

## Grade 4

Title: My Name is Magnolia

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### Student Learning Objective(s):

- The students will understand why Magnolias are a type of evergreen.
- The students will create a story based on the information that they have collected.
- The students will learn about different types of Magnolias.
- The students will demonstrate their knowledge by filling in a KWL chart and creating a story.

### LA GLE's

Grade:4: #1: Ask questions about objects and events in the environment (e.g., plants, rocks, storms) (SI-E-A1)

Grade: 4: # 4. Predict and anticipate possible outcomes (SI-E-A2)

Grade: 4 # 48: Classify examples of plants and animals based on a variety of criteria (LS-E-B2)

Grade: 4 # 52: Describe how some plants and animals have adapted to their habitats (LS-E-C2)

Grade: 4 # 53: Identify the habitat in which selected organisms would most likely live and explain how specific structures help organisms to survive (LS-E-C2)

### Materials needed:

- Pictures of the six different Magnolias
- Charts for each activity—KWL chart, prediction sheet, Magnolia trees characteristics chart
- Learning logs
- 5 different Magnolia information
- Document camera—if available
- Pictures and leaves of Magnolias

**Detailed Procedure.** Describe what the students will do in each stage. Include guiding questions you might ask to help students.

#### 1. Engage:

**Science Process Skills** Indicate which science process skills students will develop in this part of the lesson.

- |  |  |   |   |  |  |   |
|--|--|---|---|--|--|---|
| <input type="checkbox"/> Observation           | <input checked="" type="checkbox"/> Classification | <input type="checkbox"/> Communication          | <input type="checkbox"/> Measurement        | <input type="checkbox"/> Estimation    | <input checked="" type="checkbox"/> Prediction | <input checked="" type="checkbox"/> Inference |
| <input type="checkbox"/> Identifying Variables | <input type="checkbox"/> Controlling Variables     | <input type="checkbox"/> Defining Operationally | <input type="checkbox"/> Forming Hypotheses | <input type="checkbox"/> Experimenting | <input checked="" type="checkbox"/> Graphing   | <input type="checkbox"/> Modeling             |

Students will discuss the evergreens that they researched in the last class time. The students will take out their KWL charts and will discuss what they have learned from the last time. The students will then look at the chart created from last class. They will pay attention to the Magnolia today. The students will look at the Magnolia. The teacher will ask students:

Do you think that all Magnolias are just like this one here (our state flower)?

No because some of them are different colors and some of them grow in different places.

So there are Magnolias in different areas?

Yes, they have some in China, South America and in different areas across the United States.

So then the students will get another KWL chart about Magnolias. They will fill in what they know and what they want to know about the Magnolias. A few people will share as the teacher writes some responses on the board.

#### 2. Explore:

**Science Process Skills** Indicate which science process skills students will develop in this part of the lesson.

- |  |  |   |   |  |  |                                    |
|--|--|---|---|--|--|------------------------------------|
| <input type="checkbox"/> Observation           | <input checked="" type="checkbox"/> Classification | <input checked="" type="checkbox"/> Communication | <input type="checkbox"/> Measurement        | <input type="checkbox"/> Estimation    | <input checked="" type="checkbox"/> Prediction | <input type="checkbox"/> Inference |
| <input type="checkbox"/> Identifying Variables | <input type="checkbox"/> Controlling Variables     | <input type="checkbox"/> Defining Operationally   | <input type="checkbox"/> Forming Hypotheses | <input type="checkbox"/> Experimenting | <input type="checkbox"/> Graphing              | <input type="checkbox"/> Modeling  |

The students will be in the same groups as last time and they will have the same jobs/responsibilities:

- 1 recorder
- 1 speaker
- 1 noise and task monitor
- 1 material manager

The teacher will explain all of the roles and responsibilities each person has in the group prior to going into the lesson.

Next, each group will get a different type of Magnolia:

- Magnolia Virginiana
- Magnolia Macrophylla
- Magnolia Sieboldii
- Magnolia Watsonii

-Magnolia Wilsonii

pictures and information packets come from [www.hort.uconn.edu/plants/index.html](http://www.hort.uconn.edu/plants/index.html)

They will get the information page and will fill in the characteristics chart based on what they find in the information packet:

- Color
- size
- height
- climate
- loose leaves/keep leaves
- fruit or no fruit
- type of leaves
- Location

They will have 15 minutes to complete this activity.

### 3. Explain:

*Outline the line of questioning you will use to assist students in understanding the concept. List at least 5 good questions and identify the question category (Gallagher & Aschner) in which your question falls (see text, Figure 7.6).*

After the 15 minutes is over the class will come back to order and the speakers from each group will tell what each group recorded in their charts. They will discuss their predictions and what they read (found out in the reading). We will discuss what magnolias are and what they recorded. We will discuss:

- Typical size
- Where they are typically located
- Color
- Climate
- What are they good for

What hurts them, etc.

1. **Where do Magnolias usually live?**
2. **Do they produce fruit? Why?**
3. **What is the average height that Magnolias grow to?**
4. **Why are Magnolias a type of Evergreen?**
5. **What are Magnolias good for?**

### 4. Expand:

**Science Process Skills** *Indicate which science process skills students will develop in this part of the lesson.*

- |  |  |   |   |                                     |                                     |                                    |
|--|--|---|---|-------------------------------------|-------------------------------------|------------------------------------|
| <input type="checkbox"/> Observation           | <input type="checkbox"/> Classification        | <input checked="" type="checkbox"/> Communication | <input type="checkbox"/> Measurement        | <input type="checkbox"/> Estimation | <input type="checkbox"/> Prediction | <input type="checkbox"/> Inference |
| <input type="checkbox"/> Identifying Variables | <input type="checkbox"/> Controlling Variables | <input type="checkbox"/> Defining Operationally   | <input type="checkbox"/> Forming Hypotheses |                                     |                                     |                                    |
| <input type="checkbox"/> Experimenting         | <input checked="" type="checkbox"/> Graphing   | <input type="checkbox"/> Modeling                 |   |                                     |                                     |                                    |

The materials manager will get the magnolia cut out and will trace on a piece of poster board. The students will have to create a story like the Evergreen story about their Magnolia. They will use the chart that they created to come up with the story. The recorder will write and everyone can put in ideas about the Magnolias that they find important. When they are finished (after 15 minutes), they will share their stories to the class.

After reading their stories, they will fill in the last part of their chart—what they have learned.

### 5. Evaluate:

*What exactly will you do, or what evidence/data will you collect, to ascertain whether the students can achieve the objectives you listed at the top of this lesson?*

Engage: The teacher will pick up their completed KWL charts for the Magnolia tree

Explore: The teacher will grade the Magnolia Chart that the students must fill in from the information they get from the Magnolia tree packets

Explain: The teacher will evaluate the student's predictions while they are discussing what they have found— anecdotal notes on the students

Extend: the teacher will pick up their Evergreen Charts and KWL chart to grade them as well as their stories on the Magnolias.

**Brain Compatible Learning Strategies Used in This Lesson:**

- Brainstorming/Discussion
- Drawing and Artwork
- Field Trips
- Games
- Graphic Organizers
- Humor
- Manipulatives, Experiments, Labs, Models
- Metaphors, Analogies, and Similes
- Mnemonic Devices
- Movement
- Music, Rhythm, Rhyme, and Rap
- Project/Problem-Based Instruction
- Reciprocal Teaching, Cooperative Learning
- Role Plays, Drama, Pantomimes
- Storytelling
- Technology (student use)
- Visualization/Guided Imagery
- Visuals
- Writing/Journals

**Lesson Source:**

**Nation Master: Encyclopedia- Magnolias.** <http://www.nationmaster.com/encyclopedia/Magnolia>. March 31, 2009.

**Uconn Plant Database webpage.** [www.hort.uconn.edu/plants/index.html](http://www.hort.uconn.edu/plants/index.html). March 31, 2009

## Magnolia Acuminata

### Habitat

native to New York down through Georgia  
hardy to zone 4 and warmer parts of 3

### Habit and Form

a deciduous tall tree  
50' to 80' tall and equal in width  
pyramidal in youth and becoming more open with age  
wide-spreading branches  
medium-coarse texture  
fast growth rate

### Summer Foliage

alternate leaf arrangement  
simple, deciduous leaves  
entire leaf margins  
ovate leaf shape  
6" to 12" long  
yellowish green leaf color  
cordate leaf base  
slightly pubescent

### Autumn Foliage

yellowish bronze fall color

### Flowers

greenish white flowers  
fragrant  
blooms in spring  
generally hidden by foliage  
2.5" to 3" in diameter

### Fruit

elongated aggregate of follicles, 2" to 3" long  
red seeds  
showy  
persistent  
looks like a cucumber

### Bark

thin bark  
branches are stout and picturesque in winter  
gray-brown bark  
ridged and furrowed

reddish brown stems with vertical gray lenticels  
U-shaped leaf scar  
branches emit spicy odor when bruised

#### Landscape Use

as a specimen  
shade tree  
street tree  
golf courses  
park tree

#### ID Features

whitish, silvery, silky pubescent terminal buds  
terminal buds are 0.5" to 0.75" long  
valvate, appressed lateral buds  
ash-gray, smooth bark  
U-shaped leaf scar  
emits spicy odor when branch bruised  
red seeds  
greenish white flowers

#### Propagation

by seed  
by tissue culture

## Magnolia Kobus

### Habitat

native to Japan  
hardy to zone 4 and warmer parts of 3

### Habit and Form

a deciduous, medium-sized tree  
multi-stemmed  
25' tall  
35' wide  
rounded and widespreading  
dense  
coarse texture  
slow growth rate

### Summer Foliage

alternate leaf arrangement  
simple, deciduous leaves  
3" to 6" long  
obovate leaf shape  
entire leaf margins  
dark green leaf color  
pointed apex  
glabrous leaf underside

### Autumn Foliage

yellow fall color  
somewhat showy

### Flowers

white with pink tinge flowers  
pleasant fragrance  
blooms in spring  
showy  
4" across  
young trees don't flower

### Fruit

elongated aggregate of follicles, 1" to 3" long  
red seeds  
showy  
persistent  
attracts birds

### Bark

slender, green stems  
brown spots cover twigs  
vertical gray lenticels  
strong odor when broken  
older bark is gray-brown

#### Landscape Use

as a specimen  
large planter  
patio tree

#### ID Features

1" to 1.5" long terminal flower buds  
terminal buds have silky, gray pubescence  
valvate lateral buds have greenish-gray pubescence  
brown spots cover stems  
vertical gray lenticels  
strong odor when branch bruised  
3" top 6" long, obovate leaves  
red seeds  
white flowers

#### Propagation

by seed  
by cuttings

## Magnolia X Soulangiana

### Habitat

a hybrid of *Magnolia heptapeta* x *Magnolia quinquepeta*  
hardy to zone 5 (warmer parts of 4)

### Habit and Form

a deciduous small tree  
grows up to 30' tall  
upright and spreading branching  
rounded to irregular habit  
multi-trunked or with low main branches

### Summer Foliage

deciduous leaves 3" to 7" long, half as wide  
leaves elliptical with a sharply-pointed tip  
leaf color is dark green  
new leaves are reddish bronze  
foliage maintains a high quality through the summer

### Autumn Foliage

leaves turn yellow-brown before falling  
not highly ornamental

### Flowers

white, pink, or purple  
cup-like, large blossoms  
blooms in mid- to late April  
sometimes fragrant  
flowers at young age  
typically very showy; a heavy bloomer

### Fruit

4" long aggregate fruit with knobby surface  
typically few are produced  
seed emerge reddish-orange from slits  
mature in August and September

### Bark

smooth, silver-gray  
quite attractive

### Landscape Use

as a specimen

patio tree  
very effective in groupings when space allows  
desired for impressive spring bloom display

#### ID Features

flower buds and vegetative buds very distinct  
hairs on flower buds are dense and short  
silver-gray smooth bark  
pink-tinged, white, saucer-shaped flowers in spring  
multi-trunked or with main branches low on the trunk

#### Propagation

by seed  
cultivars by cuttings

## Magnolia Stellata

### Habitat

native to Japan

zone 4

### Habit and Form

a deciduous small tree or large shrub

grows 15' to 20' tall, with a spread of 10' to 15'

branching is upright-spreading; multi-stemmed

shape is rounded or oval

has a somewhat dense-compact, twiggy nature

### Summer Foliage

leaves are elliptic

2" to 4" long and half as wide

leaves are smaller than other magnolias and form a dense foliage mass

color is medium to dark green

new leaves emerge with a bronze cast

clean-looking, high quality

### Autumn Foliage

no fall color develops

### Flowers

3" to 4" across

white to pink-tinged

12-18 tepals per flower

each tepal is 1.5" to 2" long

tepals are narrow and strap-like

blooms just before *M. x. soulangiana*

blossoms lightly fragrant

very showy in bloom

### Fruit

reddish-green, knobby aggregate fruit

about 2" long

often drops before fully developed

fruit mature and open in early autumn

mature fruit opens by slits to reveal orange red seeds

### Bark

young twigs have smooth, shiny chestnut brown bark

main trunks have smooth, silvery gray bark

bark is ornamental

## Landscape Use

as a specimen  
for patios  
excellent flowering tree for small spaces

## ID Features

small leaves for a magnolia  
flower buds covered with very long hairs  
12 to 18 strap-like tepals per flower  
small habit and size for a magnolia

## Propagation

by seed  
by cuttings

## Magnolia Virginiana

### Habitat

native to eastern United States; more common in southeast

hardy to zone 5

often found in swampy locations

### Habit and Form

a semi-evergreen small tree

10' to 30' tall in the northeast

40' to 60' tall in the southeast

multi-stemmed, loose and open

rounded to pyramidal or irregular outline

upright, spreading branching

### Summer Foliage

leaves are evergreen in the southeastern United States

leaves are semi-evergreen to deciduous in the northeastern United States (zone 5 and 6)

leaves are 5" long; alternate arrangement

smooth, almost waxy, bright green upper surface

undersides of leaves are white and look frosted

young twigs are green and smooth

### Autumn Foliage

typically not showy

a mix of yellow, brown and green

non-uniform color due to semi-evergreen nature

### Flowers

blooms in mid-June; sporadically during the summer

2" to 3" diameter creamy white flowers

9 to 12 petals

lemon-scented

generally not strongly showy in bloom because the foliage hides many blossoms and flowers are not very abundant

### Fruit

2' long aggregate fruit

changes from green to red when mature

orang-red seeds are visible through slits in mature fruits

### Bark

smooth, dark gray on older branches and trunk

young branches smooth and green

### Landscape Use

as a specimen tree or large shrub  
useful for flower fragrance  
patio plant  
naturalistic areas  
wet soils

#### ID Features

smooth, green bark or twigs  
silvery-white undersides of leaves

#### Propagation

by seed  
by cuttings; can be challenging from adult trees

Name \_\_\_\_\_

My Name is Magnolia

Magnolia Tree Name \_\_\_\_\_

<b>Field Name</b>	<b>What I have found</b>
Habitat	
Size of Tree	
Summer Plants	
Summer Plants	
Autumn Plants	
Flowers	
Fruit	
Bark	
Landscape Use (how it can be used outside)	
Tree Features	
Propagation- How they are spread	



MAGNOLIA ACUMINATA



MAGNOLIA KOBUS



MAGNOLIA X SOULANGIANA



MAGNOLIA STELLATA



MAGNOLIA VIRGINIANA

Name \_\_\_\_\_

Date \_\_\_\_\_

Predictions

What did I find?

