head or glue on button eyes.
7. Hole-punch and feed ribbon through the head to hang or tape the finished butterfly to a window after the story is over.

Handprint Butterfly Pattern

Make this as large as
possible to fit all the hands
or make more than one Butterfly.

Put groups of hands here
for Upper wings.

Lower Wings



Lesson 5: Creepy Crawlies/Flyers Scavenger Hunt

Class Preparation

Read through all the Directions and the Lesson.
This lesson will take more than one Sunday, depending on whether or not you do the outside "field" trip scavenger hunt and all the art lessons. You can shorten it by shortening the creepy crawler list (worms, sow bugs are two live creepy crawlers easy to find and use as examples). There is an inside "field" trip, too. Read on.

Important Notes
Children love this lesson, but do not allow them to touch any insect in this activity because some, like centipedes, are poisonous and a child may have an allergic reaction. Most spiders have fangs too small to break skin on a human unless the human squashes them next to their body, but again, a child might have a reaction.

I highly recommend that you get permission from parents to do this activity by having a field trip release form.

Talk to the parents about how to look for ticks. Go to **www.lyme.org.** Look on the right and click on "Children's Corner" for some great free posters about how to protect your children and yourself from ticks.)

To collect creepy crawlers
You or someone in your congregation who likes to do this sort of thing in your congregation can collect creepy crawlies before class and make a Creepy Crawly Zoo. **Have the children release the organisms as part of the activity. Some live creepy crawlies are really important, but you can also make puzzles (see directions # 7-9).**

1. Make pitfall traps for ground crawlers like beetles.
    - Choose a sheltered area in your yard and dig a hole deep and large enough for a jelly jar.
    - Put some green and rotting leaves at the bottom of the jar.
    - Put the jar in the hole, level with the surface of the ground.
    - Place a flat stone or camouflaged cover over the jar propped up by pebbles.
    - Check your trap several times during the day and once in the morning if you leave the jar overnight.
    - Wear gloves when removing insects to a vivarium or their own jar or carefully shake them into their new home.

2. Shake a bush or tree over a white sheet laid on the ground for other insects. Find slugs, worms and sow bugs under rotten logs, in leaf litter or under rocks. You will also find centipedes and millipedes. Go to for Field Guides and information: http://www.enature.com, http://bugguide.net/node/view/4555 or http://www.backyardnature.net/1000legs.htm

How to make your Zoo or Mini-Vivarium

- Get jelly jars, large plastic pretzel jars, plastic soda bottles, rectangular lettuce containers, old small fish tanks, etc
- Make a mesh top from old nylon hose and secure it with rubber bands or string.
- Place a little dirt on the bottom of the jar and leaves and sticks for the insects to climb on. If you'd like to keep them for more than a day, plant live plants.

Ant Farm: Farms can be bought, of course, but it is better to make one.

- Use large pickle jars filled with light colored dirt and covered on the outside with construction paper to keep it dark.
- Find a nest and be sure you get "honey" ants vs. carnivorous or grease eating ants. This is easy to do with a little sugar water or honey placed in a dish outside. Follow the ants back to their nest. Dig up one of the queens wearing gloves and as many as her workers as you can.
- Place them in their new home and feed daily with a little honey or sugar and water placed on the surface. Soon they will make tunnels and you can remove the paper from time to time to look at them.

Other Bottle Habitat ideas

http://www.thinkingfountain.org/h/habitat/habitat.html
http://www.learner.org/channel/courses/essential/life/bottlebio/terraqua/column.html

Materials

- Copies of the Creepy Crawly/Flyer Scavenger Hunt and Adopt A Creepy Crawly/Flyer (at end of lesson)
- Books on insects and other organisms from the library
- Cardboard backing
- Bull nose clips to temporarily attach the Scavenger Hunt sheet to the cardboard,
- Pencils
- Magnifying hand lens or dissecting microscope, if available (a biology teacher in your congregation can borrow these from their school)
- At least 3 tags sets numbered 1- 15 (fold over a piece of heavy construction paper)
- A few props like a jar of honey, a tomato plant growing in compost and bee's wax candles

Directions

1. Opening the Circle with Sounding of the Bell

Allow a Child to ring a chime, bell, or triangle and ask the children to concentrate on the sound until it can no longer be heard.

2. Opening Circle Words to Light a Chalice

We light this special chalice today (you may use a short bee's wax candle) because we have reverence for the 7th principle which is: "We believe in caring for our planet Earth, the home we share with all living things."

3. Ask this Essential Question

(Show children the books marked with each of the 15 scavenger hunt creepy crawly/flyer items.) In our opening words to light the chalice, we used the word "reverence". Does anyone know what this word means? Allow all children to share what they think reverence means.

4. Discuss reverence

One of the definitions for reverence is "to hold something in awe, in respect or to see wonder in it". Hold up a photograph image of a bee, and then explain why they really aren't creepy! We should have reverence for all Earth's creatures because we are connected to them.

What is good about Bees?

- A hive of bees flies over 55,000 miles to bring you one pound of honey. A honey bee can fly 15 miles per hour.
- Flowers and other blossoming plants have nectarines that produce sugary nectar. Worker bees suck up the nectar and water and store it in a special honey stomach. When the stomach is full the bee returns to the hive and puts the nectar in an empty honeycomb. Natural chemicals from the bee's head glands and the evaporation of the water from the nectar change the nectar into honey.
- Bees wax is used to make candles and other products like soothing lip gloss.
- Many plants cannot grow unless they are cross-pollinated by insects such as bees.
- Because bees cross-pollinate so many fruit and vegetable plants, they play a vital role in food production all over the world.

Hold up a jar of worms and sow bugs.

What is good about worms and other bugs?

- Sow bugs and worms help to compost and make the soil good for growing things.
- Other bugs like spittle or stink bugs are food for the song birds and other animals.
- Praying mantis and lady bugs help us control garden pests naturally.

5. Blow out the candle and prepare to go outside.

Tell the children that they are going outside on a scavenger hunt to find insects and other creepy crawlies and to see where they live (or have them do the hunt inside with the Creepy Crawly Zoo. See # 9). If you plan to keep your finds more than one day, go on-line to find out what each creepy crawler needs to survive in a jar. Worms and sow bugs

need moist soil with rotting leaves. I use vegetable scraps to maintain an indoor compost garden all year for my students in a plastic pretzel jar.)

6. Divide the children into groups.

Divide the class into pairs or groups of 3, older ones with younger ones. Have each group go to one area of the garden and then switch to another area after a period of time. All groups should go by the Butterfly area you made in Lesson 2.

7. Give each group materials for the hunt.

Each group should have one scavenger hunt sheet and some of the numbered tags, not every group has to find all the creepy crawlies or items.

8. Organize a sharing circle.

After 10-20 minutes of looking outside, call all children into a circle to share what they found, and then go look to see how many items were found (note: look under rocks and use a shovel to pick up leaf litter.)

9. Inside Variation of Scavenger Hunt

Make puzzles of each of the 15 Creepy Crawlies/Flyers on the Scavenger Hunt List. This is easy enough with colored images off the Internet.
Images: http://www.7art-screensavers.com/screenshots/insects/?S=A
Free Clip art at ~~http://webclipart.about.com/gi/dynamic/offsite.htm~~
http://webclipart.about.com/od/msubmenu1gg/Insect_Links.htm

Glue to the back of each puzzle a different colored piece of construction paper and then cut into puzzle pieces to fit your age group's level of difficulty. You can also add facts to the back by typing them and gluing before cutting. Example at end of lesson is shown using a sketch which the children can color and add to by drawing their own plants and other insects.

Hand out jumbled up pieces of the puzzle to the children. Have them find other children with the same-colored backing.

After they put together the puzzle, then they can use the puzzle and the books to fill in information on the Adopt A Creepy Crawly/Flyer sheet, and to do a drawing of it. Show them how to make the basic insect structure. See "How to Draw Creepy Crawlies" attached. (And if you have a Creepy Crawly Zoo, then they can match their puzzle to a jar as well.)

10. Unison Ending Words (before snack)

All Read Together and then blow out the chalice:

"All things in this world
Have souls or spirits.
The sky has a spirit,
The clouds have spirits:
So have animals, trees, grass, water stones,
Everything."

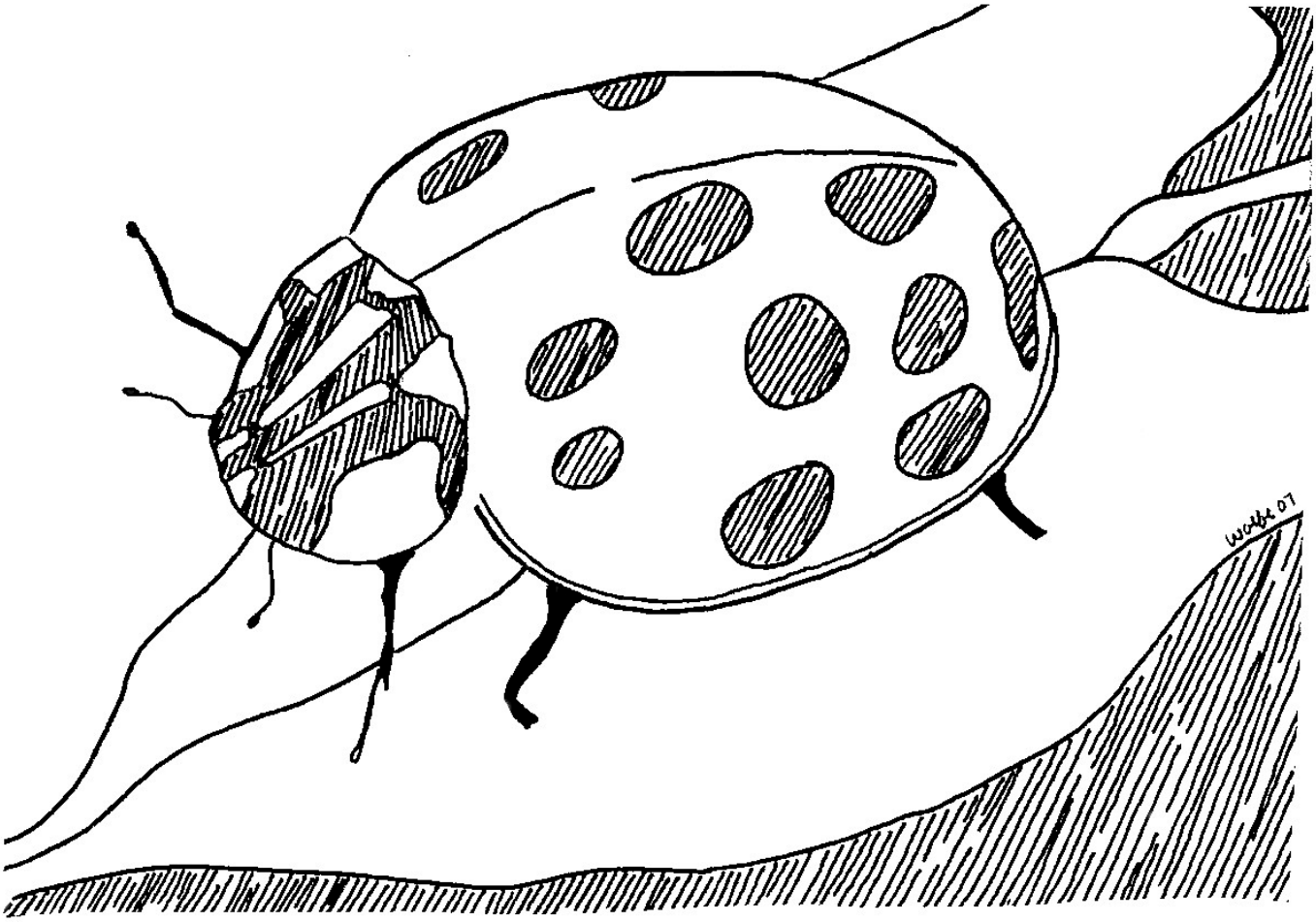
-----from the Hidatsa Native Americans

11. Snack suggestion

A good snack for this lesson is ladybug apples. Serve each child half of a red apple with the peeling left on. Let children attach raisin spots using cream cheese or peanut butter. (Make sure they aren't allergic to peanut butter.)

Lady Bug Puzzle

Paste this page on the back of a piece of lightweight cardboard and then cut into jig-saw-puzzle pieces.



Facts about Lady Bugs

The number of spots identifies the species of ladybug.
All ladybugs of the same species have the same number of spots.
As the lady bug ages, its spots fade.
Not all ladybugs are spotted. One species is striped!
Save Lady Bug larvae and pupae because Lady Bugs are predators of harmful insects like aphids!

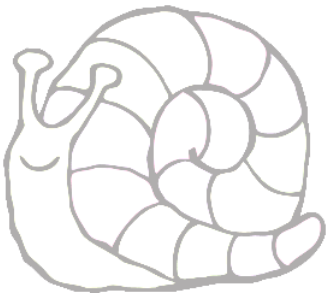
Learn more about lady bugs at http://www.celticbug.com/Legends/Lore.html

Creepy Crawly/Flyer Scavenger Hunt

Name(s)_____
_____

- See if you and your partners can find examples of the following organisms or evidence of their lives.
- Check off each one you find by putting a numbered tag where you find them.
- Do not kill or hurt any of the creepy crawlies you see.
- LOOK Carefully! Good luck!

	Tag	Creepy Crawler
❑	1	An ant
❑	2	A bee or wasp
❑	3	A caterpillar
❑	4	A grasshopper or cricket
❑	5	A stink bug or spittle bug spit on plant stem
❑	6	A butterfly
❑	7	A lady bug (beetle)
❑	8	A worm
❑	9	A sow (pill) bug
❑	10	A slug
❑	11	A spider or insect caught in a spider's web
❑	12	A dragonfly
❑	13	An insect with 3 or more colors
❑	14	A praying mantis
❑	15	Insect eggs



Adopt~A~Creepy Crawly or Flyer

Name: _____

Draw a diagram or cartoon of your creepy crawler and label its body parts.

My Creepy Crawler is:

_____

Habitat (Where it Lives):

_____

What does it eat?:

_____

What eats it?:

_____

Other Interesting Information:

_____

_____

_____

_____

_____

_____

How to Draw A Creepy Crawly

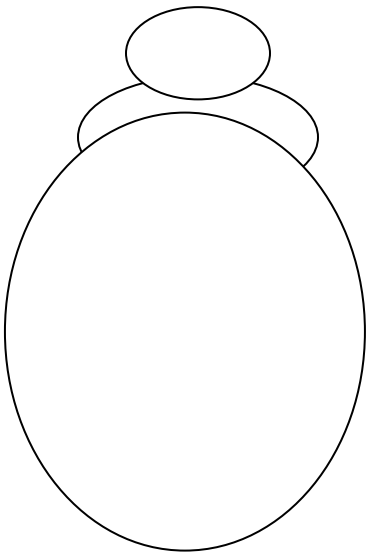
Directions

1. Basically, you want to remember that arthropods, which include sow bugs (a crustacean like crabs), insects and spiders, have 3 parts, a head, a thorax, and an abdomen. In spiders and crabs the head and thorax are fused. Other creepy crawlies, like worms and slugs, can be drawn by using this method, too.

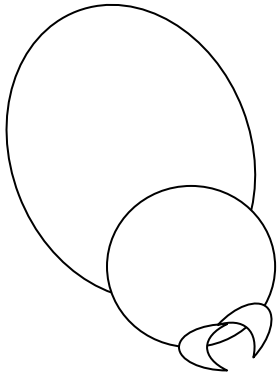
   (How to Draw Nature books can be found in the Library. There is a great series called *Draw Science* by Lowell House Juvenile, Los Angeles CA and, of course, there are now on-line lessons at http://www.artistshelpingchildren.org/howtodraw.html

2. Look at your creepy crawly carefully. Does it have a small head and thorax and a big abdomen like a beetle? Or, does it have a long and thin abdomen small head and more oval shape abdomen like a butterfly? By looking carefully, you can decide on its general shape.
3. Sketch the general shape with a pencil. Use ovals and circles, squares and triangles.
4. Erase any excess lines and add details like eyes and antennae.
5. Shade in to make texture.
6. Using a thin line marker or black ink pen, outline your drawing.

Examples of how to start drawing:



Beetle



Spider

Lesson 6: The Little Blue-Green Creepy Flyers

Class Preparation

Read through the Directions, Lesson and Story. This lesson can again be extended by doing the Principles in Action. Please note Lessons 6, 7, and 8 are about aquatic creepy crawlies.

Materials

1. Thin shrub branches. It is best to save these up from when you trim bushes before they bloom (or you make one large mobile and put silk or dried flowers from the garden to decorate it),
2. Popsicle sticks
3. Pipe cleaners
4. Cone-shaped coffee filters
5. Watercolor markers
6. Small paint brushes
7. Glue (a hot glue gun is perfect- if an adult does the gluing before hand)
8. String to hang the dragonflies
9. Live damselfly nymphs (if possible) from your neighborhood pond or wetland (see "Collect Plants and Animals Responsibly" in the Introduction by the Author)
10. Hand lenses or a dissecting microscope
11. Colored pencils or markers to color the story

How to collect live damselfly and dragonfly nymphs

Scoop up some pond water and aquatic plants with a rake into a bucket. Pour the bucket and plants into a clear "under the bed" shallow storage container. Swish around the water and pull the plants to one side. The nymphs, aquatic snails, leeches (oh gee, more creepy crawlies) and other water "bugs" can be spotted, because they move. Use a turkey baster (big plastic pipette) or slotted spoon to capture the little ones and put them in a clear baking dish for observation using a hand lens or with a dissecting microscope (a biology teacher in your congregation can borrow one from their school.) Field guides, such as the Golden Guide to *Pond Water,* are great for little kids (and us older ones, too.)

Directions

1. Opening the Circle with Sounding of the Bell

Allow a Child to ring a Chime, Bell, or Triangle and ask the Children to concentrate on the Sound until it can no longer be heard.

2. Opening Circle Words to Light a Chalice

This light stands for the warmth of friendship and our never ending search for truth.

3. Read the Story

Read the story at the end of this Lesson to the children. Ask at the end: Do you know what Lou's little blue-green flyers are really called? Damselflies and Dragonflies. Show a photograph image of a damselfly or dragon fly nymphs and adults (the nymphs are especially creepy.)

Websites for images and information:
http://www.livescience.com/insects/
http://www.earthlife.net/insects/odonata.html
http://www.auburn.edu/~webbeec/limnology/dragonfly.htm
~~http://www.acay.com.au/~adderley/enviro/frogday.html~~
http://www.7art-screensavers.com/screenshots/insects/?S=A

4. Discuss the Essential Questions

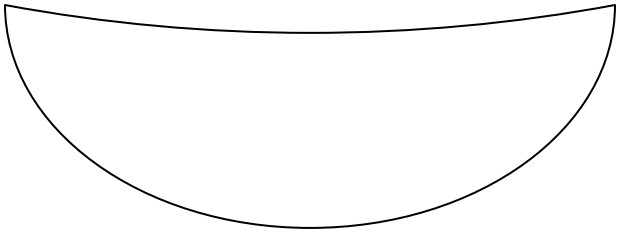
Why did Lou like these creepy crawlies and flyers so much? Hopefully, some will see that Lou was curious, and believed in the inherent worth of even creepy things. She was searching for truth in her own way. Lou came to identify her life with these creatures and believe they were her friends like the old timers.

What made Lou like the swamp so much? (Accept all answers, but you may open up a "can of worms" with this question. Obliviously, Lou found acceptance from the old timers and peace in the swamp that she didn't find at home. She could escape the turmoil. This story may give you insight into what is happening in the lives of your children and how happy they are at home. This story (and any metamorphosis story) allows children to understand that unhappiness does not need to be life long.

5. Have children make a damselfly/dragonfly

How to Make a Damselfly or Dragonfly

- Have the children decorate a popsicle stick with water color markers,
- An adult needs to glue 2 pipe cleaners with the top portion of the pipe cleaners sticking over the "head" of the dragonfly in a V shape. Hot glue is the easiest way to do this. Let the glue cool off for a few minutes while the children decorate the wings, or do this before time. Curl the ends of the V to make it look like antennae.
- Open up a cone-shaped coffee filter at the seam or fold one in half so it is shaped like wings.



- Have the children decorate the coffee filter with water color markers. Decorations in the very middle will not show, so concentrate on the outer parts. Wet the decorations just a little for a special effect making iridescent wings.

- Glue the finished wings to the side that the pipe cleaner is glued on.

6. Hang the damselflies/dragonflies

Attach string to each damselfly/dragonfly and hang from the thin branches.

7. Hand out the Wetlands picture to color from the end of this Lesson.

Give out the coloring picture to take home or do in class in another lesson. Children can add fish, frogs, etc… to the pond.

8. Principles in Action Extension: Make a Wetland

This is really a wonderful way to practice the Principle and will give you live baby damselflies and dragonflies to show the children all through the year unless the water freezes. It is very easy to make a wetland, I have done it in my own back yard with my boys' (now 17 and 20 years old) baby swimming pool, a little dirt, some native aquatic plants in garden pots, such as Arroweed (*Sagittaria)* and Common bladderwort (*Utricularia) W*hat is really neat about about bladderwort is that it is carnivorous.

Check this website for more information:
http://www.rook.org/earl/bwca/nature/aquatics/utricullariamac.html)

Go to one of these sites for more information on building a wetland:
http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/newsroom/features/?cid=nrcs143_023525
http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs143_023212.pdf
http://www.bobvila.com/articles/backyard-pond/
http://www.doityourself.com/stry/backyardwetlands#.UjOE1MZON8G
~~http://www.nrcs.usda.gov/feature/backyard/BkPond.html~~
~~http://www.nrcs.usda.gov/feature/backyard/pdf/Wetland.pdf~~
~~http://www.birding.about.com/library/blbackyardwetland.htm~~
~~http://www.bobvila.com/HowTo_Library/Backyard_Wetland-Water_Features-A1471-3.html~~

9. Closing Words

There are about 200,000 individual insects for every one human being. Most of their babies live in a wetland. Scientists are estimating that because human beings are cutting down forests at an alarming rate (deforestation) and filling in wetlands, that we are losing 1000 species each year. What is a Wetland? If you have time read "Why Save Wetlands" (attached), have a discussion and send a copy home with the children for their parents. The flooding that happened in New Orleans during hurricane *Katrina* would have been less severe if over 100 years ago we had realized the importance of protecting our wetlands. (Give out the coloring picture to take home or do in class.)

10. Closing Poem

Have the children fly their dragonflies on their branches as you read the poem called *Fly, Dragonfly!* by Joyce Sidman from her book *Song of the Water Boatman.*

Reaching for the Light

Written by Stefani Scott and Illustrated by Deborah Wolfe

Lou was almost all grown up, about 8 years old, when she learned that the little blue-green flyers that hovered over her head in the swamp were not tiny, little hawks at all, but insects. First, you may wonder what in the universe made Lou mistake an insect for a bird. Well, she thought the blue-green flyers were hawks because some the Southern old timers who used to fish off the dock in the swamp called them "mosquito hawks". And sure enough, she did watched the little blue-green flyers snatch mosquitoes in their jaws as they darted around her head flying in and out of the cattails.

Second, you may wonder what in the universe, Lou was doing sitting on a dock surrounded by cattails in a swamp with poisonous cotton mouth snakes, snapping turtles, and alligators, as well mosquitoes trying to pick her off either by sucking her blood or snapping at her short, girly limbs. Back then, a good long time ago, 50 years ago at least (Lou is quite old now with gray hair and grown children of her own), 'gators didn't like to nibble on people and cotton mouths gave off a real good musky smell so you could avoid stepping into their paths while hiding out in the cattails. Mosquitoes couldn't be avoided, but because she rarely sat out by the swamp at dusk, her chances of getting bitten by a mosquito were very low. The swamp was quiet and beautiful and far enough from home that she couldn't hear the yelling going on between her Ma and Pa, so the swamp held a special place in her heart. Even though it was truly hot, maybe 90 or so degrees Fahrenheit in the shade during days, and so humid she sometimes had sweat dripping down into her eyes like rain, Lou thought of the swamp as heaven and enjoyed listening to the Southern old timers' stories.

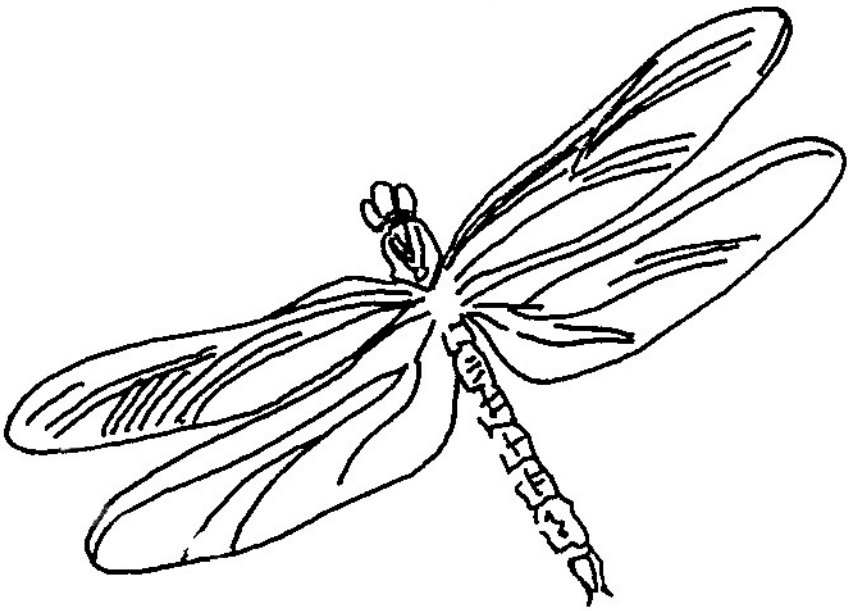
One day in early summer this little blue-green flyer lit on Lou's shoulder and she watched it move its eyes. It seemed to look into her soul. She could see that while it was looking at her, it was also looking simultaneously in all directions. Each day during that summer a little blue –green flyer would "light" on her shoulder and smile at her. Later when she was almost grown up, at least 9 years old, Lou would learn from a library book that its eyes were made of 30,000 lenses. Wow!

During the autumn of her 10^{th} year, just before Hurricane Donna hit Florida hard, Lou saw what looked like a blue-green flyer on a cattail be brushed into the swamp as the wind and rain beat down the cattail. She was very upset running back to her house to help her Ma border-up the windows, thinking the flyer had drowned. A few days after the hurricane, when she was finished helping to clean up the broken trees and roof tiles from her house, Lou found out she was wrong. She went back to the swamp and was watching as this prehistoric-looking insect climbed out of the water onto a cattail, broke through its skin (molt), and turned into a little blue-green flyer. After the sun dried its wings, it flew into the sky. Then she knew that what she saw fall into the swamp before the hurricane hit was the just the insect's outgrown exoskeleton or skin.

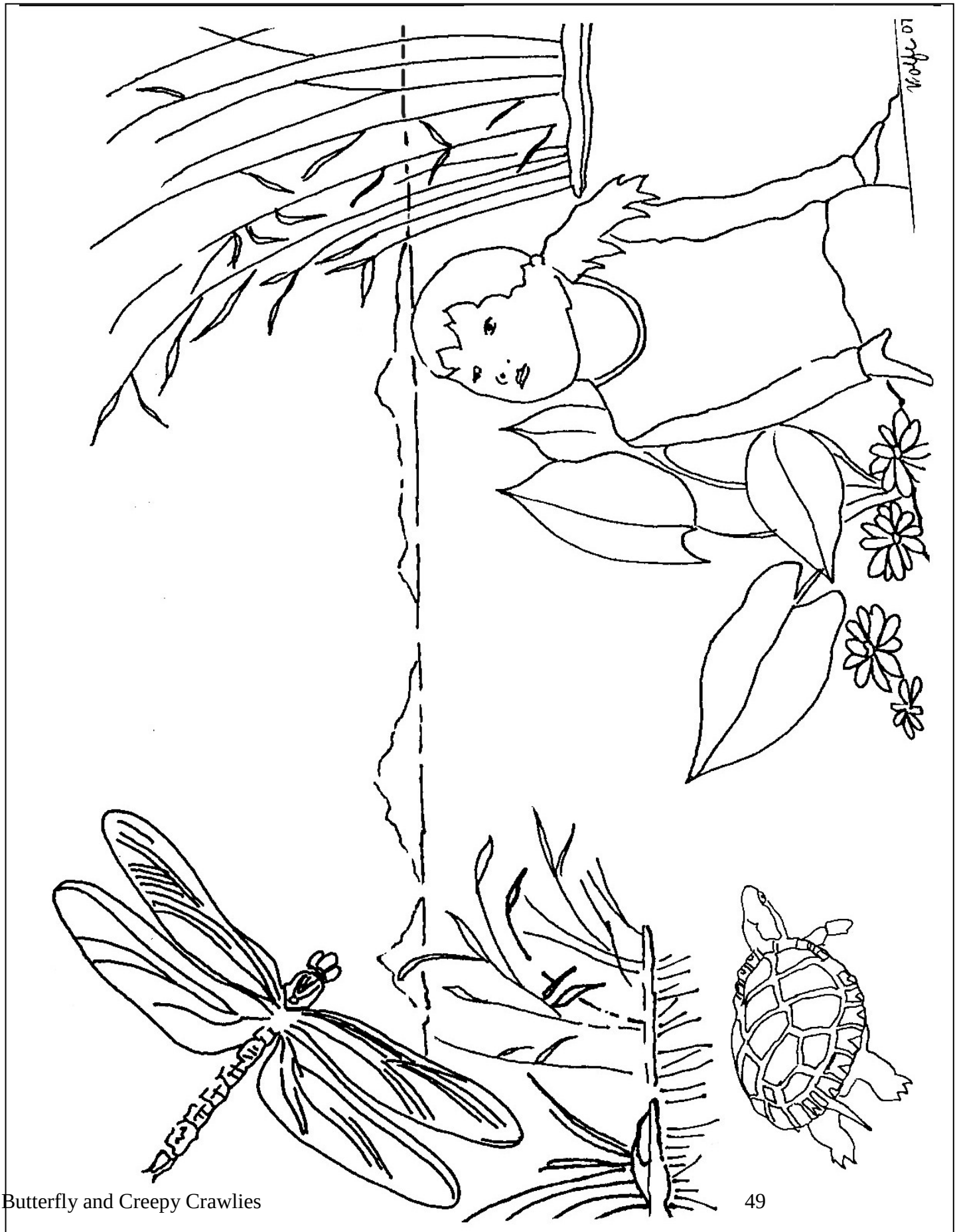
Later, when she was really all grown up, in her teens, Lou studied more about the little blue-green flyers and found out that their babies were called nymphs and didn't fly but walked at the bottom of the swamp. While they hid in aquatic plants, they waited to grab other insect larvae, and sometimes even young tadpoles and minnows, with their jagged jaws. As a nymph, the little blue-green flyer breathed through something that looked like its tail, but really these were "gills". When it grew up, it wouldn't have lungs like Lou but would breathe through holes in its exoskeleton. Its membranous wings help it to do acrobatic dives and spins like a jet airplane. Lou also found out that these little blue-green flyers were fairly ancient insects going back about 300 million years in the fossil record. Wow!

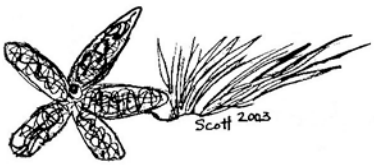
Lou thinks that no one will believe her when she tells them that the little blue-green flyers from the swamp were her friends and that she could tell that this was true because the little flyers always smiled at her. They talked to her, too, in their silence, and they showed her that you could molt your exoskeleton to change, grow and reach to the sun to gain your dreams. They taught her to look to the future, to set goals, and become all she could be. To this day, she is grateful for their presence in her life.

The End



Wetlands Picture to Color






WHY SAVE WETLANDS?

A wetland is land flooded with shallow water. Some wetlands are seasonal or only last for a month or as much as a few years and then dry up to return only when there is another rainy time. Wetlands can be found around bays, rivers, and lakes, too. Shallow ponds and marshes, swamps and bogs are considered wetlands. Wetlands have been disappearing in North American and around the world at alarming rates as land is drained and filled for agriculture and urban development or swamp forests are cut for timber. When Europeans began to settle the "New" World, the United States had approximately 215 million wetlands. Today there are fewer than 85 million acres left in the USA.

Because ALL LIFE IS CONNECTED!

WATER

►Wetlands help to maintain groundwater supplies, including drinking water, by allowing it to seep through porous soils for storage.
►By storing and slowing the flow of water, wetlands act in flood control (a study by the Army Corps of Engineers found that protection of 8,400 acres of wetlands would prevent over $17 million of flood damages).
►Wetlands anchor sediments along streams, lakes, and beaches, and dissipate the energy of moving water, controlling erosion.
►Many chemical pollutants such as radioactive materials, phosphorous and nitrogen are retained by sediments and removed from water by wetland plants.

RECREATION & LIFESTYLE

►Recreation, such as fishing, camping, hiking, and bird watching are dependent on wetlands.
►50% of the US population lives within several miles of a coast, stream or lake.

AESTHETICS

►Wetlands provide a changing landscape of water, plant and animal life.
►Wetlands have intrigued the human mind, inspiring countless artists, scientists, photographers, musicians and People of Faith all over the world.

FOOD AND FOOD WEBS

►Estuaries are nurseries for shellfish (mollusks and crustaceans) and ocean fish. The basis of all life is photosynthetic algae found in aquatic ecosystems like oceans. Zooplankton feed on the algae, the next step in food chains, and the zoea (young crab and shrimp) and fingerling fish feed on both. So wetlands feed humans through the shellfish and fish industries.
►Freshwater food webs are as important as food sources for inland-bound humans, too. Some foods such as blueberries, cranberries and wild rice are grown and harvested in wetlands, and fish like largemouth bass are important sources of proteins.
►Many people around the world still rely on hunting and trapping for their food and clothing. Because wetlands are habitat for many animals they provide humans with this way of life.

WILDLIFE HABITAT

►More than 80% of North America's birds rely on wetlands for breeding, resting during migration and wintering.
►Wetlands provide habitat for about 50% of all endangered species, which include mammals like river otters and panthers. As a class amphibians are the most endangered species on Earth and wetlands are their nurseries, too.
►Other animals including mink, beaver, muskrats, raccoons and many reptiles need wetlands as habitat.

LINKS

http://www.audubon.org/campaing/wetlands/ecosystem.html
http://www.epa.gov/owow/wetlands/education/#activities (Fun Activities, Curriculum and Links)
http://www.wetlands.org/education_celebrate.htm (Celebrate Wetlands)

Lesson 7: Creepy Crawlies In One Tidepool

Class Preparation

Read through all the Directions and the Lesson.
This lesson is best if you have a salt water estuary or bay near by to collect organisms or take a field trip. However, you could take a field trip to an aquarium or marine pet store with your RE class or you could go to a local seafood or bait store and buy a live crabs and mussels, eels, bait fish etc…Or you can also collect dead organisms to "show and tell" and or buy plastic models (Oriental Trading Company www.orientaltrading.com has lots of small creepy crawlies including insects) or bring in all those beanie babies stuffed animals you've been collecting from yard sales). Read *In One Tidepool* by A. Federicks so you can **see what organisms you need.**

Materials
Large Conch shell, if possible, or musical recorder and a collection of shells, sea stars also called starfish, hermit crabs, horseshoe crab, mussels, small fish, eels (killifish or other bait fish), mudsnails, drills, barnacles etc…See direction 3 below on "how to gather" live things, buckets, nets, aerator, large under the bed blanket or sweater clear storage container.

Directions

1. Opening the Circle with Sounding of the Bell

Allow a Child to blow through a conch shell. If that isn't available then blowing through a recorder can simulate the sound. Ask the children to concentrate on the Sound until it can no longer be heard.

2. Opening Circle Words

Put a shell or collection of shells as the center of your circle. Hold up one shell and have the children repeat after you these words: "Our 7th Principle says we should care for the Earth and all its creatures."

3. Gathering sea creatures

You can gather live sea creatures at low tide along a bay, on pilings of docks or in a tide pool if you have a net, a bucket and a pair of old sneakers. It usually takes me one hour to collect. I have a license to collect for educational purposes. You should check out your state laws. You must RELEASE your organisms or set up an aquarium for short time use (see extensions).

I always find sea stars on pilings. Do not take, even for a day, more than one small sea star or two of any other organisms except hermit crabs and/or mudsnails (you will need 5 for Lesson 8). Do not gather anything that is endangered or protected even for a day. Be sure to collect live plants like Knocked Wrack and Sea Lettuce. Don't collect sponges, as they will die within 2 days and mess up your bucket. The aerator is to keep your organisms alive for a few days for RE class. The organisms will feed on each other or

anything dead you scoop up. Be careful about getting big shore crabs (one small one is ok) because they will eat your other creatures.

You may use "dead" things or stuffed animals or plastic animals and plants for this lesson, but still pretend that they are in a real habitat by making a tide pool. I get all my "dead" stuff from yard sales especially starfish, corals and exotic shells, and then I don't feel like I am taking from nature. I have even found sharks teeth and jaws this way. Field guides at www.enature.com or the Golden Guide to *Sea Shores* is great for little kids and will help you identify the organisms you collect.

4. Sea Creature Care

From the bucket, put your organisms into bay water in a shallow, clear "under the bed" container with seaweeds just before RE class. Keep aeration going if possible, but be assured I have had nothing die in an hour or so of doing this in 30 years. Tide pool creatures are adapted for low oxygen at low tide.

5. Introduce the "habitat" reading

A wetland can be as big as an estuary or bay, as deep as a lake or along swift running rivers and creeks. The water can be slow moving and shallow like in tide pools or in bogs or swamps. Even though this LITTLE Tide Pool isn't a real tide pool, it still represents a nursery of life. Let's see if you can know any of its life, let's see if you know any of its creepy crawlies.

6. Read* In One Tidepool *by A. Federicks

Leave blanks in the poems, point to the organism and let the children guess what it is: Example: "_____ with legs so small, that waved at the girl who watched them all…" "Barnacles" fills in the blank.

7. Touching the Sea Creatures

Let the children touch the organisms if they would like, but not remove them from the water. The children love this part, but they must wash their hands after touching the organisms.

8. Unison Closing Words (before snack)

Have the children hold hands around the touch tank. Say: We believe all life is worthy of our respect and love. Have them repeat the words after you.

9. Suggested snack: Gold fish cheese crackers.

10. Lesson Extensions for the following weeks

Set up small aquariums; bay aquariums can usually last 2 months without too much trouble if you use bay water initially, no more than 1 organism per gallon, aerate them continuously, do not put any sponges or clams in the tank (mussels are ok), and feed them every 3 days with marine fish food and shrimp pellets (too much feeding kills them quicker than anything else). You can do individual creepy crawly studies with each of the organism you have. Snails are great to watch especially if you have a magnifying glass or dissecting microscope.

Entice the older YUUth in your congregation to read *The Sign of the Seahorse: A Tale of Greed and High Adventure in Two Acts* (Picture Puffin Books) by Graeme Base. This book can be acted out by the YUUth for the younger children. It is a romance and a mystery where the beautiful Pearl Trout falls in love with Corporal Bert, the Soldiercrab. Reeftown, the coral reef, is being destroyed by a deadly poison. Pearl, Bert, and Pearl's brother Finneus must journey through the ocean depths to save the coral reef. It is great summer idea for the YUUth.

Lesson 8: The Shelled Animal Races

Class Preparation

Read through the Lesson and Directions.

Materials

1. Aquatic hermit crabs (or mudsnails),
2. Clear pyrex baking dish or small plastic container,
3. Empty sea (snail shaped) shells just a little larger than the ones the hermits are wearing (you can get empty shells at aquarium stores or collect them along a bay),
4. Shrimp pellets from aquarium store,
5. Copies of the Maze Race attached,
6. A sea shell collection (perhaps some member of your congregation will lend you one.)

Directions

1. Opening the Circle with Sounding of the Bell

Ask an older child to play a recorder or flute instead of ringing the bell. Ask the children to close their eyes and concentrate on the Sound.

2. Opening Circle Words to Light the Chalice

We light this chalice today because we honor all life great and small.

3. Read Eric Carle's "A House for Hermit Crab."

This story book is an underwater fantasy based on the true habits of hermit crabs, the algae (seaweed), and animals in their marine environment. It is a great first introduction to marine biology, as well as an appealing story of a hermit crab's search for a house as he grows throughout one year's cycle.

4. Maze Race setup.

If you have live bay hermit crabs, put them into a clear baking dish with bay water next to empty shells. Watch the hermits race to get into the larger shells. Then try the Maze Race (see direction 5.) If you only have snails you will only be able to use the Maze Race and you will have to tell your children that the snails grow shells unlike the hermits who must look for ones left behind by other animals. Hermits most often use empty snail shells. Show the shell collection and then ask the children, what other sea animals have shells. (Hopefully, they will answer turtles. And then mention that sea turtles are much more rare or endangered than snails or than aquatic hermit crabs. (See Principle In Action Extension.)

If you don't have live snails or hermits, make copies of the Maze for each child and let them color and do the maze. We want rainbows of color to illustrate diversity. They may also draw in fish and other aquatic animals.

5. Snail Race

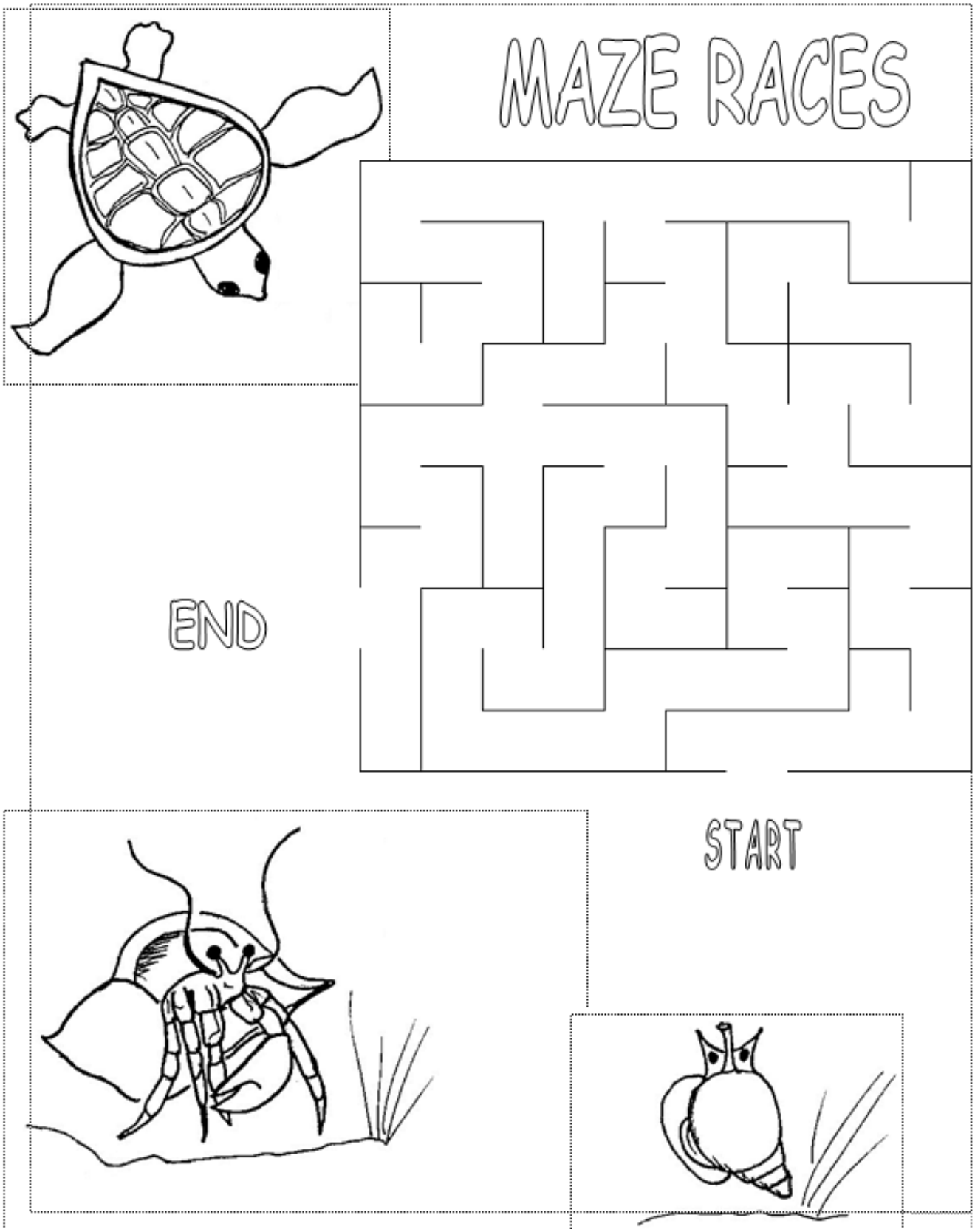
Make the same number of copies of the Maze Race (next page) that you have hermits (or snails) and/or clear baking dishes. Put the maze under the dish. Be sure you have bay water in the dish, freshwater will kill your bay animals. You can also try this lesson with aquarium store snails, but, if you do, be sure you have the right kind of water for this activity. Place a crushed shrimp pellet at the end of the maze with pieces along the trail. Place 2 hermit crabs (or snails) at "Start" and let them race to the "End". They probably won't follow the trail, but it is fun to experiment.

6. Closing Words

Have one child choose a shell from the collection and place it by the chalice and then have the children repeat these words:
"Today we learned to honor all life great and small."

7. Principles in Action Extension

- How about adopting a sea turtle? Have the children brainstorm ways to make money so the class can adopt a sea turtle. Find information at: http://www.savetheseaturtle.org/or
- https://secure.defenders.org/site/SPageServer?pagename=wagc_seaturtle&s_src=3WEW1100XXXXB&s_subsrc=seaturtledirect&JServSessionIdr004=35ymr4ki22.app220a
- Clean up the shoreline of a beach or pond.
- Find other Principles in Action at: http://www.nrdc.org/reference/topics/water.asp


MAZE RACES
END
START

Lesson 9: Sea Star Play

Class Preparation

Read through the Lesson and Directions.
If possible get help from the YUUth to act out the short story in this lesson.

Materials

1. Starfish (sea star) cut outs,
2. Variety of thin colored ribbons,
3. Beads (optional),
4. Colored sand or glitter,
5. Recorder or flute,
6. Glue,
7. Live sea stars (optional) or book on sea stars,
8. Clear pyrex baking dish if you have a live sea star, mudsnail.

Directions

1. Opening the Circle with Sounding of the Bell

Ask an older child to play a recorder or flute instead of ringing the bell. Ask the children to close their eyes and concentrate on the Sound.

2. Opening Circle Words to Light the Chalice

This light stands for the belief that by doing one good kindness we can change the world. We believe this because we believe in justice and equity for all.

3. Read the following short story to the children.

The author of this story is unknown and I have adapted it for this RE lesson.
Be sure to instruct the children that when you stand up and pretend to throw something into the air that they should follow your movements.

One morning an elderly man was walking along the beach, his bare feet in the sand... In the distance, he could see a beautiful woman dancing along the water's edge with a beautiful rhythmic movement... *(all the RE children stand up and dance by looking like they are throwing something into the air or ocean waves. It would be nice to have the recorder player play a few notes each time).*

As he got closer he saw that what he thought was a beautiful woman dancing was really a young child and she really was not dancing... He could see her stooping to pick something up, running, and throwing the objects into the waves... *(all the RE children stand up and pretend to throw something into the waves.)*

As he approached her, the man saw that she was picking up sea stars on the beach and tossing them into the sea...

He asked, "What are you doing?"
"The tide is going out," she responded, "and these sea stars stranded on the beach will die unless I cast them back into the ocean..."

"But there are miles of beach and thousands of sea stars," the elderly man said... "You cannot possibly make a difference..."

The little girl bent over, picked up another sea star, and hurled it to the waves. "It makes a difference to this one," she said....

4. Seastar Shw-and-Tell

Get a small live seastar if possible (Asterias species are common on the Eastern coast) from the pilings on a dock at low tide, keep it alive in a bucket of water, aerated and with snails and mussels for food. In class put the seastar into a clear baking dish. Turn it upside down and show its tube feet. Allow the children to look at the "red eye" which isn't an eye and tell them it is a siphon that takes in water and squirts it through the tube feet. This is how the seastar moves and also makes the suction to open mussels and snails.

The neatest "show and tell" is to put a snail near its mouth and watch the sea star push its stomach out to feed on the snail. You can explain that this is part of the web of life. Point out that they have 5 arms and tell them that sea stars can regenerate (grow back) their arms. With a live sea star it is important to tell the children that they must never intentionally remove one from the sea except to take care of in an aquarium for a short time to study. Taking too many out of the sea would change the balance of life. (The baymen, people who make their living by collecting scallops, mussels and oysters on Long Island, consider seastars a pest because they compete with them for the shellfish.)

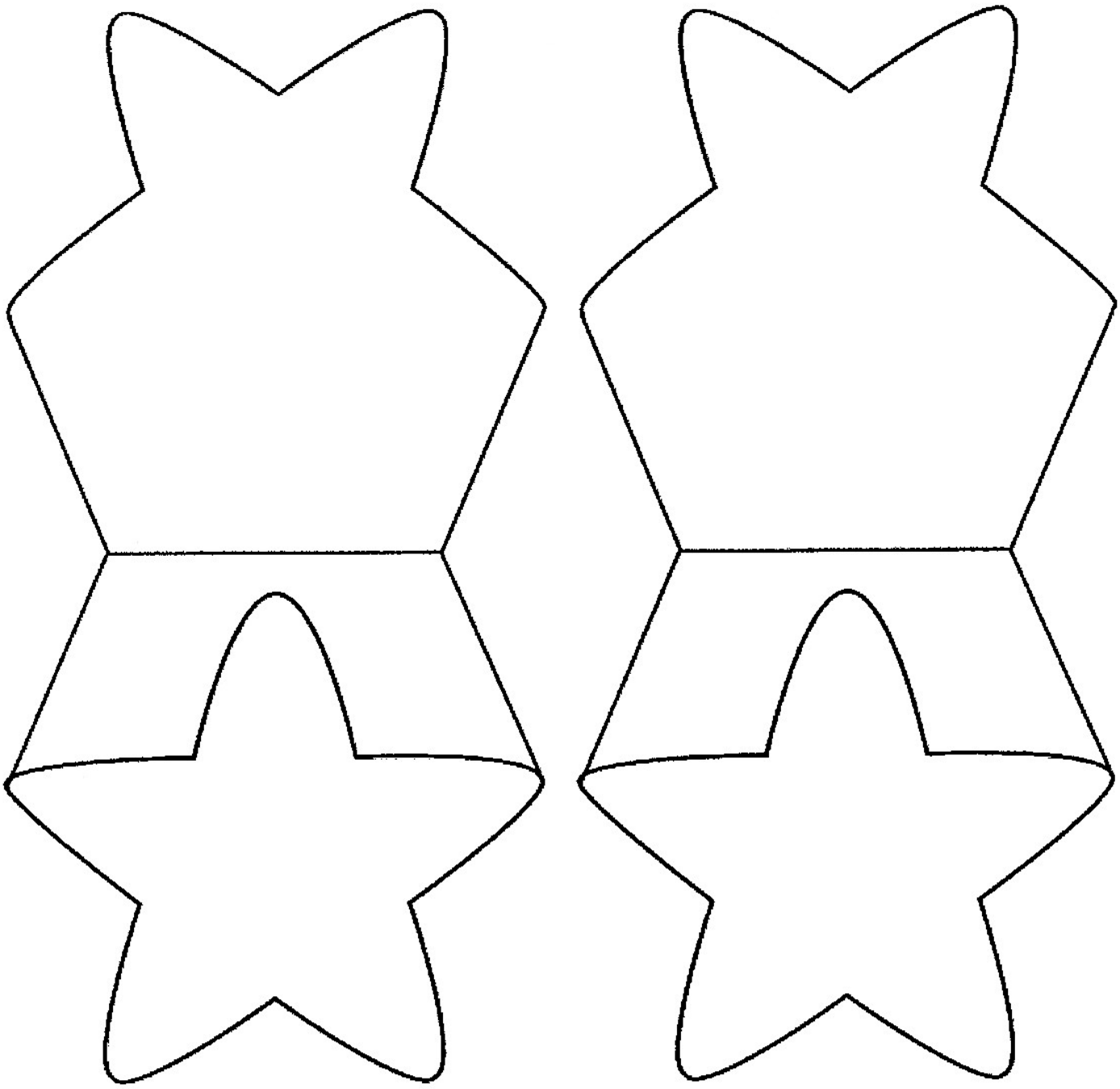
5. Make seastar necklaces or hangings.

- Print the template at the end of this Lesson on paper in different colors. Cut out starfish, fold them in half and thread ribbon through them, glue the sides.
- Give the starfish to the children to color and allow them to spread diluted white glue on one side when they are finished.
- Dust the wet glue with colored sand or glitter.
- After it has dried, string beads onto a ribbon and make a slip knot for a necklace or hang all the starfish in a mobile.

6. Unison Closing Words

Each of UUs can make a difference if we Reduce, Reuse, Recycle and keep practicing the 7th Principle by Respecting all life.

Seastar Template



Lesson 10: The Spider and all The Web of Life

Class Preparation

Read through the Introduction and Directions.

Introduction

You will have to remind the children about *Charlotte's Web*, the classic children's novel by E.B. White.

You can also show the latest released film, which will take a couple Sundays or just read parts of the story for the essential questions.

At http://www.murrieta.k12.ca.us/cms/lib5/CA01000508/Centricity/Domain/688/Core%20Lit/CharlottesWebScript2011.pdf is a script for a play based on the book.

And/or you can use the story attached, "*How the Spider Became a Symbol to the People"* which is an adaptation of the Osage myth and its essential question.

My favorite line in the book is when Dr. Dorian assures Fern's mother that she need not understand how the words appeared on the web:

> *"Oh no," said Dr. Dorian. "I don't understand it. But for that matter I don't understand how a spider learned to spin a web in the first place. When the words appeared, everyone said they were a miracle. But nobody pointed out that the web itself is a miracle."*

All of nature is a miracle of evolution and the tiny spider's web is one of the best of examples. Other examples from Butterfly and Creepy Crawly lessons include the metamorphosis of a caterpillar, the molting of a dragonfly, the movement of a caterpillar or how a sea star feeds and the dancing and art of our children.

Materials
See How to make Dream Catcher-see explanation in # 5 and Art Activity Extension - Spiderlings Directions

Directions

1. Opening the Circle with Sounding of the Bell

Allow a Child to ring a Chime, Bell, or Triangle and ask the Children to concentrate on the Sound until it can no longer be heard.

2. Opening Circle Words to Light a Chalice

This light stands for the warmth of friendship and our never ending search for truth.

3. Ask this Essential Question

(See Introduction to this lesson for setting context for this question.) Why do you think someone would want to be Wilbur's friend? If you were there how would you convince someone that Wilbur would make a good friend? What does Wilbur do that shows that, although he is cute and cuddly, he still behaves like a pig? (He grunted, he poked around in the straw with his snout, he played in the mud that was warm and moist, and got wonderfully dirty.) Which Principle are Charlotte and Wilbur practicing when they become friends? What does this show the other farm yard animals? Say something like this: Just as every person on Earth is special, so are pigs and spiders, they are amazing unique animals.

4. Discuss how pigs are amazing

- Pigs can't sweat. Pigs have no sweat glands. That is why they roll around in mud to cool off.
- Heart valves from hogs are used to replace damaged or diseased human heart valves.
- A pig can run a 7-minute mile.
- A baby pig, or piglet, weighs about 3 1/2 pounds at birth and will double its weight in just 7 days. (And, although baby pigs are cute,full grown pigs can be dangerous, especially feral ones.)
- Pigs are considered to be one of the more intelligent animals on the planet. In one study conducted by a Pennsylvania State University professor, two pigs were taught to play rudimentary video games by manipulating a joy stick with their snouts. (I got this off of wikipedia so it is questionable fact.)
- Find out more about pigs at the Pig Sanctuary http://www.pigs.org/

5. Discuss how spiders are amazing

The weight of insects eaten by spiders every year has been estimated to be as great as the total weight of the entire human population. (I have no idea if this fact is true or not but it is quoted on almost every spider fact website. Someone must have done a biomass study.) Each spider eats about 2000 insects a year (and there are about 5 million spiders per hectare and approximately 5.2 billion hectares of dry land on Earth so maybe this how they figured it out.

The combined length of thread in a spider's web is about 20-60 m and it can take an orb-making spider up to 3 hours to make its web.

On an equal weight basis, an orb spider silk is twice as strong as steel. In addition, spider silk is very elastic.

A jumping-spider can jump up to 25 times its own body length. More facts at: http://news.nationalgeographic.com/news/2004/06/0623_040623_spiderfacts.html

To help you emphasize how amazing spiders are you may read the story *How the Spider Became a Symbol to the People* (attached).

6. Now you can have the children make a Dream Catcher

Base this activity on the art of some Native Americans. Be sure to tell the children that we are trying to show respect for Native American culture as well as the spider as we do this activity. (I try to be sensitive to the issue of cultural misappropriation, but I believe as long as you say this and mean it, then when making art that might be considered religious in other cultures you have not been disrespectful. Alternatively, you can do the activity Spiderlings Art.) The dream catcher is similar in appearance to a spider web. Bad dreams get caught in the dream catcher and disappear when the sun comes up, while good dreams float through the web, down the feather, and onto the person sleeping beneath it.

Materials for Dream Catcher

- Lid from Round 1/2-Gallon Ice Cream Container or any large plastic container lid (coffee, oatmeal, Non-dairy creamers)
- Yarn in 3 Colors
- White Glue, Masking tape
- Scissors
- Hole Punch

Instructions

You will have to cut out lid top leaving only the rim ring for the children or get the older children to help. Punch holes spacing them evenly all around rim either with scissors or the hole punch.

Cut yarn into pieces about a meter or yard in length. Stiffen one end of each piece with white glue or use masking tape so that you can feed the yarn through holes. Weave randomly back and forth through holes in rim. Pull the yarn through a hole and tie. Repeat with one or more pieces of yarn.

When you are done weaving take the ends at the bottom and tie more yarn to them to hang beads or shells or to make tassels. If you leave yarn at the top, you can tie more yarn to the pieces so that you can hang the Dream Catcher.

7. Closing Thoughts

Charlotte calls her egg sack a "magnum opus", another name for her greatest "masterpiece." What does this say about how she feels about her eggs vs. what she has accomplished in writing words in the web? Why do you think so many eggs are contained in the egg sack? (Many of the new spiders will not live. They will be eaten by birds and other insects and die because of environmental conditions. This is a part of life. It is important that there are a lot of tiny spiderlings so that the species survives.) But humans have over populated the world and some are causing the extinction of many of their brother and sister plants and animal species because they don't think about what they are doing or they don't understand their connections to even tiny things like spiders.

Our UU Principles and faith require that we do something about saving the Earth. What can you do to make a difference? (Try to get the children to remember the 4 R's: Reduce, Reuse, Recycle and Respect.)

8. Closing Unison Words

We are not Isolated Earth Peoples like in the story. UUs know that we are connected to all life on Earth and that we are interdependent. By caring for the Earth and its life we will also act out all our UU Principles.

Think about it and repeat after me our UU Principles:

Children's UNITARIAN UNIVERSALIST PRINCIPLES

1. We believe that each and every person is important.
2. We believe that all people should be treated fairly and kindly.
3. We believe that we should accept one another and keep on learning together.
4. We believe that each person must be free to search for what is true and right in life.
5. We believe that all people should have a vote about the things that concern them.
6. We believe in working for a peaceful, fair, and free world.
7. We believe in caring for our planet earth, the home we share with all living things.

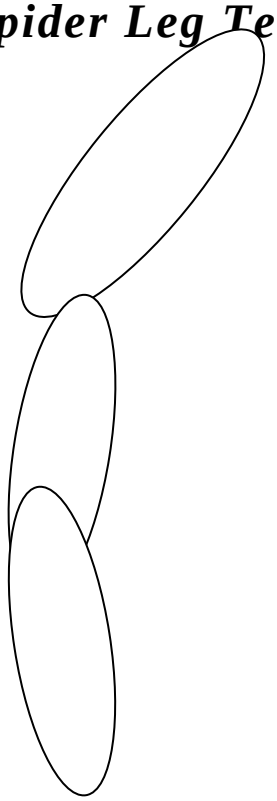
Art Activity Extension – Spiderlings

A spiderling can use its spinnerets as soon as it is born; spinnerets are the miracle parts of their bodies that allow them to spin webs.

Making Spiderlings

1. Each child blows up a balloon (or UU may have to do this for them or have an older child do it for the younger ones.)
2. Color in eight eyes (some spiders have more) at the front of the balloon with markers,
3. Make two fangs on the sides close to the eyes with markers,
4. Make eight construction paper spider legs and tape the eight legs to the spider balloons.

Spider Leg Template



Spider legs are jointed like all arthropods. The legs have many segments but this is an easy template.

5. Hang the spiderlings by a window in the classroom by taping a piece of yarn to the balloons. The yarn represents a dragline. Have the children observe that air currents in the room make the spiderlings sway and float. Or they can launch them into the air and watch them float.

What do you suppose a spiderling uses its silk dragline for? (They use it to move, called ballooning, to find a place to live and to catch food.)

How the Spider Became a Symbol to the People

(Adapted by Stefani Scott from an Osage Plains People myth)

From the earliest days, when they came together on this earth, the Peoples have been divided into two groups with other animals. One of these groups was called the Sky Clan (or the Flyers) and the other group was called the Earth Clan (the Crawlies). These clans of people looked to their brothers and sisters who were all ANIMALS like themselves as their teachers, to serve as symbols for how they would live their lives. Each clan had more than one ANIMAL as its symbol.

Essential Question: Is a Butterfly an Animal? Would it be part of the Sky tribe or the Earth Clan? How about a Damselfly or a Sea Star? What about a Worm?

One of the groups of the Earth Clan was called the Isolated Earth People, and this is the story of how the SPIDER became one their symbols.

One day, the chief of the Isolated Earth People was hunting for food in a forest near a deep swamp. He came upon the tracks of a huge deer. The chief became very excited. "Grandfather Deer," he said, "surely you will come to me because you are so strong and will want to become a symbol of my people." He began to follow the deer's tracks. His eyes were on nothing else as he followed those tracks, and he ran faster and faster through the forest and fell into the swamp. A huge Spider's web had been strung across the swamp and he was caught in it and so didn't drown. When he finally freed himself, he was still very angry because he had lost the deer. He struck at the spider, who was sitting at the edge of the web, but the spider jumped out of reach.

Then the spider spoke to the man. "Grandson," Grandmother Spider said, "why do you run through the forest not watching where you are going?" The chief felt foolish, but he had to answer the spider. "I was following the tracks of a great deer," the chief said. "I am seeking a symbol of strength for my people." Well, I can be such a symbol," said Grandmother Spider.

"How can you be a symbol of strength?" said the chief. "You are small, and weak, and I didn't even see you as I followed the great Deer." "Grandson," said the spider, "Look upon me. I am patient. I watch and I wait. Then all things come to me. If your people learn this, they will be strong indeed. My web was able to capture even you, who are a chief of your people and save you from drowning". The chief saw that this was the truth. Thus, the Spider became one of the symbols of the People and taught them not to consider themselves isolated from other life.

The End

Resources

Notes:

- *There are certain WEBSITE resources and books that I cited **in the lessons and not below.***
- Check out the following environmental groups for **Principles In Action** activities: Nature Conservancy, Sierra Club, Audubon, NRDC, Defenders of Wildlife.
- The children's section of your library may have just the book you need.

Website Resources

http://www.enchantedlearning.com/subjects/butterfly/ is a great site kids can explore for information, coloring pages and find fun crafts to do. You can become a member of this website and it is well worth it as well as for downloading things for free.

UU Ministry for Earth has several resources at http://uuministryforearth.org/Resources%20Publications which can be purchased that can expand your RE children and adult programs, for example *Nurturing the Spirit-Nature Connection.* A resource available from the UUA is *The Green Sanctuary Manual*.

http://school.discovery.com/

www.everythingabout.net/

The Butterfly Website http://www.butterflywebsite.com

Monarch Watch www.monarchwatch.org

www.epa.gov/owow/wetlands/education

Church of the Larger Fellowship KidTalk http://clf.uua.org/kidtalk/2007/02/

http://www.enature.com/home/ is a great site for all kinds of fun activities and sending animal e-cards to friends and FIELD GUIDES which will help you identify animals.

Dover Publishing http://store.doverpublications.com/ also has many great books for coloring and activities such as: *Favorite Poems for Children Coloring Book* by Susan Gaber and ***Glow-in-the-Dark Bugs Stickers***. Mary_Davis@doverpublishing.com for free sample illustrations,

Books for Kids and Adults

Caduta, Michael and Joseph Bruchac***,*** ***Keepers of the Earth***, Fulcrum, Inc.1989. This book and ***Keepers of the Animals*** are by far the best books I have ever found for myths and activities.

Carle, Eric. ***The Very Hungry Caterpillar***, Philomel Books, 1987. and
A House for Hermit Crab, 1987, Picture Book Studio, Ltd., 1987.

Federicks, Anthony D., ***In One Tidepool ,*** Dawn Publications 2002.

Hickman, Pamela***. Wetlands,*** 1993, Kids Can Press, LTD.

Hines, Anna Grossnickle. ***Miss Emma's Wild Garden***, 1997, Greenwillow Books.
http://www.aghines.com/anna_html_pages/Book_htmls/missemma.htm

Ray, Deborah Kogan. ***Lily's Garden***, 2002, Roaring Book Press. Thumbnail sketches of the book and other information at: http://www.dkray.com/books/lily.html

Sidman, Joyce. ***Song of the Water Boatman and Other Pond Poems***, Houghton Mifflin Company 2005. This book is just beautiful and Sidman has a site that you can go to expand your lessons. http://www.joycesidman.com/books/song-of-the-water-boatman-/
And http://www.homeschoolshare.com/song_of_the_water_boatman.php

Tamar, Erika. ***The Garden of Happiness,*** 1996, Harcourt Brace.

White, E.B. ***Charlotte's Web***, 1952, Harper and Row Publishers.

Other References and Story Books

Gibbons, Gail. ***The Honey Makers,*** Mulberry Books, 1997. *Learn how thousands of bees work together to make hives and honey.*

Julivert, Angels. ***The Fascinating World of Ants,*** Barron's, 1991. *Many facts about ants are presented in a way to give young readers some understanding of nature's role for these dynamic insects.*

Kalman, Bobbie and Tammy Everts. ***Bugs and Other Insects,*** Crabtree Publishing Company, 1994. *Through colorful photographs, learn the anatomy of specific insects and some unique characteristics they have.*

Kneidel, Sally. **Slugs, Bugs and Salamanders: Discovering Bugs in Your Garden,** Fulcrum Publishing, 2000. The role of insects is emphasized in the garden.

Lavies, Bianca. **Compost Critters,** Dutton's Children's Press, 1993. Photographs and informational text about the critters one may see in a compost bin or garden.

McGavin, George. **Insects,** from the Jr. Nature Guide Series, 1996. Includes a CD for hours of fun.