# Part 5 Flowers and More

Name:

Part 5 Lesson 1 Leaf Identification

Find three leaves or more and create a rubbing in the space below using the side of a crayon.

Define a leaf in or around the rubbing? Once we learn about leaf identification can you describe some identifiable leaf structures / name the tree this leaf came from?

Blade: The entire \_\_\_\_\_ unit. Sometimes this is made up of several smaller leaflets.

Veins: Contain \_\_\_\_\_ tissues.

Leaf Margin: The \_\_\_\_\_ of the leaf.

Leaf Base: Name for the blade close to the \_\_\_\_\_

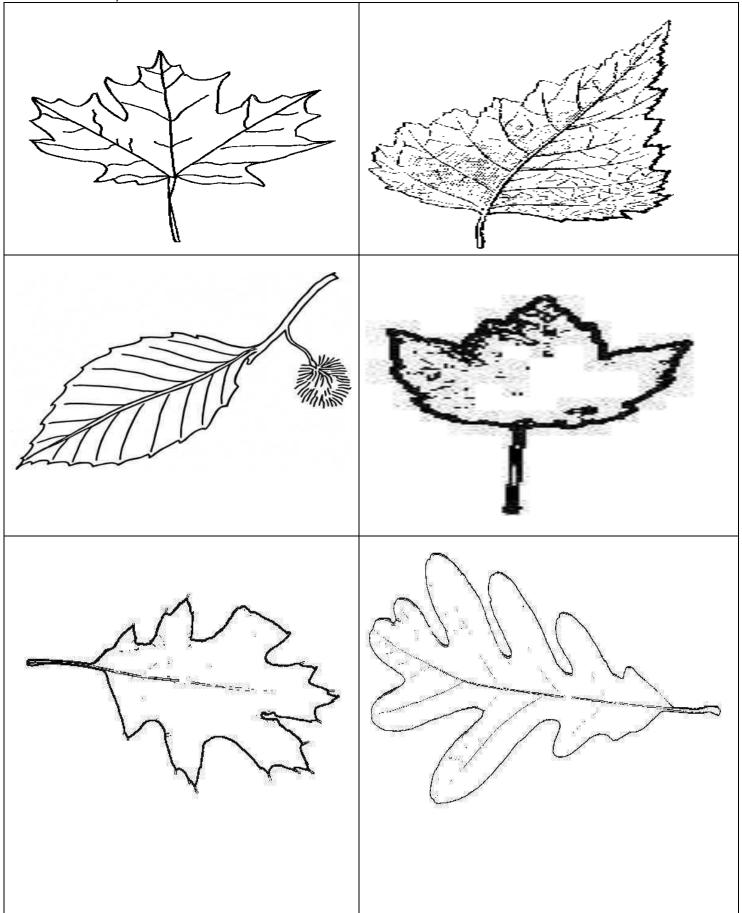
Leaf Apex: The \_\_\_\_\_ of the leaf.

The Petiole: Thin \_\_\_\_\_ that connects the leaf blade to the stem.

Please identify some of the structures on these leaves.



Please identify the tree based on the leaves/needles below. Sizes are not to scale!





Poison Ivy: A North American	plant of the cashew family that secretes an irritant
from its leaves, which can cause _	

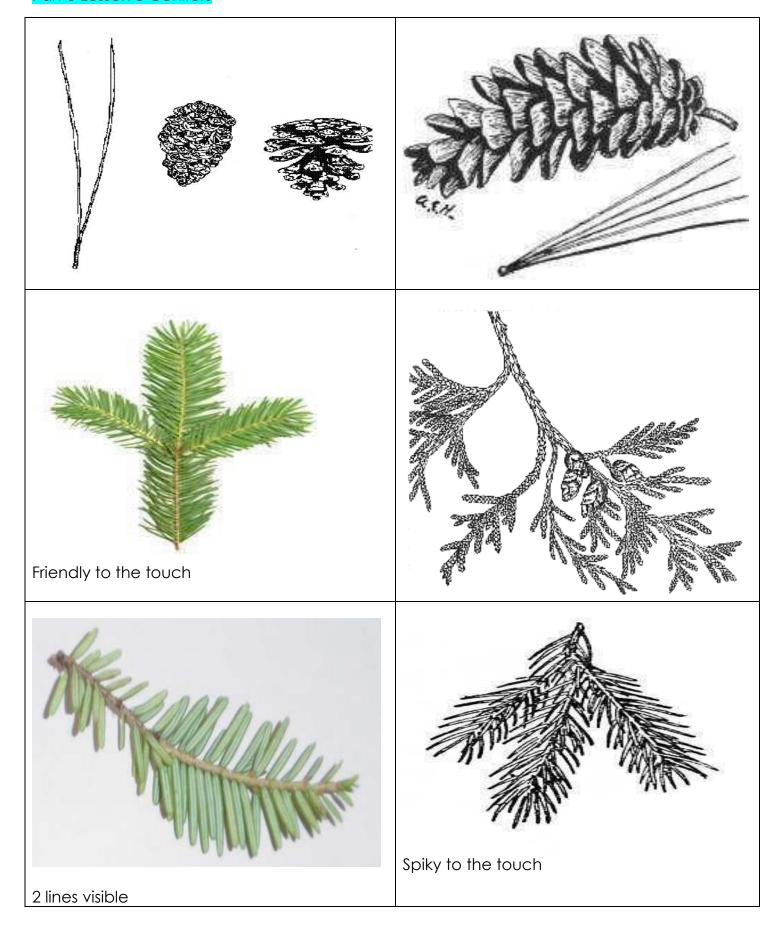
Please describe Poison Ivy in the Spring, Summer, Fall, and Winter. Sketches work as well.

Spring	Summer	Fall	Winter

Quiz Wiz –Poison Ivy Identification. 1-10, Write <u>Poison Ivy</u> for the slides that are, and <u>Not Ivy</u> for the others.

1)	2)	3)
4)	5)	6)
7)	8)	9)
10)	*11)	

# Part 5 Lesson 3 Conifers



Deciduous: Plants and shrubs that \_\_\_\_\_\_ leaves in fall and grow them back in spring Evergreens: Needles can survive \_\_\_\_\_, trees constantly grow and drop needles. • Needles can survive cold (sap antifreeze). bundled scale-like awl linear single clustered needles needles needles shaped shaped Conifers, as their name hints, bear cones.

Quiz! 1-11, Name that tree based on the leaf / needles.

1)	2)	3)		
4)	5)	6)		
7)	8)	9)		
10)	*11)			

# Part 5 Lesson 4 Plant Life Cycles

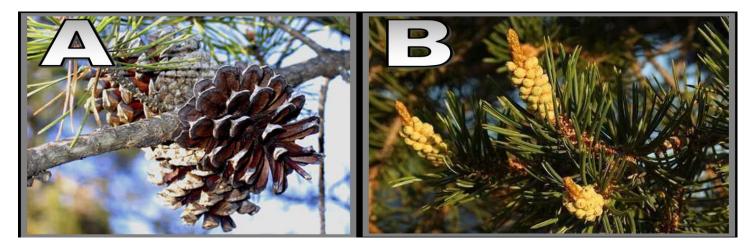
Seed Plant Life Cycles.

All plants undergo \_\_\_\_\_\_ I reproduction (two partners). When the sperm and egg come together you get a \_\_\_\_\_ / baby plant.

Gymnosperm: Non-flowering, seeds usually arranged on a \_\_\_\_\_\_.

Which is the male cone (pollen producer), and which is female (egg)?

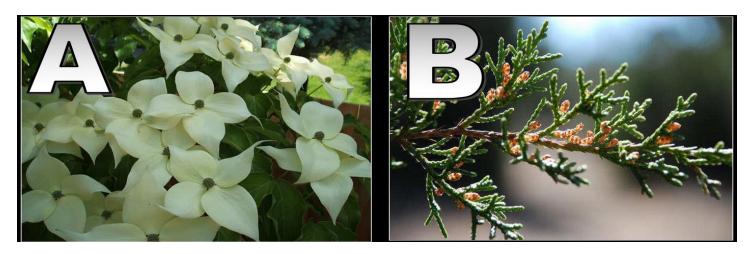
A) B)



Angiosperm: Flowering, covered seed, produce seeds enclosed in a fruit /ovary.

Which plant is an angiosperm, and which is a gymnosperm?

A) B)

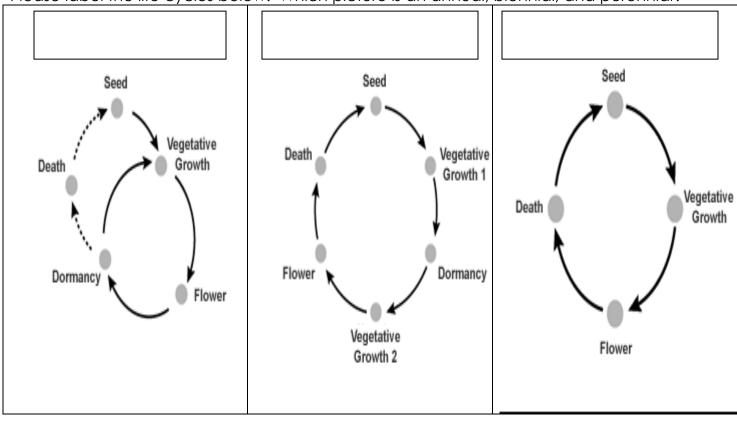


Annuals: Seed germinates, grows, and produces \_\_\_\_\_\_ seed, before dying.

Biennials: Plant \_\_\_\_\_ through first winter and produces seed before dying.

Perennials: Plants that live for \_\_\_\_\_ years producing seeds each year.

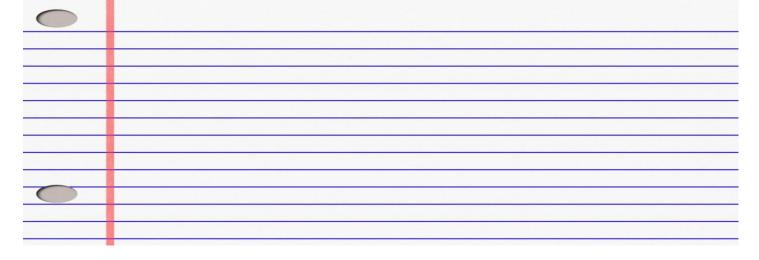
Please label the life cycles below. Which picture is an annual, biennial, and perennial?



Plant Life Cycles Dramatic Dance.

- Class will be divided into three groups (Annuals, Biennials, Perennials)
- Each group will have 15 minutes to plan an interpretive dance that explains their life cycle.
  - Group should not discuss life cycle with words but instead with dance and drama. Group can have a narrator only if really needed. (Not recommended)

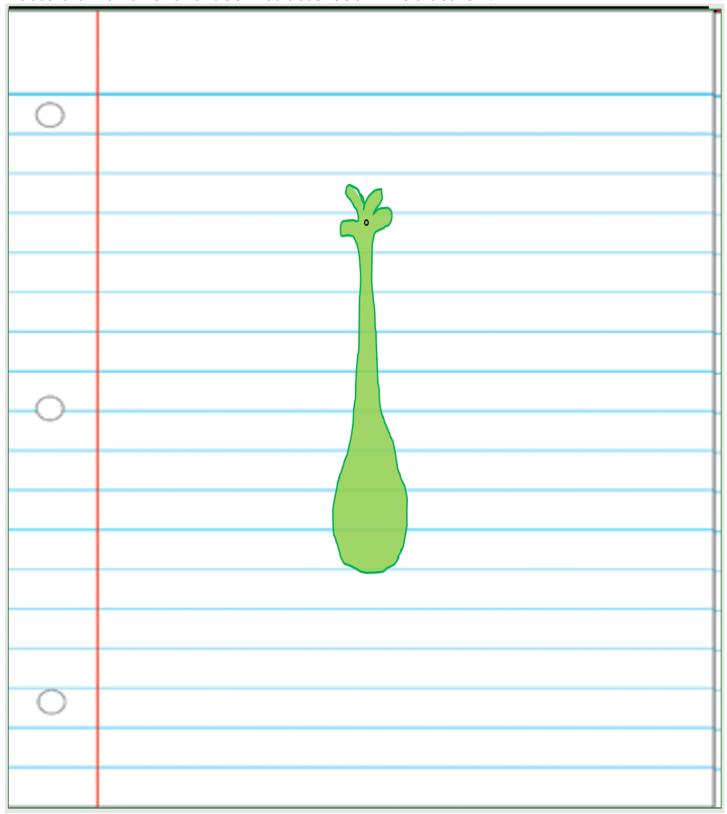
Notes for Dramatic Plant Life Cycle Skit



# Part 5 Lesson 5 Parts of a Flower

Flower: The reproductive organ of a plant that makes the \_\_\_\_\_\_.

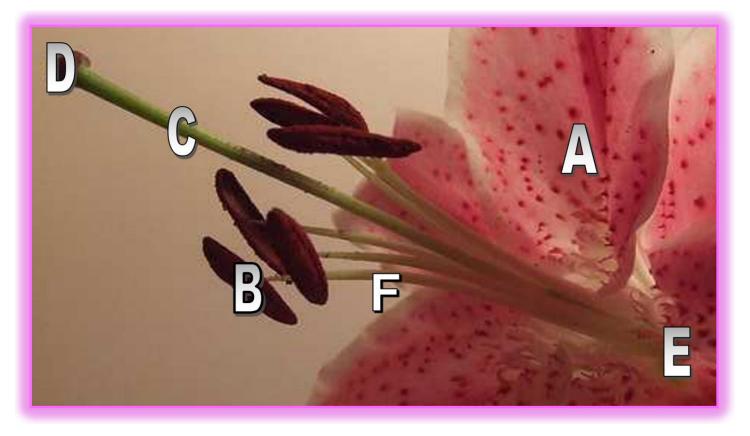
Please draw a flower and label it as described in the slideshow.



Stamen -	part of flow	ver (sperm).	
	Filament:	the anther.	
	Anther: Part of the sto	men that holds the	·
Pistil: Fem	nale part of flower (eg	g).	
	Stigma: Sticky bulb in	the center of the flower. Recei	ves the grains.
	_	that the stigma sits on top of	
	Ovary: On bottom of	the flower, has the	_inside and turns into the fruit.
	Contains the ovul	es.	
	Ovule: The part of the	ethat becomes the se	eeds.
	Petal: The colorful, off	en bright part of the flower. The	y attract
	Sepal: Green leaves t	hat cover the outside of a flower	er bud to the
	flower before it op	ens.	
Please no	ame A-F from the pict	ure below.	
A)		B)	C)

F)

E)



Flowers c	ittract pollinators thro	ugh
	Fragrance (smell)	
		(food)
	Color (sight)	

D)

# Part 5 Lesson 6 Flower Dissection

- Remove the parts of the flower (Be delicate)
- Line them up in your journal and label them.

Once labeled, place clear tape on top.

Quiz Wiz 1-10. Name that part of the flower. Same answers can be used more than once.

1)	2)	3)
4)	5)	6)
7)	8)	9)
10)	*11)	

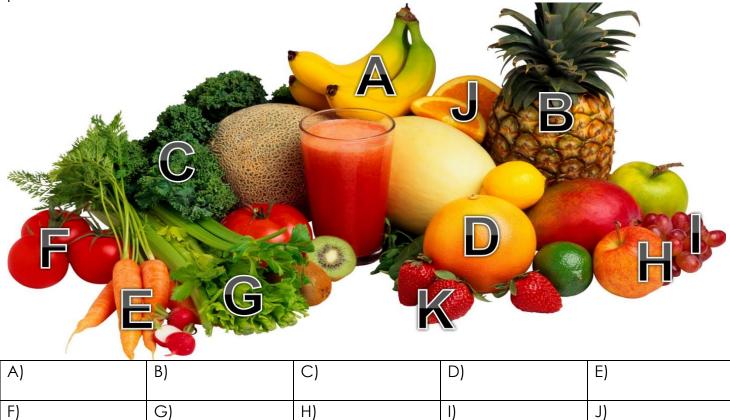
K)

# Part 5 Lesson 7 Fruits and Vegetables

Fruit: The matured \_\_\_\_\_ in the pistil. Contains the seed.

Name A-K, Which is a fruit? And which is a vegetable? Try and provide what type of fruit if

possible.

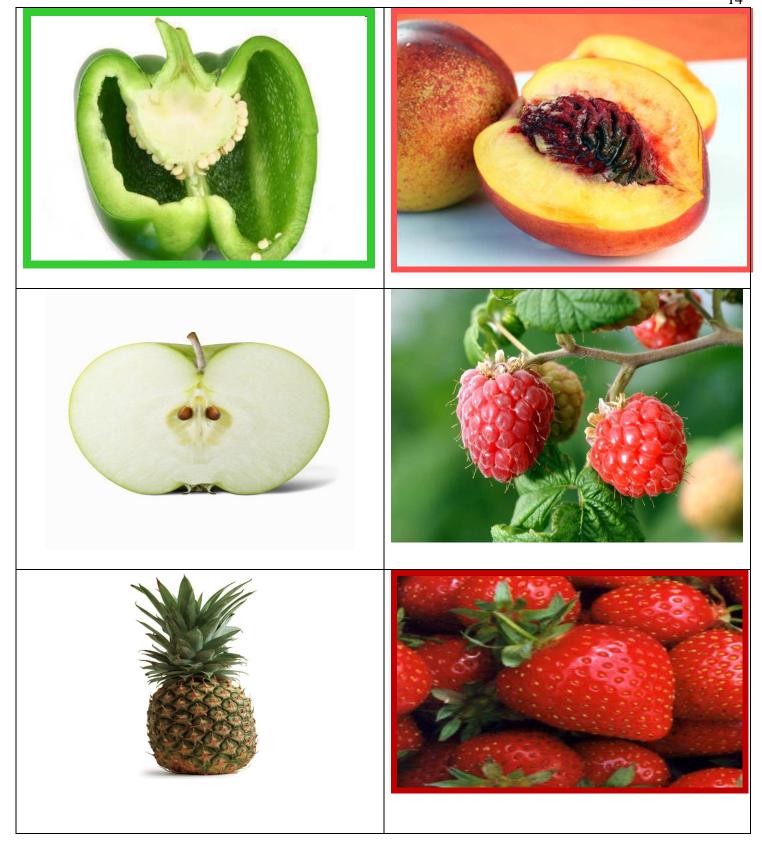


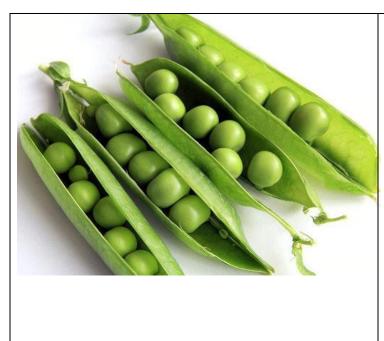
### Part 5 Lesson 8 Parts of a Fruit

i dii o Lo	
Parts of	a fruit.  Exocarp / Epicarp: covering of the fruit. "skin"  Mesocarp: covering. "Flesh"  Endocarp: covering, the stiff area around the seed. "Stone" "Pit"
Types of Fleshy Fr	uits  Berry: A fleshy fruit that contains one to seeds. (No stony layer)  Tomato, Grape  Drupe is a type of fleshy fruit that has a inner layer surrounding a single seed.  Plum, Peach  Pome: This fruit has a core as the true fleshy fruit, and it's surrounded by a fleshy
	good accessory layer.  Apple, Pear  Fleshy Aggregate Fruits: Develop from flowers with pistils.  Strawberny Blackberny

			13
		Fleshy Multiple Fruits: Form from a of several flowers.  Pineapple, Fig	
Activity! Fr	- - - -	Dissection Please draw and label each fruit in your journal. What type of fruit it is? (From notes as we cover each fruit a sample may be delivered) Epicarp / Exocarp – (exo=outside). Mesocarop – (meso = middle). Endocarp – (endo = inner).	
	_	Where fruit attaches to plant (old receptacle)	

Name the types of fruit below. Ex, Apple is incorrect. Providing some extra info is advised.







Dehiscent Dry Fruits: A dry fruit that \_\_\_\_\_ at maturity releasing the seeds.

Legume (Dry Fruit): An elongated \_\_\_\_\_ splitting along two seams. (Beans)

Indehiscent Dry Fruits: Pericarp does not split open. These fruits usually contain only one seed (

Describe some of the ways that people use plants.



### Across

- 2. The reproductive organ of a plant that makes the seed.
- 4. D\_\_\_\_\_ Dry Fruits: A dry fruit that splits at maturity releasing the seeds.
- 7. Green leaves that cover the outside of a flower bud to protect the flower before it opens.
- 12. Fleshy \_\_\_\_\_ Fruits: Form from a cluster of several flowers. Ex-Pineapple, Fig 13. Sticky bulb in the center of the flower. Receives the pollen grains.
- 15. The colorful, often bright part of the flower. They attract pollinators and are pretty 17. \_\_\_\_\_ lvy: a North American climbing plant of the cashew family that secretes an irritant oil from its leaves, which can cause dermatitis.
- 19. Inner covering of the fruit, the stiff area around the seed. "Stone" "Pit"
- 20. Leaf M\_\_\_\_\_: The edge of the leaf.
- 22. On bottom of the flower, has the seeds inside and turns into the fruit. Contains the ovules.
- 24. Plants and shrubs that lose leaves in fall and grow them back in spring.
- 27. This fruit has a core as the true fleshy fruit, and it's surrounded by a fleshy good accessory layer. Ex-Apple, Pear
- 29. A fleshy fruit that contains one to many seeds. (No stony layer) Ex-Tomato, Grape 30. Plants that live for many years producing seeds each year.

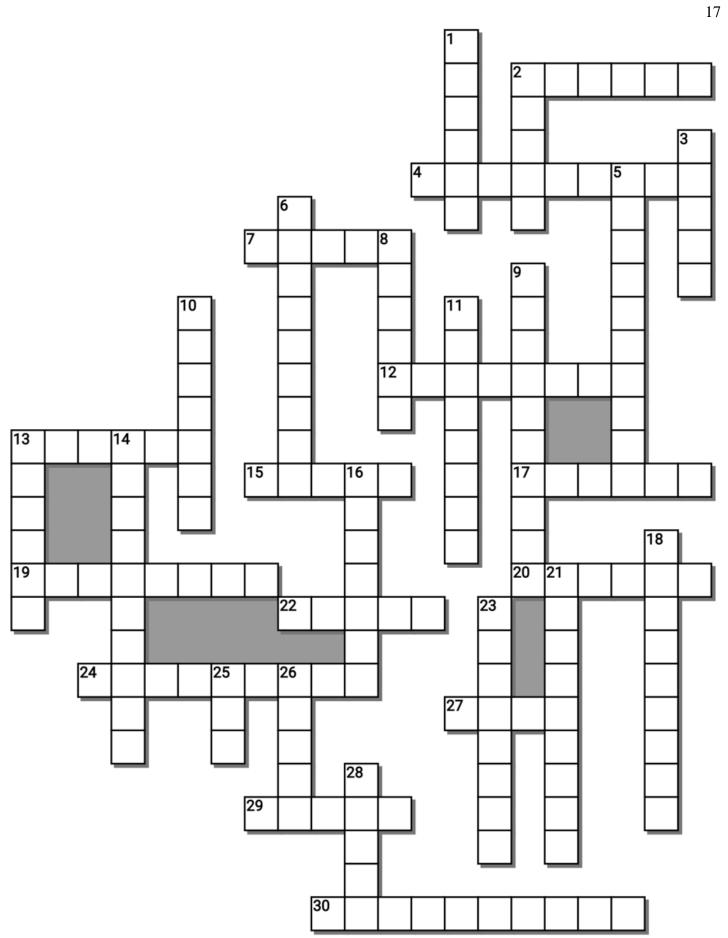
### Down

- 1. Part of the stamen that holds the pollen.
- 2. The matured ovary in the pistil. Contains the seed.
- 3. Long stalk that the stigma sits on top of.
- 5. Needles can survive winter, trees constantly grow and drop needles.
- 6. Edible part of a plant that is not a sweet fruit or seed. Stalk, leaves, root, etc.
- 8. An elongated pod splitting along two seams. (Beans)
- 9. Flowering, covered seed, produce seeds enclosed in a fruit /ovary.
- 10. This is the outer covering of the fruit. "skin"
- 11. Supports the anther.
- 13. Male part of flower
- 14. Non-flowering, seeds usually arranged on a cone.
- 16. Seed germinates, grows, and produces new seed, before dying.
- 18. Plant lives through first winter and produces seed before dying.
- 21. Fleshy \_\_\_\_\_ Fruits: Develop from flowers with many pistils. Ex-Strawberry, Blackberry
- 23. This is the Middle covering. "Flesh" of the fruit
- 25. Indehiscent \_\_\_\_ Fruits: Pericarp does not split open. These fruits usually contain only one seed (Nuts)
- 26. The part of the ovary that becomes the seeds.
- 28. This is a type of fleshy fruit that has a stony inner layer surrounding a single seed. Ex-Plum, Peach

-----teacher can remove this word bank to make puzzle more challenging------

### Possible Answers

AGGREGATE, ANGIOSPERM, ANNUALS, ANTHER, BERRY, BIENNIALS, DECIDUOUS, DEHISCENT, DRUPE, DRY, ENDOCARP, EPICARP, EVERGREENS, FILAMENT, FLOWER, FRUIT, GYMNOSPERM, LEGUME, MARGIN, MESOCARP, MULTIPLE, OVARY, OVULE, PERENNIALS, PETAL, POISON, POME, SEPAL, STAMEN, STIGMA, STYLE, VEGETABLE



# Part 5 Review Game Lesson 9

1-10 = 10 pts\* = Bonus + 1 pt,(Secretly write owl in correct space +1 pt) Final Question = 5 pt wager

Name: Due: Today Score \_\_\_\_ / 100

IDENTITY CRISIS	THE WONDER YEARS	BOYS AND GIRLS	TOOTY FRUITY	BIG BERRY  Bonus round 1 pt each
1)	6)	11)	16)	*21)
2)	7)	12)	17)	*22)
3)	8)	13)	18)	*23)
4)	9)	14)	19)	*24)
5)	10)	15)	20)	*25)

Final Question Wager		: :
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# Part 5 Flowers and More

Name:

## Part 5 Lesson 1 Leaf Identification

Find three leaves or more and create a rubbing in the space below using the side of a crayon.



Define a leaf in or around the rubbing? Once we learn about leaf identification can you describe some identifiable leaf structures / name the tree this leaf came from?

Blade: The entire leaf unit. Sometimes this is made up of several smaller leaflets.

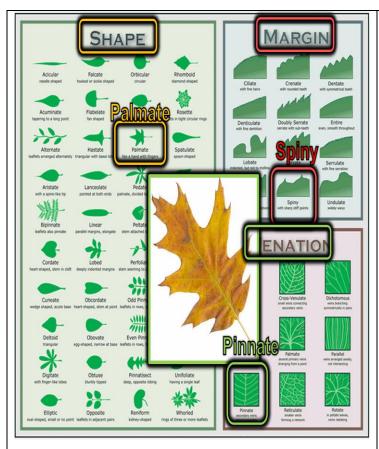
Veins: Contains vascular tissues. Leaf Margin: The edge of the leaf.

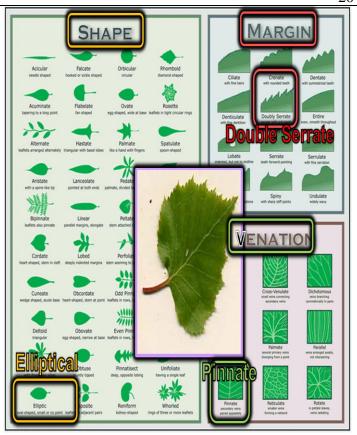
Leaf Base: Name for the blade close to the stem

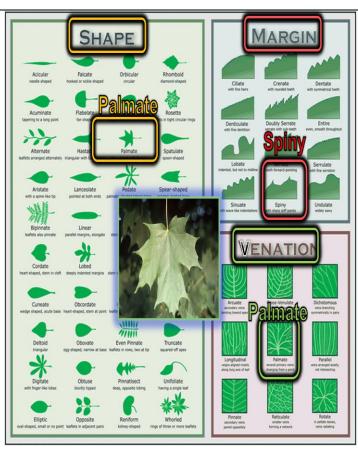
Leaf Apex: The tip of the leaf.

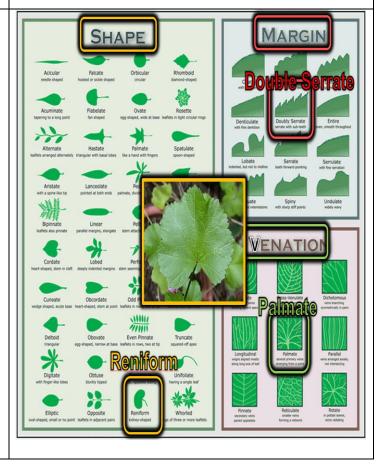
The Petiole: Thin stalks that connects the leaf blade to the stem.

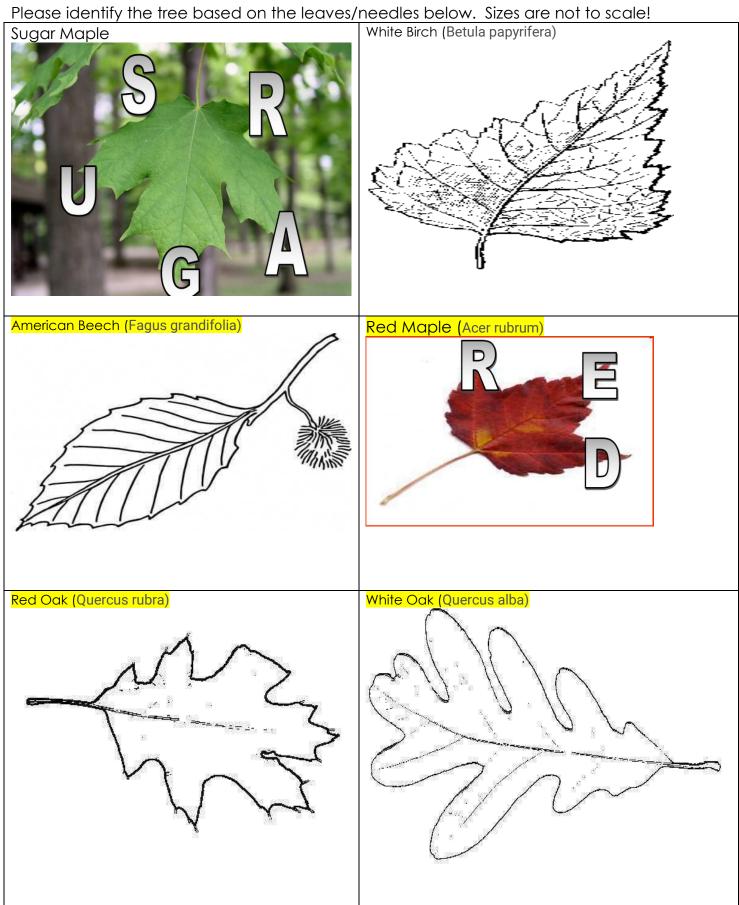
Please identify some of the structures on these leaves.











Name this plant? Poison Ivy (Toxicodendron radican)

- 1. Compound leaves with three leaflets (leading to the saying "leaves of three, let it be")
- 2. The stalk of the middle leaflet is much longer than the stalks of the two side leaflets.
- 3. The edges can be smooth or coarsely toothed.
- 4. Surface can be glossy or dull.

Poison Ivy: A North American climbing plant of the cashew family that secretes an irritant oil from its leaves, which can cause dermatitis.

Please describe Poison Ivy in the Spring, Summer, Fall, and Winter. Sketches work as well.

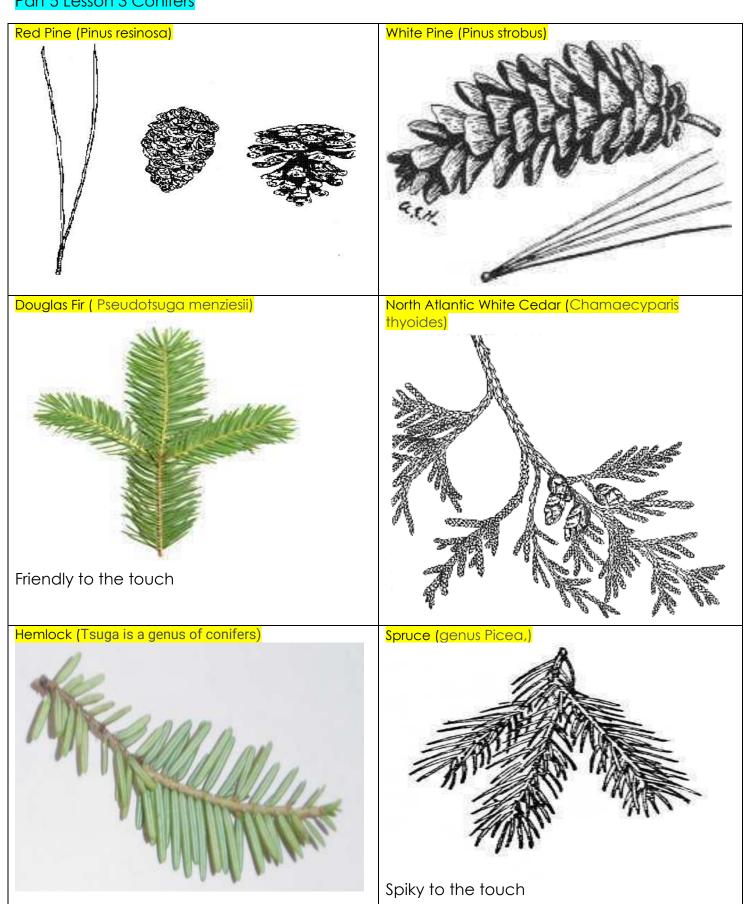
Summer Fall Winter Spring Winter makes all of the Fall turns berries darker, In the spring, the leaves drop, leaving dried, and wrinkled, leaves are a darker See above only bare sticks, whipand the leaves turn a red sometime with description like stems, or climbing brilliant scarlet or russet some green. They vines remaining. Don't brown before falling to will turn green in touch vines! You can the ground. the summer still aet dermatitis in the winter if you come in contact with oil in vines.

Quiz Wiz –Poison Ivy Identification. 1-10, Write <u>Poison Ivy</u> for the slides that are, and <u>Not Ivy</u> for the others.

1) It's Poison Ivy	2) Not Poison Ivy	3) Not Poison Ivy
4) It's Poison Ivy	5) Not Poison Ivy	6) Not Poison Ivy
7) It's Poison Ivy	8) Not Poison Ivy	9) It's Poison Ivy
10) <mark>It's Poison Ivy</mark>	*11) <mark>Jumanji</mark>	

# Part 5 Lesson 3 Conifers

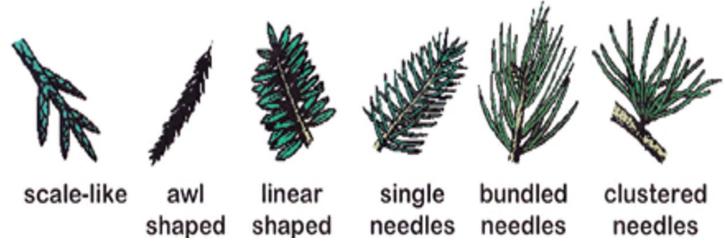
2 lines visible



Deciduous: Plants and shrubs that drop leaves in fall and grow them back in spring

Evergreens: Needles can survive winter, trees constantly grow and drop needles.

Needles can survive cold (sap antifreeze).



Conifers, as their name hints, bear cones.



Quiz! 1-11. Name that tree based on the leaf / needles.

QUE. 1 11, Italia mai nee basea en me lear, needles.				
1) White Oak (Quercus alba)	2) Hemlock (Tsuga is a genus of conifers)	3) Red Maple (Acer rubrum)		
4) Red Pine (Pinus resinosa)	5) Red Oak (Quercus rubra)	6) American Beech (Fagus grandifolia)		
7) North Atlantic White Cedar (Chamaecyparis thyoides)	8) White Pine (Pinus strobus)	9) White Birch (Betula papyrifera)		
10) Spruce (genus Picea,)	*11) Christmas Vacation			

## Part 5 Lesson 4 Plant Life Cycles

Seed Plant Life Cycles.

All plants undergo sexual reproduction (two partners). When the sperm and egg come together you get a zygote / baby plant.

Gymnosperm: Non-flowering, seeds usually arranged on a cone.

A) Female Cone -Seeds

B) Male Cone (Pollen / Sperm)

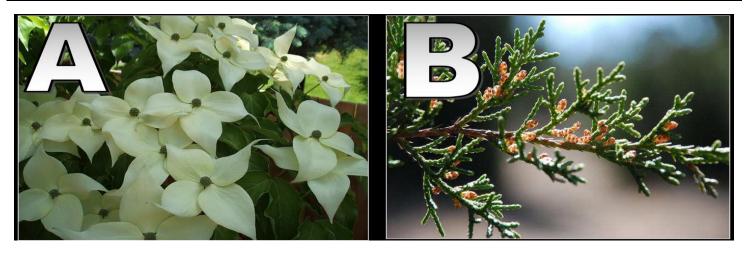


Angiosperm: Flowering, covered seed, produce seeds enclosed in a fruit /ovary.

Which plant is an angiosperm, and which is a gymnosperm?

A) Angiosperm (Flowering)

B) Gymnosperm (Cone Bearing)

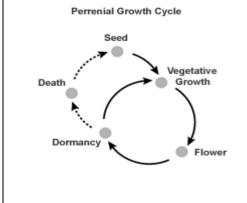


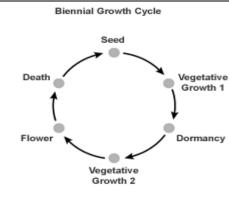
Annuals: Seed germinates, grows, and produces new seed, before dying.

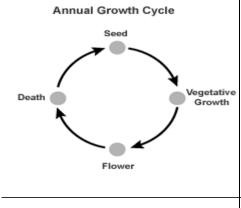
Biennials: Plant lives through first winter and produces seed before dying.

Perennials: Plants that live for many years producing seeds each year.

Please label the life cycles below. Which picture is an annual, biennial, and perennial?







Plant Life Cycles Dramatic Dance.

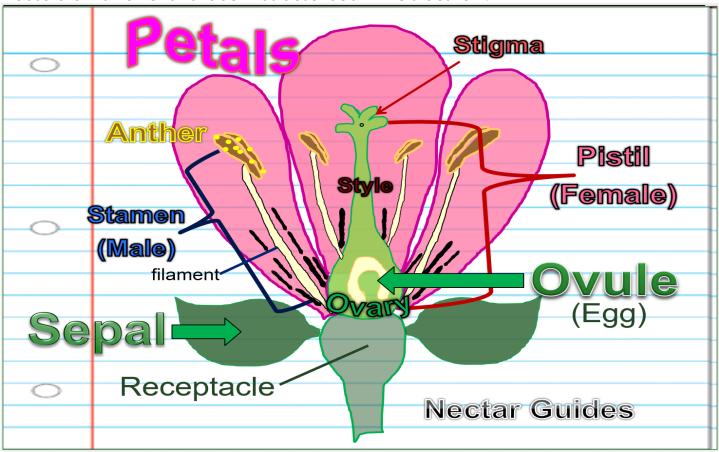
- Class will be divided into three groups (Annuals, Biennials, Perennials)
- Each group will have 15 minutes to plan an interpretive dance that explains their life cycle.
  - Group should not discuss life cycle with words but instead with dance and drama. Group can have a narrator only if really needed. (Not recommended)

Notes for Dramatic Plant Life Cycle Skit

### Part 5 Lesson 5 Parts of a Flower

Flower: The reproductive organ of a plant that makes the seed.

Please draw a flower and label it as described in the slideshow.



Stamen – Male part of flower (sperm).

Filament: Supports the anther.

Anther: Part of the stamen that holds the pollen.

Pistil: Female part of flower (egg).

Stigma: Sticky bulb in the center of the flower. Receives the pollen grains.

Style: Long stalk that the stigma sits on top of.

Ovary: On bottom of the flower, has the seeds inside and turns into the fruit. Contains the ovules.

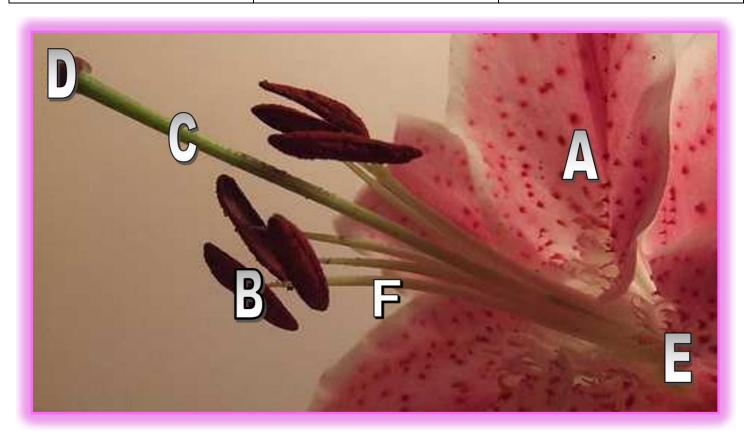
Ovule: The part of the ovary that becomes the seeds.

Petal: The colorful, often bright part of the flower. They attract pollinators.

Sepal: Green leaves that cover the outside of a flower bud to protect the flower before it opens.

Please name A-F from the picture below.

A) Petal	B) Anther	C) Style
D) Stigma	E) Ovary / Ovule	F) Filament



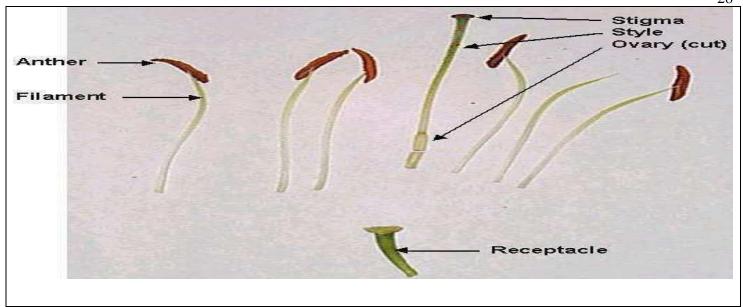
Flowers attract pollinators through...

Fragrance (smell)
Nectar (food)
Color (sight)

## Part 5 Lesson 6 Flower Dissection

Activity! Flower Dissection.

- Remove the parts of the flower (Be delicate)
- Line them up in your journal and label them.
- Once labeled, place clear tape on top.



Quiz Wiz 1-10. Name that part of the flower. Same answers can be used more than once.

1) <mark>Filament</mark>	2) Ovules	3) Petals
4) <mark>Stigma</mark>	5) <mark>Sepals</mark>	6) Anther
7) <mark>Ovary</mark>	8) Style	9) Anther
10) <mark>Sepals</mark>	*11) Polar Express	

# Part 5 Lesson 7 Fruits and Vegetables

Fruit: The matured ovary in the pistil. Contains the seed.

Name A-K, Which is a fruit? And which is a vegetable? Try and provide what type of fruit if possible.



<mark>A) Fr∪it</mark>	<mark>B) Fr∪it</mark>	C) Vegetable	D) Fruit	E) Vegetable
F) Fruit	G) vegetable	H) Fruit	I) Fruit	J) Fruit K) Fruit

### Part 5 Lesson 8 Parts of a Fruit

Parts of a fruit.

Exocarp / Epicarp: Outer covering of the fruit. "skin"

Mesocarp: Middle covering. "Flesh"

Endocarp: Inner covering, the stiff area around the seed. "Stone" "Pit"

Types of fruit Fleshy Fruits

Berry: A fleshy fruit that contains one to many seeds. (No stony layer)

Tomato, Grape

Drupe is a type of fleshy fruit that has a stony inner layer surrounding a single seed.

Plum, Peach

Pome: This fruit has a core as the true fleshy fruit, and it's surrounded by a fleshy good accessory layer.

Apple, Pear

Fleshy Aggregate Fruits: Develop from flowers with many pistils.

Strawberry, Blackberry

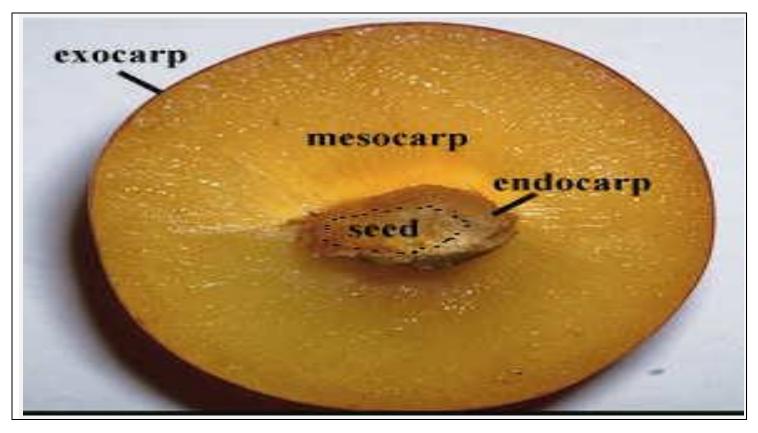
Fleshy Multiple Fruits: Form from a cluster of several flowers.

Pineapple, Fig

Activity! Fruit Dissection

Please draw and label each fruit in your journal.

- What type of fruit it is? (From notes as we cover each fruit a sample may be delivered)
- Epicarp / Exocarp (exo=outside).
- Mesocarop (meso = middle).
- Endocarp (endo = inner).
- Where fruit attaches to plant (old receptacle)



Name the types of fruit below. Ex, Apple is incorrect. Providing some extra info is advised.



Berry: A fleshy fruit that contains one to many seeds. (No stony layer) Tomato, Grape



Drupe is a type of fleshy fruit that has a stony inner layer surrounding a single seed.Plum, Peach



Pome: This fruit has a core as the true fleshy fruit, and it's surrounded by a fleshy good accessory layer.



Fleshy Aggregate Fruits: Develop from flowers with many pistils.
Strawberry, Blackberry



Fleshy Multiple Fruits: Form from a cluster of several flowers. Pineapple, Fig



Fleshy Aggregate Fruits: Develop from flowers with many pistils. Strawberry, Blackberry





Indehiscent Dry Fruits: Pericarp does not split open. These fruits usually contain only one seed (Nuts)

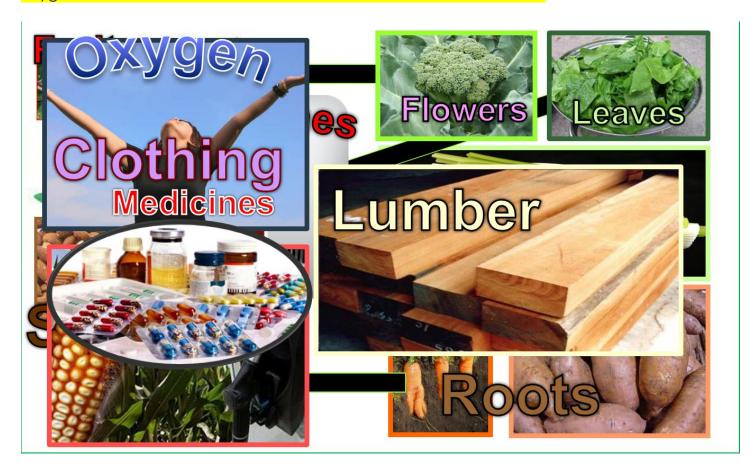
Dehiscent Dry Fruits: A dry fruit that splits at maturity releasing the seeds.

Legume (Dry Fruit): An elongated pod splitting along two seams. (Beans)

Indehiscent Dry Fruits: Pericarp does not split open. These fruits usually contain only one seed (Nuts)

Describe some of the ways that people use plants.

Plants provide us with food, fiber, shelter, medicine, and fuel. The basic food for all organisms is produced by green plants. In the process of food production, oxygen is released. This oxygen, which we obtain from the air we breathe, is essential to life.



### Across

- 2. The reproductive organ of a plant that makes the seed.
- 4. D\_\_\_\_\_ Dry Fruits: A dry fruit that splits at maturity releasing the seeds.
- 7. Green leaves that cover the outside of a flower bud to protect the flower before it opens.
- 12. Fleshy \_\_\_\_\_ Fruits: Form from a cluster of several flowers. Ex-Pineapple, Fig 13. Sticky bulb in the center of the flower. Receives the pollen grains.
- 15. The colorful, often bright part of the flower. They attract pollinators and are pretty 17. \_\_\_\_\_ lvy: a North American climbing plant of the cashew family that secretes an irritant oil from its leaves, which can cause dermatitis.
- 19. Inner covering of the fruit, the stiff area around the seed. "Stone" "Pit"
- 20. Leaf M\_\_\_\_: The edge of the leaf.
- 22. On bottom of the flower, has the seeds inside and turns into the fruit. Contains the ovules.
- 24. Plants and shrubs that lose leaves in fall and grow them back in spring.
- 27. This fruit has a core as the true fleshy fruit, and it's surrounded by a fleshy good accessory layer. Ex-Apple, Pear
- 29. A fleshy fruit that contains one to many seeds. (No stony layer) Ex-Tomato, Grape 30. Plants that live for many years producing seeds each year.

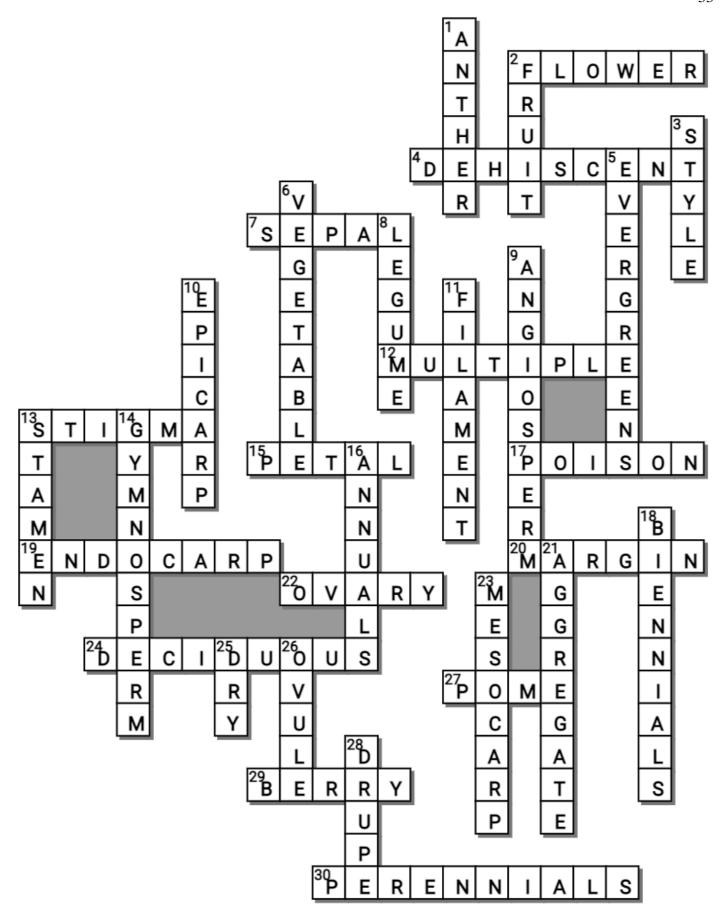
### Down

- 1. Part of the stamen that holds the pollen.
- 2. The matured ovary in the pistil. Contains the seed.
- 3. Long stalk that the stigma sits on top of.
- 5. Needles can survive winter, trees constantly grow and drop needles.
- 6. Edible part of a plant that is not a sweet fruit or seed. Stalk, leaves, root, etc.
- 8. An elongated pod splitting along two seams. (Beans)
- 9. Flowering, covered seed, produce seeds enclosed in a fruit /ovary.
- 10. This is the outer covering of the fruit. "skin"
- 11. Supports the anther.
- 13. Male part of flower
- 14. Non-flowering, seeds usually arranged on a cone.
- 16. Seed germinates, grows, and produces new seed, before dying.
- 18. Plant lives through first winter and produces seed before dying.
- 21. Fleshy \_\_\_\_\_ Fruits: Develop from flowers with many pistils. Ex-Strawberry, Blackberry
- 23. This is the Middle covering. "Flesh" of the fruit
- 25. Indehiscent \_\_\_\_ Fruits: Pericarp does not split open. These fruits usually contain only one seed (Nuts)
- 26. The part of the ovary that becomes the seeds.
- 28. This is a type of fleshy fruit that has a stony inner layer surrounding a single seed. Ex-Plum, Peach

-----teacher can remove this word bank to make puzzle more challenging------

### Possible Answers

AGGREGATE, ANGIOSPERM, ANNUALS, ANTHER, BERRY, BIENNIALS, DECIDUOUS, DEHISCENT, DRUPE, DRY, ENDOCARP, EPICARP, EVERGREENS, FILAMENT, FLOWER, FRUIT, GYMNOSPERM, LEGUME, MARGIN, MESOCARP, MULTIPLE, OVARY, OVULE, PERENNIALS, PETAL, POISON, POME, SEPAL, STAMEN, STIGMA, STYLE, VEGETABLE



# Part 5 Review Game Lesson 9

1-10 = 10 pts\* = Bonus + 1 pt,(Secretly write owl in correct space +1 pt) Final Question = 5 pt wager

Name: Due: Today Score \_\_\_\_ / 100

IDENTITY CRISIS	THE WONDER YEARS	BOYS AND GIRLS	TOOTY FRUITY	BIG BERRY  Bonus round 1 pt each
1) White Oak (Quercus alba)	6) Perennial (owl +1)	11) Pollen	16) Letter C	*21)  CHRUNCH  BERRIES
2) Maples	7) <mark>Biennals</mark>	12) Letter A (Has male and female)	17) Sepals	*22) FRUIT STRIPES
3) North Atlantic White Cedar (Chamaecyparis thyoides)	8) Deciduous	A=Anther B=Filament C=Stamen	18) Fruit	*23)  BLUEBERRIES FOR SAL
4)  Hemlock (Tsuga is a genus of conifers)	9) Sexual Egg Zygote	14) <mark>Ovary</mark>	19) A=Vegetable B= Fruit	*24) PAUL BUNYAN AND BABE
5) White Pine (Pinus strobus)	10) Angiosperm Gymnosperm	A=Stigma B=Style C=Pistil	20)  Drupe  Exocarp  Mesocarp  Endocarp	*25) FRUIT OF THE LOOM

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