

LEARNING CENTRE PACKAGE

Grade 3 - Understanding Life Systems: Growth and Changes in Plants



Section 1

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January 2013

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Science and Technology CURS 4281 U

GRADE 3 - Understanding Life Systems: Growth & Changes in Plants

CURRICULUM

Overview:

Growth and Changes in Plants focuses on the different characteristics and requirements of plants and how they develop. Students will examine and explore various local plants, from trees and mosses in their natural environment to vegetables and flowers grown on farms, in gardens or at school. Students will look at the impact that humans have on plants and their habitats. Students will also study the importance of plants as sources of oxygen, food, and shelter, as well as the importance of human protection of plants and their habitats.

Big Ideas:

Fundamental Concepts	Big Ideas
Systems and Interactions	Plants have distinct characteristics. <i>(Overall expectations 2 and 3)</i> There are similarities and differences among various types of plants. <i>(Overall expectation 2)</i>
Sustainability and Stewardship	Plants are the primary source of food for humans. <i>(Overall expectation 1)</i> Humans need to protect plants and their habitats. <i>(Overall expectation 1)</i> Plants are important to the planet. <i>(Overall expectation 1)</i>

Overall Expectations:

By the end of Grade 3, students will:

1. Assess ways in which plants have an impact on society and the environment, and ways in which human activity has an impact on plants and plant habitats;

2. Investigate similarities and differences in the characteristics of various plants, and ways in which the characteristics of plants relate to the environment in which they grow;
3. Demonstrate an understanding that plants grow and change and have distinct characteristics.

Specific Expectations:

1. Relating Science and Technology to Society and the Environment

By the end of Grade 3, students will:

1.1 assess ways in which plants are important to humans and other living things, taking different points of view into consideration (e.g., the point of view of home builders, gardeners, nursery owners, vegetarians), and suggest ways in which humans can protect plants

1.2 assess the impact of different human activities on plants, and list personal actions they can engage in to minimize harmful effects and enhance good effects

2. Developing Investigation and Communication Skills

By the end of Grade 3, students will:

2.1 follow established safety procedures during science and technology investigations (e.g., avoid touching eyes when handling plants; never taste any part of a plant unless instructed to do so by the teacher)

2.2 observe and compare the parts of a variety of plants (e.g., roots of grass, carrot, dandelion; stem of cactus, carnation, tree; leaves of geranium, spider plant, pine tree)

2.3 germinate seeds and record similarities and differences as seedlings develop (e.g., plant quick-growing seeds – nasturtium, morning glory, sunflower, tomato, beet, or radish seeds – in peat pellets to observe growth)

2.4 investigate ways in which a variety of plants adapt and/or react to their environment, including changes in their environment, using a variety of methods (e.g., read a variety of non-fiction texts; interview plant experts; view DVDs or CD-ROMs)

2.5 use scientific inquiry/experimentation skills (see page 12), and knowledge acquired from previous investigations, to investigate a variety of ways in which plants meet their basic needs

2.6 use appropriate science and technology vocabulary, including stem, leaf, root, pistil, stamen, flower, adaptation, and germination, in oral and written communication

2.7 use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes (e.g., make illustrated entries in a personal science journal to describe plant characteristics and adaptations to harsh environments)

SAFETY CONSIDERATIONS:

For Teachers:

- Ensure cleanliness and organization of classroom
- Utilize proper lifting techniques when lifting heavy items
- Make sure an appropriate number of students are at each student
- Always circulate and observe to ensure safety of students
- All flowers and herbs are non-toxic and safe for student use
- Be aware of students that may have sensitivities to strong scents or perfumes

For Students:

- Avoid touching eyes when handling plants
- Never taste any part of a plant unless instructed to do so by the teacher
- Notify teacher of any spills

CENTRE OVERVIEW

5 Centre Rotation Based on the 5 Senses



Activity 1 – TOUCH: Cotton as a Natural Resource

Activity 2 – TASTE: Tastes of our Garden

Activity 3 – SIGHT: Parts of a Plant

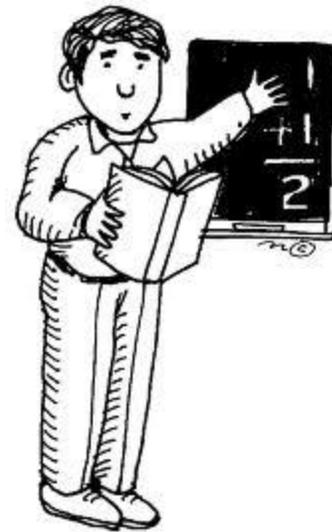
Activity 4 – SMELL: Making Our Own Scents

Activity 5 – HEAR: Talking Tree

TEACHER'S GUIDE

For each activity, you will find:

- Background Info
- Materials List
- Procedure of Centre
- Assessment Strategies
- Possible Extensions
- Appendixes (ie. answer sheets)



Activity 1 – TOUCH: Cotton as a Natural Resource

Background Info:

Students are to investigate ways in which plants meet their basic needs. In this activity centre, students will be looking at cotton as a natural resource as cotton is the most widely used natural material used to make clothing and other absorbent items the students use in their everyday lives, such as towels.

Materials:

- 30 Cotton balls (that are 100% cotton) in a container
- Cotton clothing items (ie. shirts, socks, denim, robe)
- Cotton properties worksheet (1 for each student)
- Bowl of water with food colouring
- Cookie drying rack with pan underneath

Procedure

- Students begin by reading the activity instruction card
- Students then answer the first 5 questions on their worksheet by feeling and stretching the cotton balls that are provided.
- Following that, they dip the cotton ball in the coloured water. While holding it over the bowl of coloured water, they try to separate it again.
- The students then squeeze out the excess water over the bowl and place the cotton ball on the drying rack.
- Following this step, they answer 2 more questions on how the cotton absorbs water and colour.
- Based on their findings, they can reason why cotton is used to make clothing. Articles of cotton clothing are there for them to touch as well.

Assessment:

As Learning:

While students are at this centre, the teacher should be circulating and taking anecdotal notes as based on the learning skills and work habits section of the report card. Additionally, anecdotal notes can be taken based on the answers to probing questions to assess the students understanding. Probing questions could include:

- What feature did you notice first about the cotton?
- Can you think of any reasons why cotton may not make a good choice for clothing?
- What might some other uses of cotton be?

Of Learning:

The worksheet can be taken up or marked to assess the students understanding of the material. One option for assessing the students learning, is to let them know before beginning the centres that one worksheet will be marked but they won't know which one until the end. For those students that need external motivation, this may help to keep them on task. Following the completion of the centre rotations, you can have the students select their best work to be marked.

Integration:

- Visual Art: coloured cotton balls can be used as craft pom-poms after being dried on the rack.
- Social Studies: although cotton cannot be grown in Canada because it's too cold, this can lead into a discussion of what other plants as natural resources were utilized during this time such flax in which the plant fibres were woven into linen.

Possible Extensions:

- Making comparisons between cotton and flax or hemp plants which are all used to make material (i.e. all have different textures and thread-counts)

Teacher Answer Sheet:

Cotton as a Natural Resource

How does it feel to touch? soft

Is it light or heavy? light

Is it rough or smooth? smooth

What colour is it: white

Can it be separated? yes



Dip the cotton ball in the coloured water. While holding it over the bowl of coloured water, try to separate it again. Squeeze out the excess water over the bowl and place the cotton ball on the drying rack.



Is it easier or more difficult to separate now that it's wet? more difficult

Is the colour bright or dull? Bright

Feel the clothing on the table and read the label found on the inside of the clothing.

Based on your findings, why do you think cotton is used to make clothing?
___ answers will vary (ie. because it's soft on your skin, it's white and so you could dye it another colour, it's smooth etc.) _____

Activity 2 – TASTE: Tastes of our Garden

Description of Activity/Experiment & Background Info:

Students will be given a sample of 5 different edible plants that exist in our ecosystem. Students will be asked to describe each plant using a list of qualitative observation vocabulary, and make an educated guess as to what each plant is. Most of the observations made will be done with elements of taste. Prior to this activity students should have an understanding of photosynthesis.

Materials:

- 5 edible plants (chives, green pepper, red pepper, cucumber & broccoli)
 - These plants can be substituted if there are any food aversions in the classroom. Any variety of vegetables accessible/grown in Canada will do.
 - These plants will need to be cut up and portioned into bite sizes. An average group will have 5 students in it therefore, you must have at least 30 samples of each plant for a class of 30 students).
- 5 sample/petri dishes (to put the plant samples on)
- Work sheet (one for each student)
- Extra pencils
- Qualitative observations vocabulary sheet (one at the center for student reference)
- Toothpicks (1-2 boxes) for students to use to eat

Procedure:

- Students will begin by reading the activity card
- The students will take a toothpick and examine a plant sample by viewing and tasting it
- When the students have done this they will record their observations in the chart on their worksheet
- The students can refer to the qualitative vocabulary sheet to help them describe their sample

- The students will then make a prediction as to what they think the plant is

Assessment

As learning:

When the students are participating in their sections the teacher will be circulating and asking prompting questions:

- What are some of the first observations you made about these plants?
- What did you take into account to help you make your prediction of what the plant might be?
- How did you come up with these observations and what senses did you use to figure it out?

The teacher will be circulating the classroom and making note of who is on task, who is working collaboratively and what sort of observations are being made. For example: are the students using their senses to predict what type of plant is at their station?

Of learning:

The assessment of learning is done through the observation/worksheet that has been provided to the students. Each student will complete a worksheet, for each station. The teacher will take up these worksheets at the end of the class and will have the teacher answer sheet to reference for correct answers. The teacher will be assessing whether the students have accurately used their senses to make predictions and observations.

Integration:

- Science: Students can extend their knowledge by analyzing what other plants are edible, in their ecosystems and in foreign ones.
- Social Studies: Students can analyze what types of edible vegetation grow now compared to when early settlers came to Canada. They can compare and contrast the various societies that grew/harvested plants. I.e. hunter gatherer societies vs. agricultural societies.

Possible Extensions:

- Plant Pot Luck – students will all bring one edible vegetation to celebrate their success in the plant unit.

Teacher Answer Sheet:

	What does it taste like?	What else do you see?	What do you think it is?
1	-taste like onion -crunchy texture	-green -looks like grass	-chives
2	-crunchy -bland, little taste -water	-crunchy -has a skin -green	-green pepper
3	-crunchy -sweet -moist	-crunchy -has a skin -red	-red pepper
4	-mild taste, almost none -water -crunchy	-seeds -has a skin -green	-cucumber
5	-crunchy -slightly bitter -easy to chew	-stem and leaves -green -looks like a little tree	-broccoli

Activity 3 – SIGHT: Parts of a Plant

Description of Activity/Experiment & Background Info:

The students will have a live flower in front of them. The students will draw a picture of the flower they see (as much of it as possible). They will then use the word chart provided to help them label each part of the plant. The students will need to have been taught previously about the parts of the plant and photosynthesis (anchor chart of parts of plant on the wall). The students will also have background information on pollination and how each part of the flower helps it grow/reproduce.

Materials:

- Blank pieces of paper (1 for each student)
- Flower label word chart (1)
- Pencils (1 for each student)
- Pencil crayons (basket full)
- Flower (with a leaf and visible roots)

Procedure:

- Students will begin by reading the activity card
- Students will examine and make observations about the flower (colour, stem, petals)
- They will then use their observation skills to produce a drawing of the flower (using colour)
- They will then use the word chart to help them label each part of their flower

Assessment:

As learning

When the students are participating in their activities the teacher will be circulating and asking prompting questions:

- What are some of the first observations you made about these plants, why did you choose that colour?
- What did you use to help you label your flower, and how did you gather the information?
- How did you come up with these observations and what senses did you use to figure it out?

The teacher will be circulating the classroom and making note of who is on task, who is working collaboratively and what sort of observations are being made. For example: are the students using their senses collaboratively to double check their observations? Which students have opposing sense observations?

Of learning

The assessment of learning is done through the observation/worksheet that have been provided to the students. Each student will complete a worksheet, for each station. The teacher will take up these worksheets at the end of the class and will have the teacher answer sheet to reference for correct answers. The teacher will be assessing whether the students have accurately used their senses to make predictions and observations.

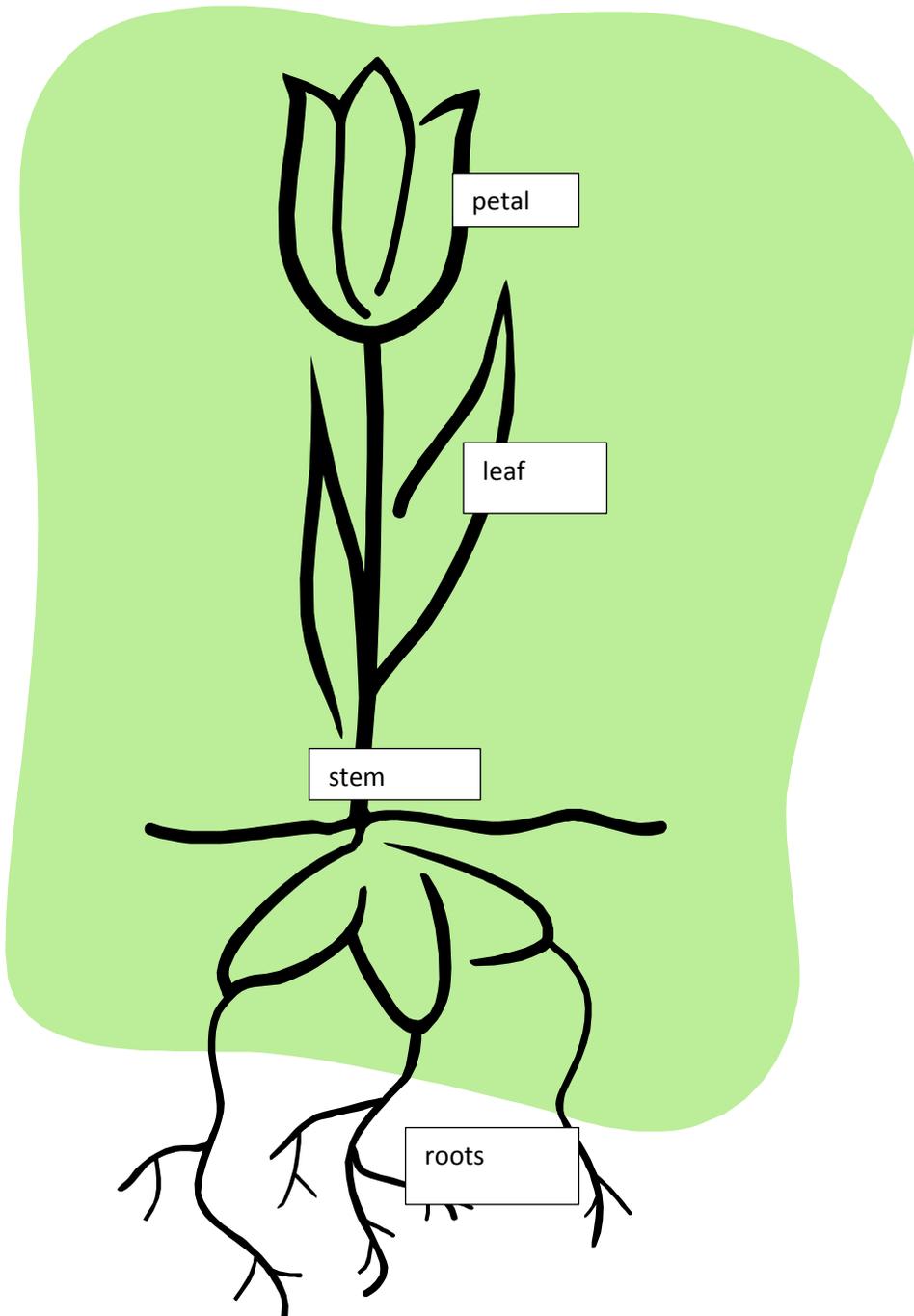
Integration:

- Science: This activity can be used to introduce the idea of edible flowers and where they might grow. This can also generate discussion around certain plants that live in certain habitats ie) water lilies only grow in water.
- Visual Art: This would be a great introduction into drawing landscapes using vegetation, ie) flower, tree, grass etc... The students can learn to use their paper to create a visual understanding of a flower or other plants.

Possible Extensions:

- Examine a variety of plants and make observations focusing on the similarities and differences of each part of the plant.
- Examine the differences between edible and non-edible plants.

Teacher Answer Sheet:



Activity 4 – SMELL: Making Our Own Scents

Description of Activity/Experiment & Background Info:

Students will have the opportunity to explore the variety of herbs and flowers and their use in the real-world. Students will be able to explore the colours, scents, textures and the purpose of a variety of herbs. By exploring different scents the students will have an opportunity to create their own potpourri satchel.

Materials:

- Small lidded boxes with a small hole at the top
- Variety of flowers (e.g. Rose, African Daisy, Begonia, Easter Daisy, Brazilian Lily, Alyssum)
- Variety of herbs (e.g. Lavender, Chamomile, Nutmeg, Sandalwood, Sage, Basil)
- Small drawstring bags (made from muslin, cotton, silk, or lace)
- Essential oils (e.g. Pine)
- Worksheet

Procedure:

1. Before Activity
 - a. Dried herbs have to be placed inside small lidded boxes
 - b. Each box should have a small hole (big enough for students to smell what is inside)
2. Scent Exploration
 - a. Students will smell each box and make predictions about what is inside and make connections with the scent
 - b. Students will record predictions and observations for 5 of the herbs or flowers
 - i. What does the scent remind them of?
 - ii. Does it smell good? Bad?
 - c. When students are finished their observations they can move onto the second part of the activity.

3. Creating Our Own Scents

- a. Students will use the scents they smelled to create their own potpourri satchel
- b. There are cards on the table to help choose a purpose and use for their satchel.
- c. The students have to justify their choice of scents to create their satchel for a specific purpose.
- d. Students need to answer the questions on the worksheet while creating the satchel.

Assessment:

As Learning

While students are completing the centre the teacher should be circulating the room to listen to conversations and guide students

- Anecdotal Notes
 - Who is engaged in the activity? Is anyone off task?
 - Do students understand the activity?
 - Are students grasping the purpose of the activity?
- Probing Questions
 - Why did you choose that scent?
 - Would you use that scent beside your pillow? In your sock drawer?
 - Why don't you like the smell of that scent?

Of Learning

Students will complete the worksheet to show their understanding of the material and the importance of scent when looking at flowers and herbs. Students will also apply their knowledge by creating a potpourri satchel for a specific purpose or use

Integration:

- Social Studies
 - Students can explore the ways herbs were used in the past (e.g. Early Settlers and First Nations)
 - Students can compare and contrast how we use herbs today and how they were used previously.

Possible Extensions:

- Students could have been involved in the process of drying the flowers and herbs.
 - Having the students plant flowers and herbs in September then dry them and have them ready for the unit in January or February.
 - Students could choose the flowers and herbs they wanted to use.

Teacher Answer Sheet:

Making Our Own Scents

Using the flowers and herbs in the containers at your table, create your own potpourri satchel. Each person needs one satchel and approximately 1 cup of dried herbal mixture. Be creative with your choice of flowers and herbs but be prepared to justify your concoction. Remember potpourri smells wonderful but it also looks attractive – what colours will you include in your concoction?

<p>State the purpose of your potpourri. (See example cards at your table)</p>	<p>To put beside my pillow to sleep more soundly.</p>
<p>List the ingredients of your potpourri.</p>	<ul style="list-style-type: none"> • Lavendar • Chamomile • Rose • Nutmeg
<p>What parts of the plant are on the plate?</p>	<p>Petals, leaves, stems, seeds</p>
<p>What do you know about each of the different herbs? Does your family use them at home?</p>	<p>I know that my mom uses chamomile lotion on my skin when it is itchy – she says it soothes the skin.</p> <p>My sister uses a lavender pillow spray to help her sleep at night</p> <p>*answers will vary</p>
<p>What scents do you like?</p>	<ul style="list-style-type: none"> • Mint • Spearmint • Lavendar
<p>What scents do you not like?</p>	<ul style="list-style-type: none"> • Rosemary – it’s fragrance is too strong for me

Activity 5 – HEAR: Talking Tree

Description of Activity/Experiment & Background Info:

Students will have an opportunity to learn about the parts and purposes of trees and gain an appreciation of trees. The students will follow along with the video and listen to the information that they are given. Students can take turns and work as a team to complete the interactive activities.

Materials:

- Headphones (1 for each member of group)
- Computer
 - ‘Exploring the Secret Life of Trees’ website
<http://urbanext.illinois.edu/trees2/index2.html>
- Worksheets (1 for each student)

Procedure:

1. Have students read the questions before starting the interactive activity.
2. Have each student wear a pair of headphones.
3. One student should press ‘English’ on the program to begin.
4. Have students take turns clicking ‘next’ to move to the next page and doing the interactive activities.
5. Students should be filling in their answers along the way.

Assessment:

While students are completing the centre the teacher should be circulating the room to listen to conversations and guide students

- Anecdotal Notes
 - Who is engaged in the activity? Is anyone off task?
 - Are students sharing the responsibilities?
 - Are students finding the answers on the worksheet?
- Probing Questions

- Can you tell me about what the roots of a tree look like?
- Do you have a new appreciation of trees now?
- What do you think is the most important part of the tree?

Of Learning

Students will complete the worksheet to show their understanding of the material and apply their knowledge. The worksheet will be taken up as a class following the completion of all centres.

Integration:

Language Arts

- Read and write about trees
- Have a basic vocabulary of trees and forestry.

Visual Arts

- Students will re-create the information they learn in the interactive activity.

Possible Extensions:

- Students could create their own video for a certain type of plant
 - E.g. Students could make a video that explains all the parts, functions and uses of the rose.
 - This could also integrate a dramatic arts component to the science video.

Teacher Answer Sheet:

Exploring the Secret Life of Trees

What does Quercus mean?	Oak
What are the 3 functions of roots?	<ol style="list-style-type: none"> 1. Food Storage 2. Support 3. Nutrient Storage
Draw tree roots.	**Roots should be shallow but wide (similar to the picture in the program)
What picks water and nutrients from the soil?	Hair Roots
Name one purpose of the bark.	Protects the tree from insects, diseases and injuries.
Give one example of a tree with smooth bark.	Birch or Beech Tree
Give one example of a tree with rough bark.	Oak or Cottonwood
True or False: The distances between annual rings are all the same.	False. Growing conditions change each year – the better the growing conditions, the greater the distance between the rings.
What is heartwood important for?	Structural support
Match the words with their definitions	
Branches	Future Leaves
Buds	Extensions of the trunk
Leaves	Food factories for the trees
List everything you need for photosynthesis.	Sunlight Chlorophyll Food Water Carbon Dioxide Oxygen
Where is the food made?	In the leaves, then moves through the leaf's veins, through the stem, to the phloem where it's transported to different parts of the tree.

What is the scab-like area that causes the leaf to fall off?	Leaf scar
List 2 reasons tree are good for you and me.	Provides homes to wildlife. Provides cool shade. Freshens the air. Looks great! Reduces air pollution Reduces noise pollution Produces oxygen Makes soil Cools the air Prevents soil erosion
Draw one thing a tree gives us that we use and need.	Baseball bat House Bench Cocoa Wood (firewood) Basket Box Train Planks
True or False: Trees are a renewable resource.	True
What is one way we can help preserve trees?	Water young trees (don't over-water) Don't injure the bark of a tree Don't carve your initials in the tree trunk. Don't chain your dog or bike to the tree. Don't bump the tree trunk. Don't nail things to a tree. Don't hang on the branches.
What is one thing you learned in the video that you didn't know before?	**answers will vary

STUDENT'S PACKAGE

For each activity, you will find:

- Activity Instruction Card
- Appendices (ie. worksheets)



Activity 1 – TOUCH: Cotton as a Natural Resource

Activity Instruction Card

TOUCH: Cotton as a Natural Resource!

What is a natural resource? It's something from nature that people can use! Plants help us meet our basic needs in many ways. Did you know that many of your clothes are made from a plant called the cotton plant? Let's take a look!

You Will Need:

- A cotton ball
- A worksheet
- A cotton clothing item close by (optional)
- A bowl of water with food colouring (to be shared)
- A Cookie drying rack with pan underneath (to be shared)

First, answer the first 5 questions on your worksheet by feeling and stretching the cotton balls that are provided.

Then dip the cotton ball in the coloured water. While holding it over the bowl of coloured water, they try to separate it again. Squeeze out the excess water over the bowl and place the cotton ball on the drying rack.

Following this step, answer the 2 questions on how the cotton absorbs water and colour.

Based on your findings, why do you think cotton is used to make clothing? (answer on your worksheet). Articles of cotton clothing are there for to touch! Have a look at the tag to see what it's made of!

Name: _____

Cotton as a Natural Resource

How does it feel to touch?

Is it light or heavy?

Is it rough or smooth?

What colour is it:

Can it be separated?



Dip the cotton ball in the coloured water. While holding it over the bowl of coloured water, try to separate it again. Squeeze out the excess water over the bowl and place the cotton ball on the drying rack.



Is it easier or more difficult to separate now that it's wet?

Is the colour bright or dull?

Feel the clothing on the table and read the label found on the inside of the clothing.

Based on your findings, why do you think cotton is used to make clothing?

Activity 2 – TASTE: Tastes of our Garden

Activity Instruction Card

TASTE: Tastes of our Garden!

You will need:

- Toothpicks
- Worksheet
- Pen or pencil
- Reference vocabulary sheet

Procedure:

- Take a toothpick and examine a plant sample by viewing and tasting it
- Record your observations on the chart on your worksheet
- Refer to the qualitative vocabulary sheet to help describe the sample
- Make a prediction as to what you think the plant is

Student Worksheet:

Name: _____

Date: _____

	What does it taste like?	What else do you see?	What do you think it is?
1			
2			
3			
4			
5			

Qualitative observations vocabulary sheet

Here are some words you can use to describe the qualitative properties of the plants, in the spaces left open add your own words! Be sure they are descriptive and specific.

What you are describing	Possible vocabulary
The state of matter of the substance	Solid, liquid, gas, plasma
Colour	Any shade or colour: red, pink, blue purple, blue, clear
Smell/Odor	Strong, spicy, burnt, odor-less
Touch/Texture	Rough, fine, soft, fragile, wet, sharp, smooth, squishy
Taste	Sweet, bitter, sour, salty, tangy, tasteless, crunchy, chewy
Sight	Shiny, dull, transparent, opaque, crystals, shapes (square, circle etc...)

Activity 3 – SIGHT: Parts of a Plant

Activity Instruction Card

SIGHT: Parts of a Plant!

You will need:

- Pen or pencil
- Worksheet (blank paper)
- Reference label sheet
- Pencil Crayons

Procedure:

- Examine and make observations about the flower (colour, stem, petals)
- Use your observation skills to produce a drawing of the flower (using colour)
- Use the word chart to help label each part of the flower

Parts of the Flower Reference Words

Label these parts of the plant

STEM

PETAL

LEAF

ROOTS

Activity 4 – SMELL: Making Our Own Scents

Activity Instruction Card

SMELL: Making Our Own Scents!

You will need:

- Potpourri flowers
- Scented oil
- Satchel (drawstring)
- Worksheet
- Pen or pencil

Procedure:

1. Scent Exploration
 - a. Take turns smelling what is inside each box and make a prediction about what you think it is or what it might be used for.
2. Creating Our Own Scents
 - a. Use the scents to create your own potpourri satchel.
 - b. Use the cards on the table to help choose a purpose and use for your satchel.
 - c. Ensure you can justify the use of your satchel and record your answers on the worksheet provided.

Name: _____

Making Our Own Scents

Using the flowers and herbs in the containers at your table, create your own potpourri satchel. Each person needs one satchel and approximately 1 cup of dried herbal mixture. Be creative with your choice of flowers and herbs but be prepared to justify your concoction. Remember potpourri smells wonderful but it also looks attractive – what colours will you include in your concoction?

State the purpose of your potpourri. (See example cards at your table)	
List the ingredients of your potpourri.	
What parts of the plant are on the plate?	
What do you know about each of the different herbs? Does your family use them at home?	
What scents do you like? Why?	
What scents do you not like? Why?	

Stress Relief & Relaxing Scents

- *Frankincense*
- *Sandalwood*
- *Lavendar*
- *Chamomile*
- *Ylang Ylang*
- *Clary Sage*
- *Bergamot*



Insect Repellent Blend

- Lavendar
- Rosemary
- Southernwood
- Spearmint
- Cedarwood Chips
- Santolina
- Pennyroyal
- Tansy
- Mugwort



Sock Drawer Sachets

- Lavender
- Roses
- Citrus Peel
- Spearmint
- Thyme
- Pine Essential Oil
- Lemon Verbena



Boost Your Mood

- Lavendar
- Ylang-Ylang
- Rose
- St. John's Wort
- Rhodiola Rosea
- Passionflower



Activity 5 – HEAR: Talking Tree

Activity Instruction Card

HEAR: Talking Tree!

You will need:

- Worksheet
- Computer
- Headphones

Procedure:

1. Read the questions before starting the interactive activity.
2. Put on your headphones.
3. Press 'English' on the program to begin.
4. Take turns clicking 'next' to move to the next page and doing the interactive activities.
5. Fill out your answers along the way.

Name: _____

Exploring the Secret Life of Trees

What does Quercus mean?	
What are the 3 functions of roots?	
Draw tree roots.	
What picks water and nutrients from the soil?	
Name one purpose of the bark.	
Give one example of a tree with smooth bark.	
Give one example of a tree with rough bark.	
True or False: The distances between annual rings are all the same.	
What is heartwood important for?	
Match the words with their definitions	
Branches	Future Leaves
Buds	Extensions of the trunk
Leaves	Food factories for the trees

List everything you need for photosynthesis.	
Where is the food made?	
What is the scab-like area that causes the leaf to fall off?	
List 2 reasons trees are good for you and me.	
Draw and label one thing a tree gives us that we use and need.	
True or False: Trees are a renewable resource.	
What is one way we can help preserve trees?	

REFERENCES

Images from Google Images

Activity 1 adapted from:

<http://www.teacherspayteachers.com/Product/Natural-Resources-Lesson-Plan-Cotton>

Activity 5 adapted from:

<http://urbanext.illinois.edu/trees2/index2.html>

Activity 4 resource adapted from:

http://www.learningherbs.com/how_to_make_potpourri.html