Part 6 Kingdom Fungi

Name:

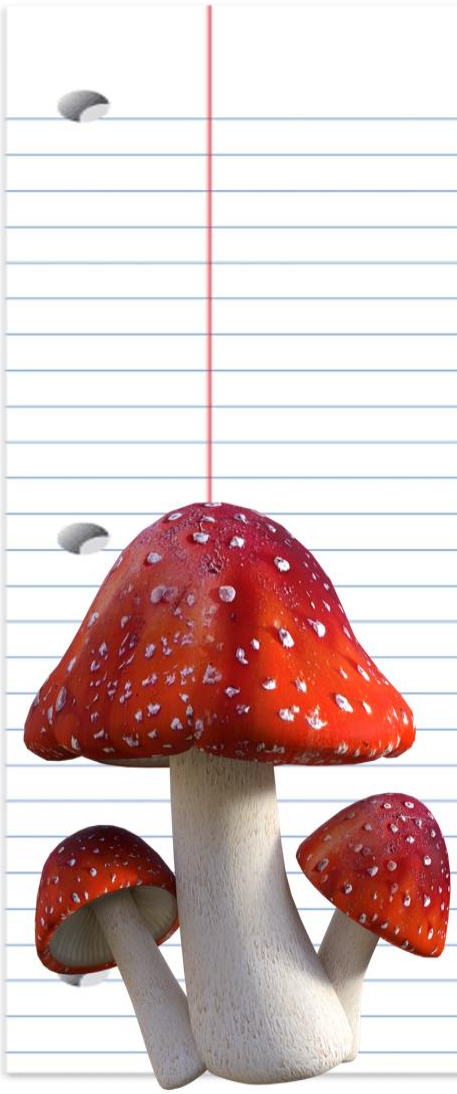
Part 5 Lesson 1 Kingdom Fungi

Kingdom Fungi: _____ cellular (many celled) organisms that ingests food by _____ and reproduce using _____.

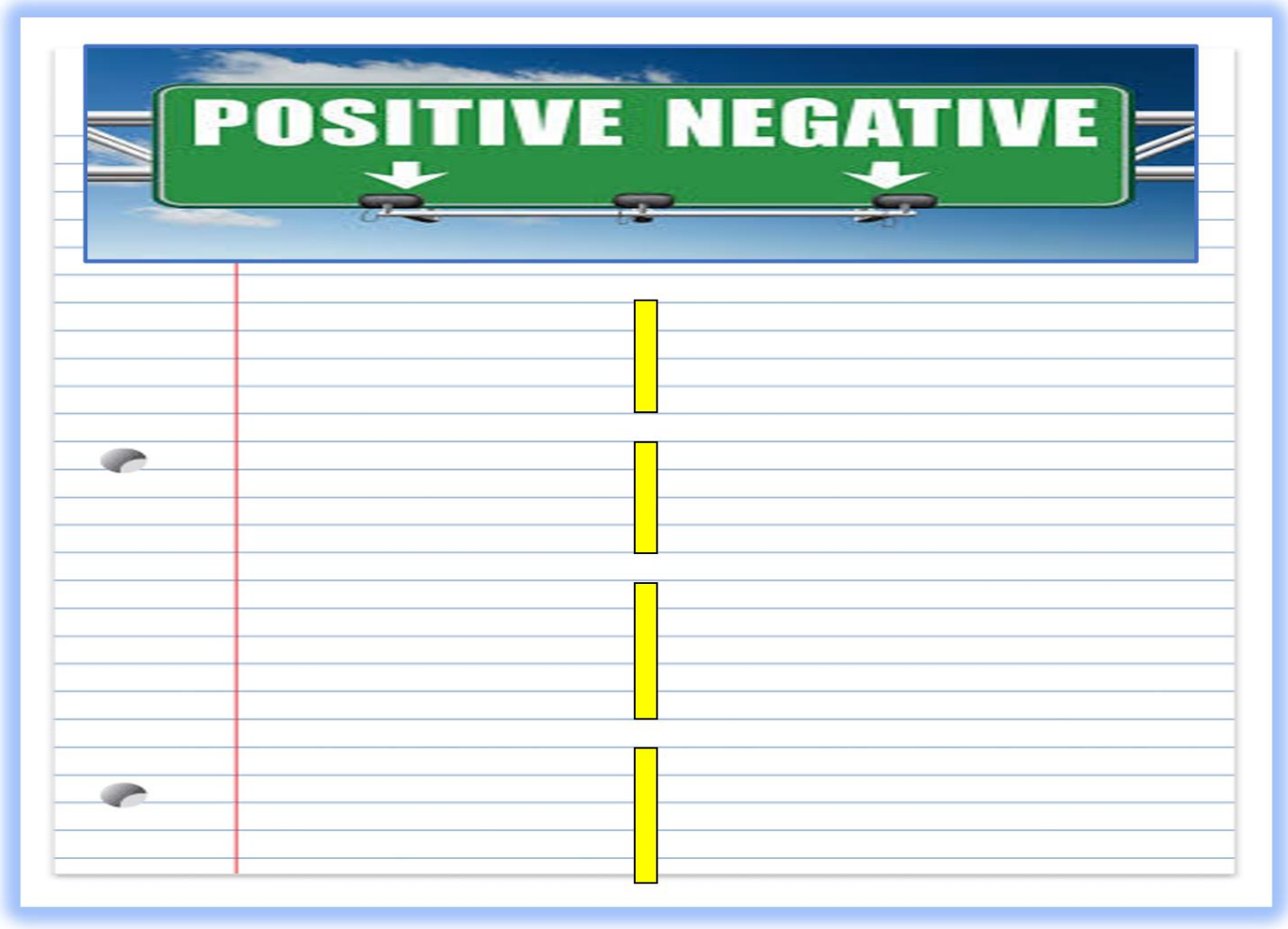
Kingdom Fungi are _____compared to us. They _____their food on the outside instead of on the inside like animals.

Fungi also have cell walls consisting largely of _____ instead of cellulose.
Fungi are more closely related to _____ than they are to plants.
They are _____ like animals and not photosynthetic like plants.

How are a Fungus and a Person Similar and Different? Describe below.



Next page. What are some positives and negatives of the Kingdom Fungi? This list will be on going throughout this unit of study. Record positives when you see a "+", and negatives when you see a "-".



Divisions of Fungi

Chytridiomycota / _____ Fungi

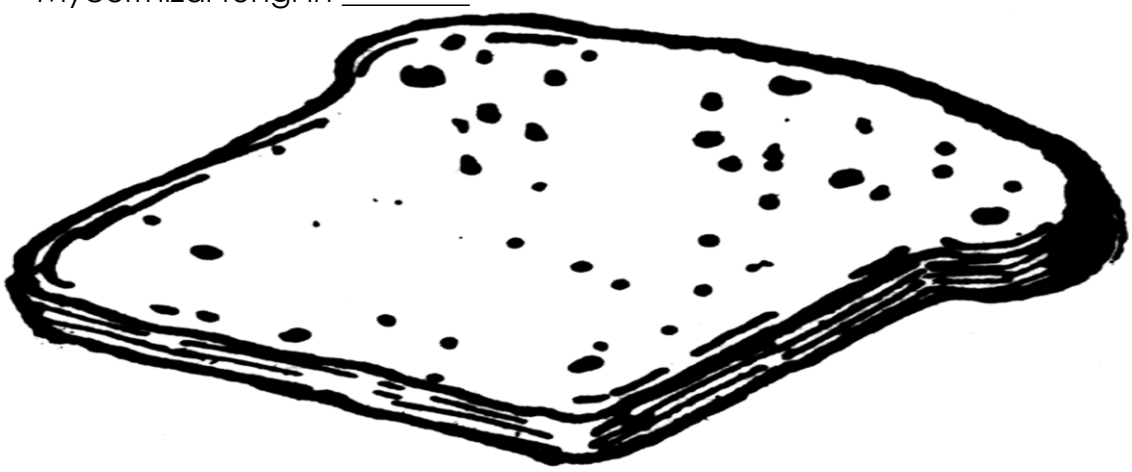
Live on land and _____.

Great _____.

Make some sketches of the Primitive Fungi below. This will be important for the quiz.

Zygomycota / _____

- Mycorrhizal fungi in _____



Bread / Mold Experiment

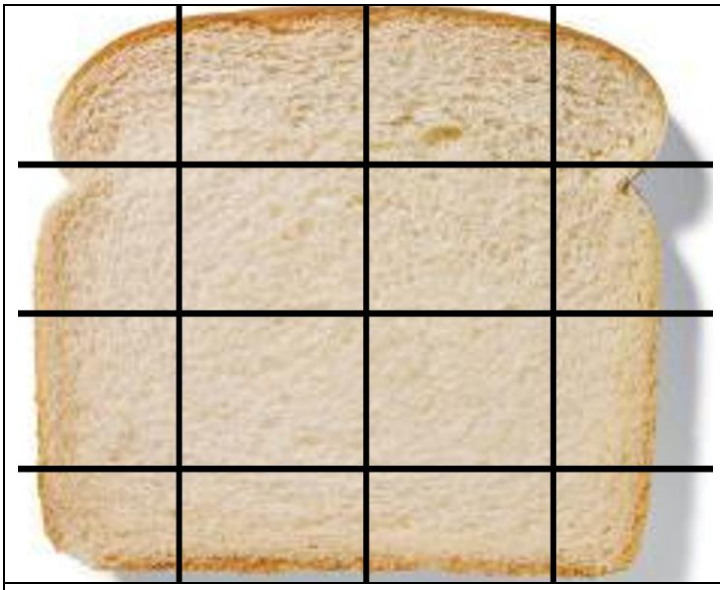
Each table group will get 8 slices of plain white bread and 8 sandwich bags.
Label each bag with a Sharpie and date.
Control: Untouched straight into bag.
Control: Untouched straight into bag.
Hands: Everyone touch bread front and back.
Washed hands: Everyone touch bread front and back after washing hands with soap for 20 seconds.
Chromebooks: Wipe bread on keyboard both sides of bread
Desk: Drag bread on both sides on desks/table
Outdoors: Move across soil on both sides
Your Choice: Lockers? Bathroom? Cafeteria?
Spray the bread with a **fine mist** of water from a spray bottle. Don't soak it – one spray works.
Seal bags and place in a warm dark area. Try not to stack the bread on top of each other.
Observe in 7-10 days.

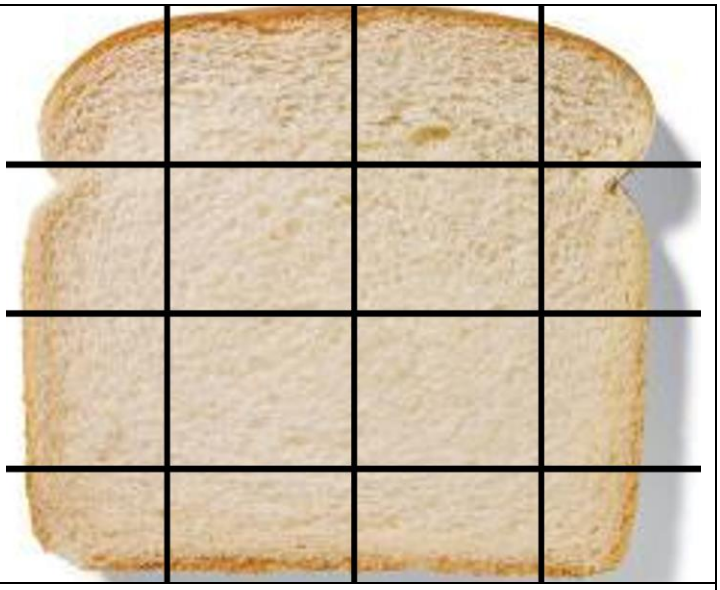
You could also investigate mold growth in bag vs. no bag, shade vs. light, types of bread, moisture vs. dry.

DON"T TAKE BREAD OUT OF SANDWICH BAGS! LEAVE IN SEALED BAGS

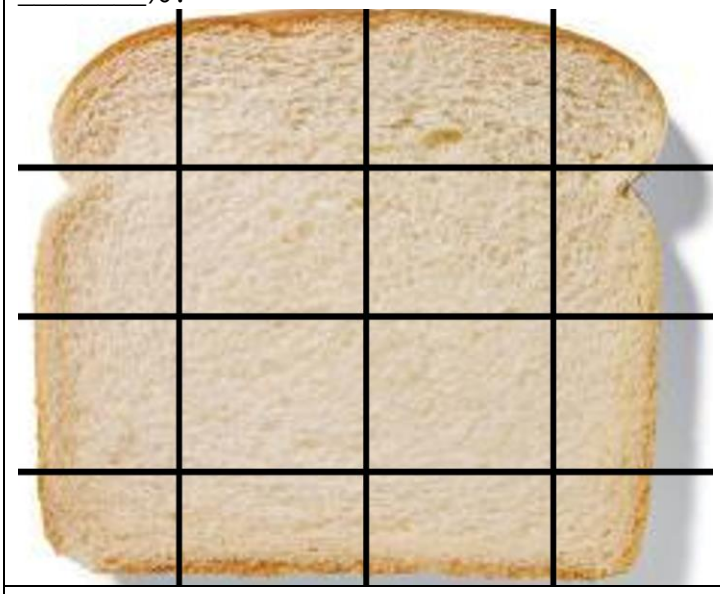
Please use a color of the mold (colored pencil) and sketch where / how much mold is on each side of bread after 7-10 days of mold growth. Estimate the % of mold that occupies the bread in the _____%?

Control #1 _____%?	Hands: Everyone touched _____%?
Chromebooks / Computer Keyboard _____%?	Hands: After washing hands with soap _____%?

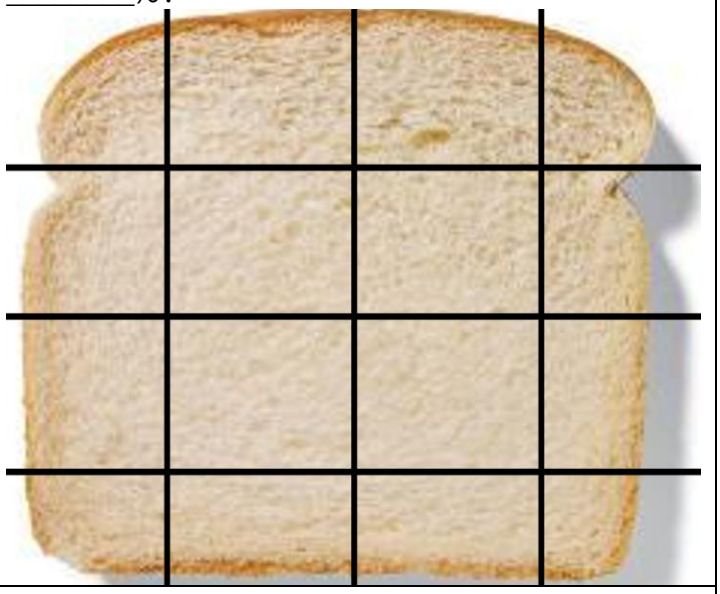




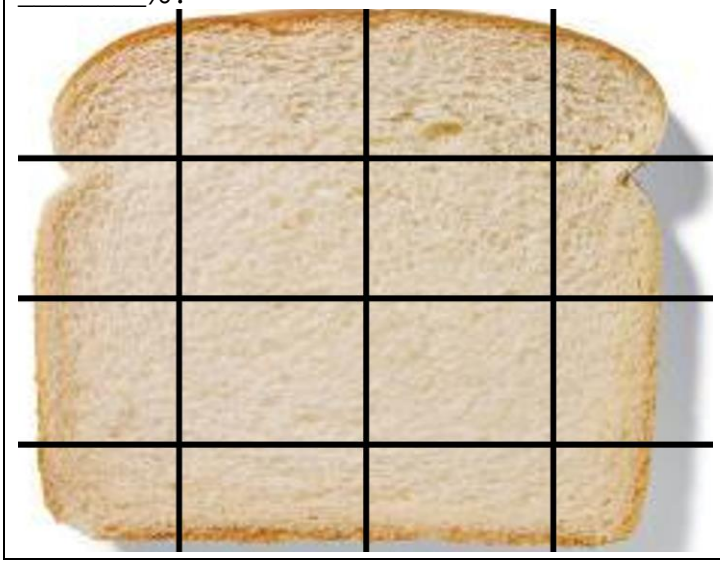
Desk – Dragging across tables or desk
_____%?



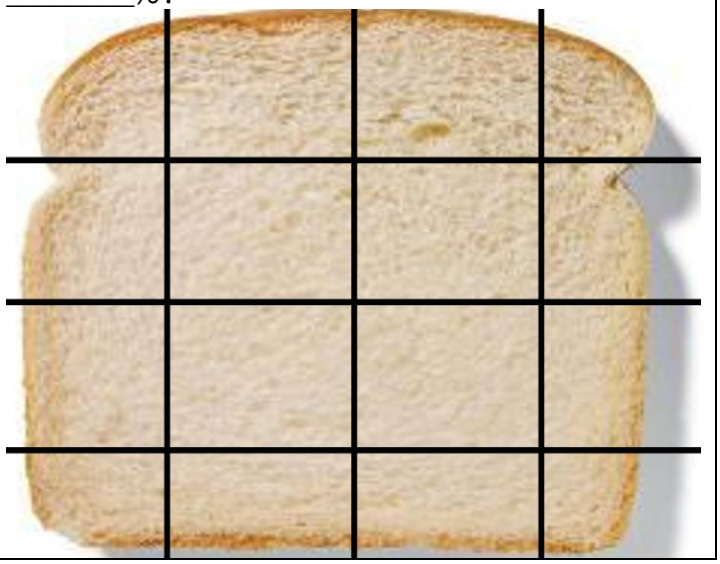
Outdoors across soil base
_____%?



Your Choice:_____
_____%?



Control #2
_____%?



Hypothesis: (Your educated guess that can be tested)

Dependent Variable (what did we measure)?

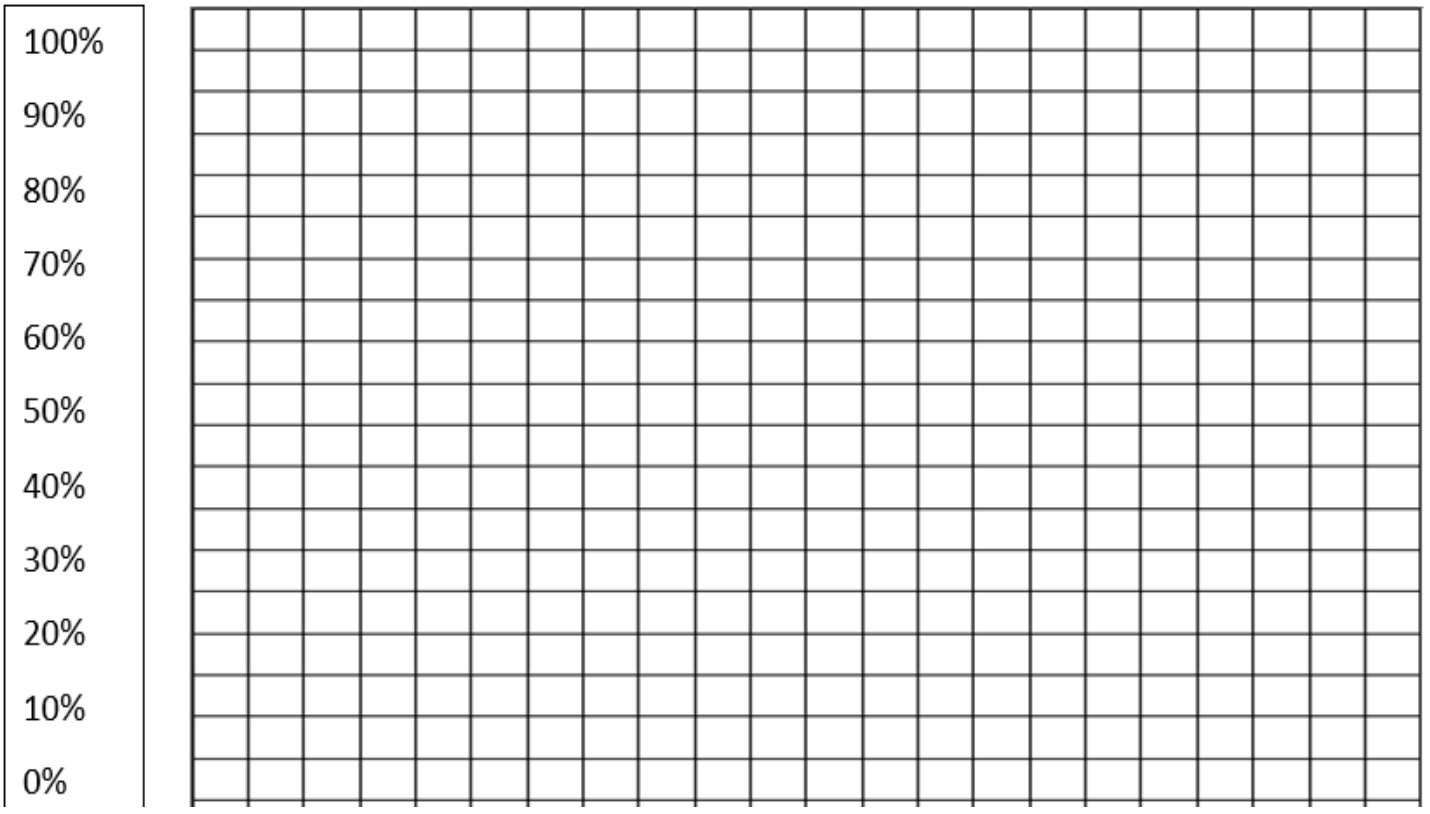
Independent Variable (What we manipulated)?

Controls (What stayed the same to ensure a fair test)

Result (What does your data suggest)

Which surface produced the most mold on your bread?_____
What was the percentage covered on this piece? _____%
What was the percentage covered on the control pieces _____%
How much more mold grew on that surface compared to the control groups?

Can you create a graph of the mold percentages

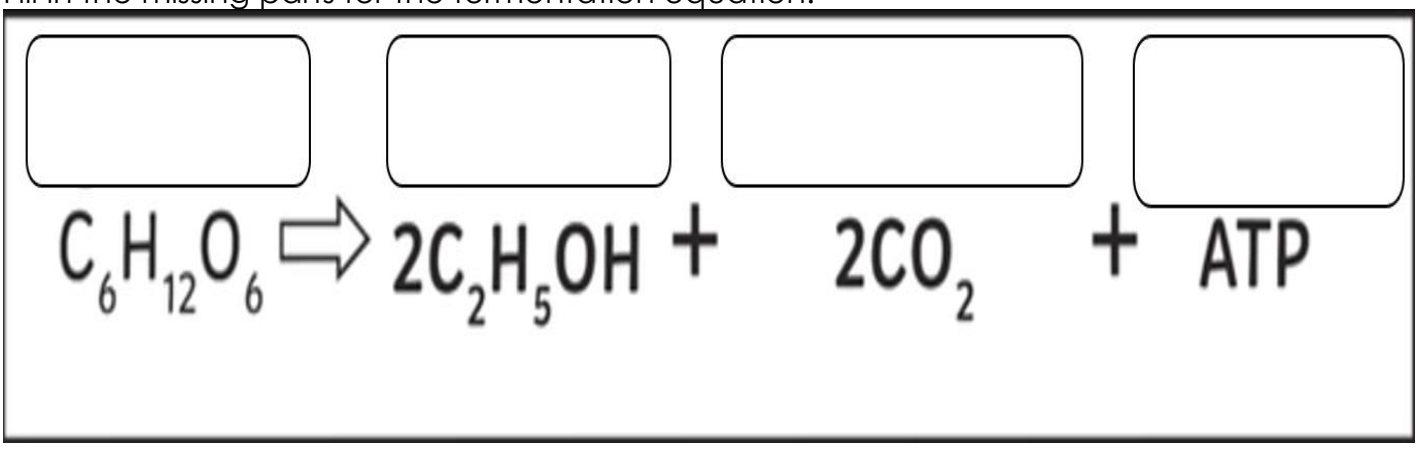


Part 5 Lesson 2 Sac Fungi

Ascomycota / _____ Fungi:
____% of all Fungi.
Yeast.
Truffles

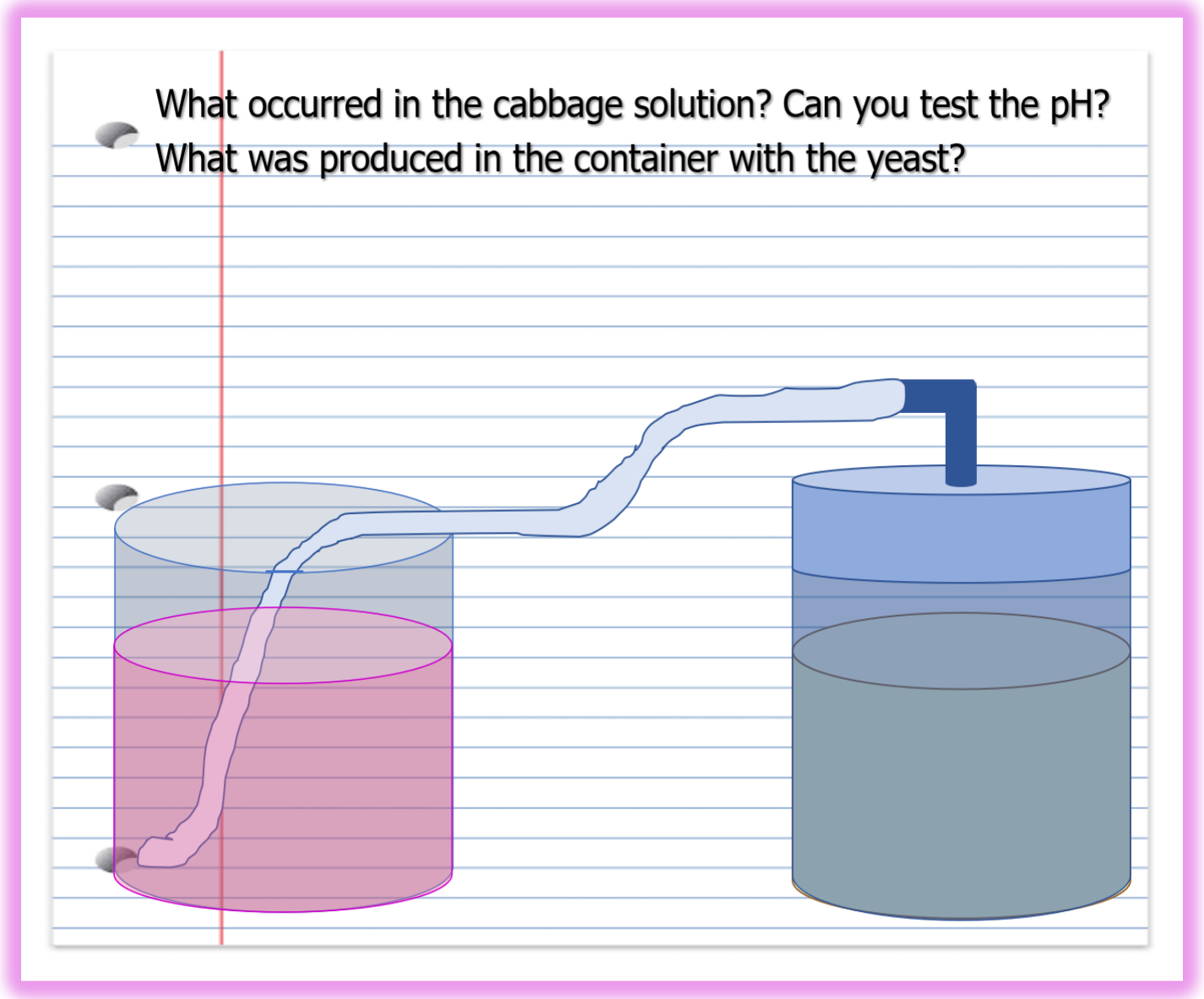
_____ - The anaerobic (no oxygen) conversion of sugar into carbon dioxide and alcohol by yeast.

Fill in the missing parts for the fermentation equation.



_____are eukaryotic, single-celled-microorganisms classified as members of the fungus kingdom. Yeasts are unicellular organisms that evolved from multicellular ancestors

Most yeasts reproduce asexually by mitosis, and many do so by the asymmetric division process known as _____. With their single-celled growth habit, yeasts can be contrasted with molds, which grow hyphae.



Part 6 Lesson 3 Lichens – Division Mycophycophyta

Lichen: a composite organism that arises from _____ or cyanobacteria living among filaments of multiple _____ species in a mutualistic relationship.

Lichens have properties different from those of their component organisms.

Lichen: Algae and fungus growing together in a _____ relationship.

The fungi extract food from the environment, while the algae are _____. This is mutualistic symbiosis.

The three types of lichens (Not Plant Kingdom –Fungi and Protist)

Crustose: Forms a _____, difficult to remove without crumbling.
Foliose: _____, can be peeled off rock with knife.
Fruticose: Forms shrubby _____. Easily removed by hand.

What is a lichen? Is it a plant? How does a lichen represent a mutualism between two species? Can you name the types of lichen above?

Activity! Going on a short walk to observe, sketch, and identify lichens.

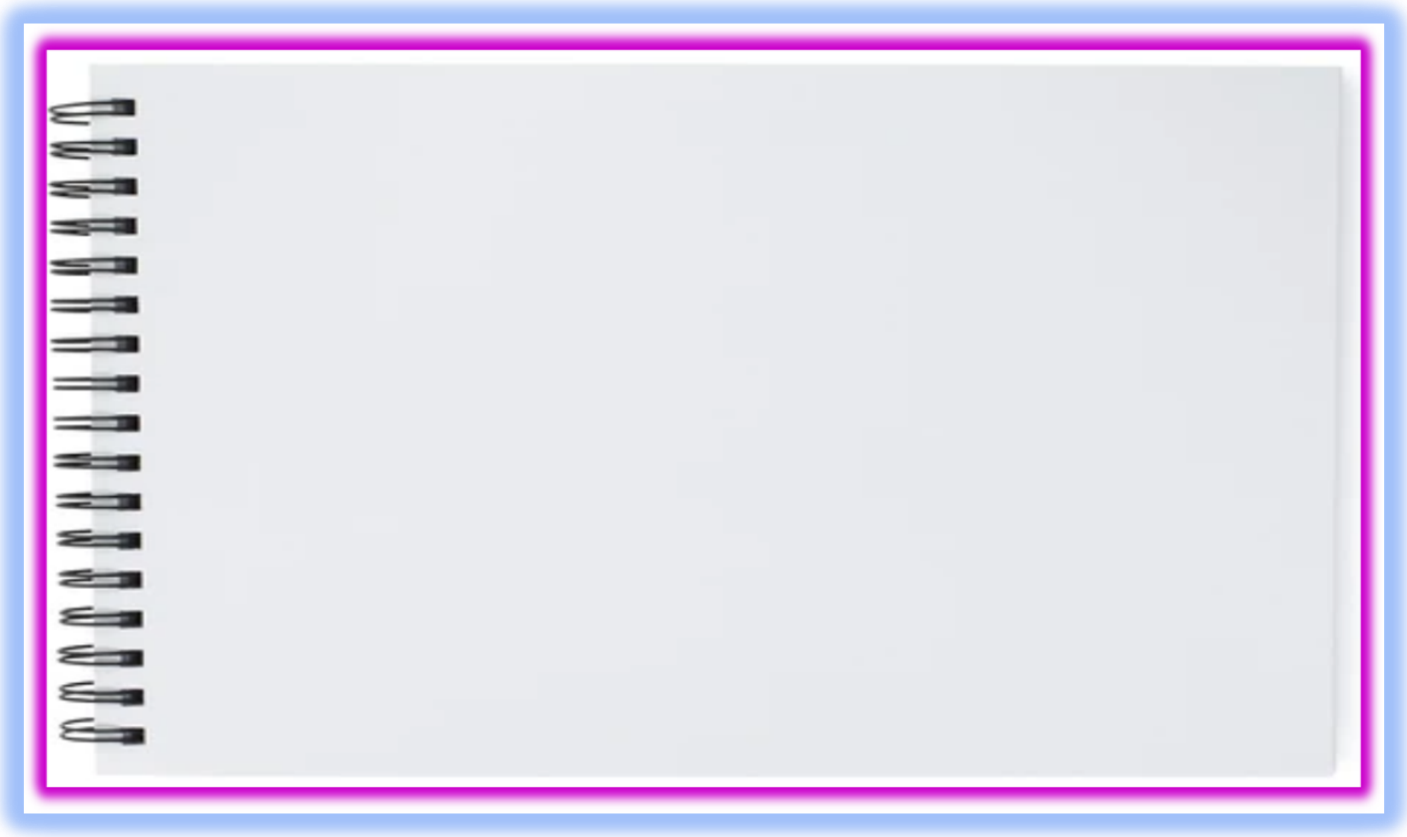
Quiz Wiz 1-10 Name that type of lichen: Word Bank - Crustose, - Foliose, - Fruticose.
Crusty Leafy Branchy

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

Part 5 Lesson 4 Imperfect Fungi

Deuteromycota / _____ Fungi:

The leftovers ☹. Much classification unknown, asexual _____ formation. Includes Athletes foot, _____



Basidiomycota / _____ Fungi:

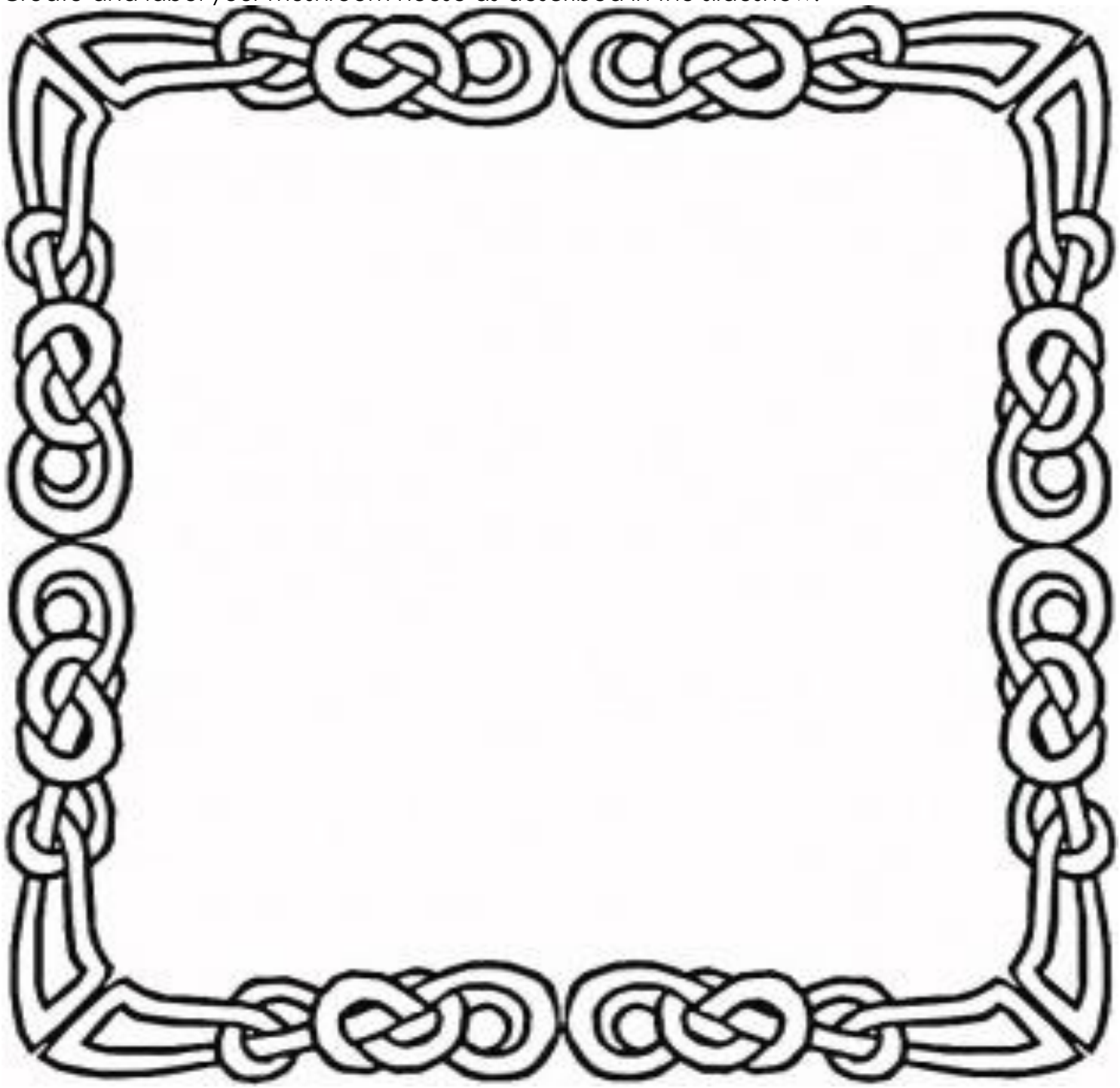
-_____.

-Decomposition of wood.

Quiz Wiz 1-10, Name the Division of Fungi, I'll give you a break and allow common names, unless you want to be a science hero and use their Division name.
Primitive Fungi, Molds, Sac Fungi, Lichens, Club Fungi, Imperfect Fungi

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

Create and label your mushroom house as described in the slideshow.



Part 5 Lesson 5 Roles of Fungi

What are "Magic Mushrooms" and some of their dangers.

The 3 Roles of Fungi

-Mutualistic symbionts – Fungus _____ organisms (plants) grow.

-Hyphae / Part of the Mycelium- The part of the fungus that feeds, grows, and ultimately may produce a _____ "Fruiting Body"

Draw the hyphae / mycelium network in the picture below.

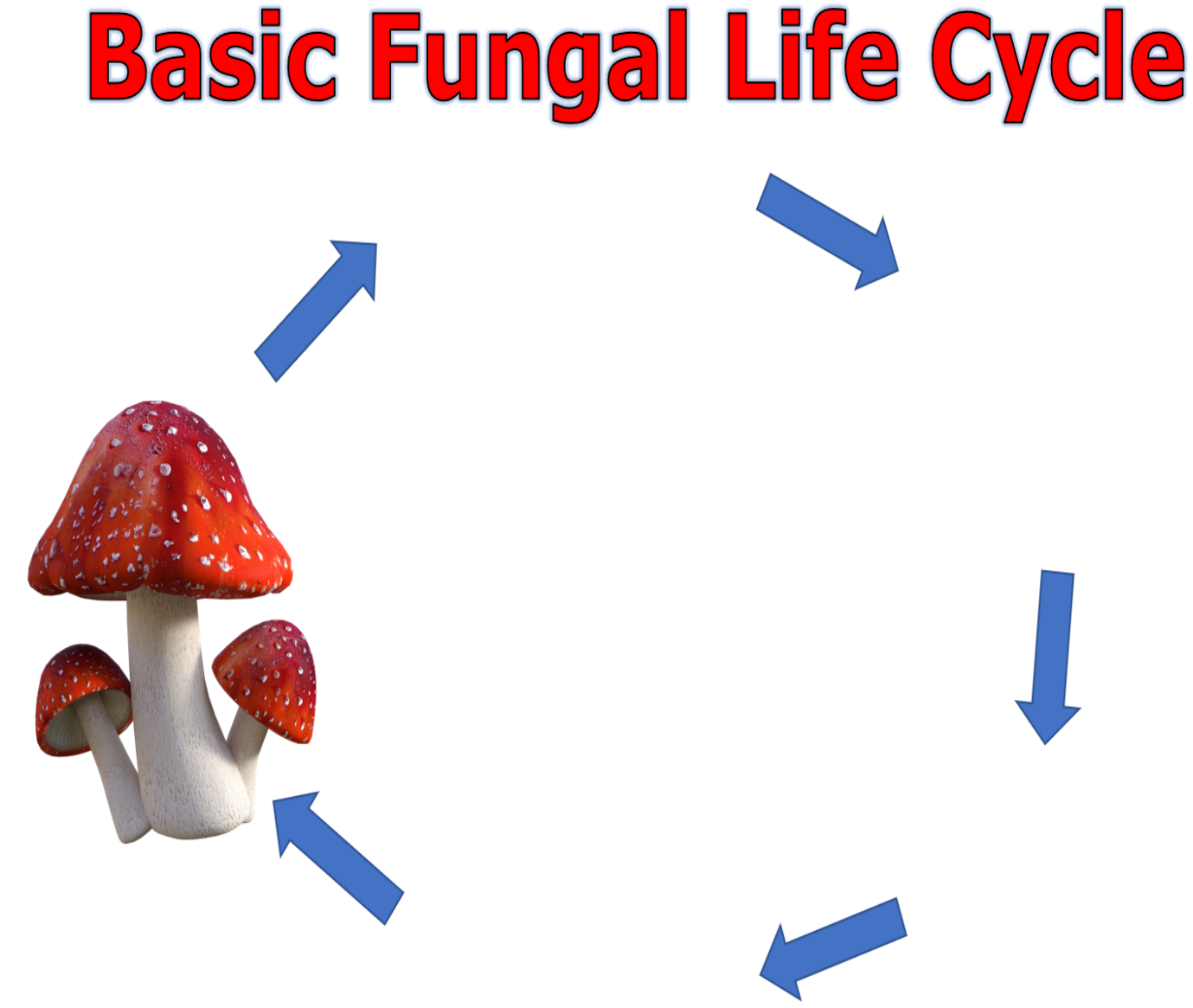
The Other Two Roles of Fungi

-Saprobic- decomposes _____ things…logs, feces, corpses, and recycles nutrients.
-Parasitic- Fungi absorbs nutrients (SPONCH) from _____ cells.

Part 6 Lesson 6 Fungi Reproductive Cycles

Asexually, Fungi reproduce by
-Budding / Splitting in _____.
-Fragmentation / _____f and grow.
-Sporulation / releases _____which are tiny repoductive bodies.

Make sketches and provide important terms below as discussed in the slideshow.

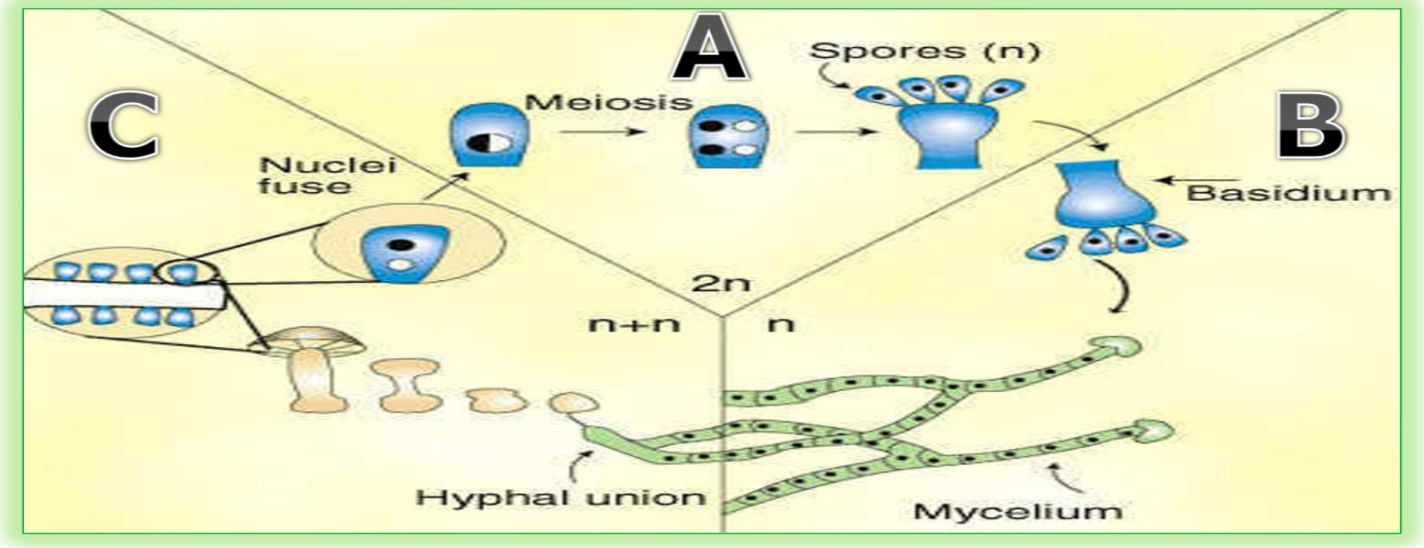


Reproductive cycles of the Fungi.
Diploid cells contain _____ complete sets (2n) of chromosomes.
Haploid cells have _____ the number of chromosomes (n) as diploid - i.e. a haploid cell contains only _____ complete set of chromosomes.

Some fungi reproduce sexually, where two _____ spores form a diploid.
Spores are microscopic and travel through the air. Storage containers help but spores will always enter.

Which letter is haploid, diploid, and fertilization?

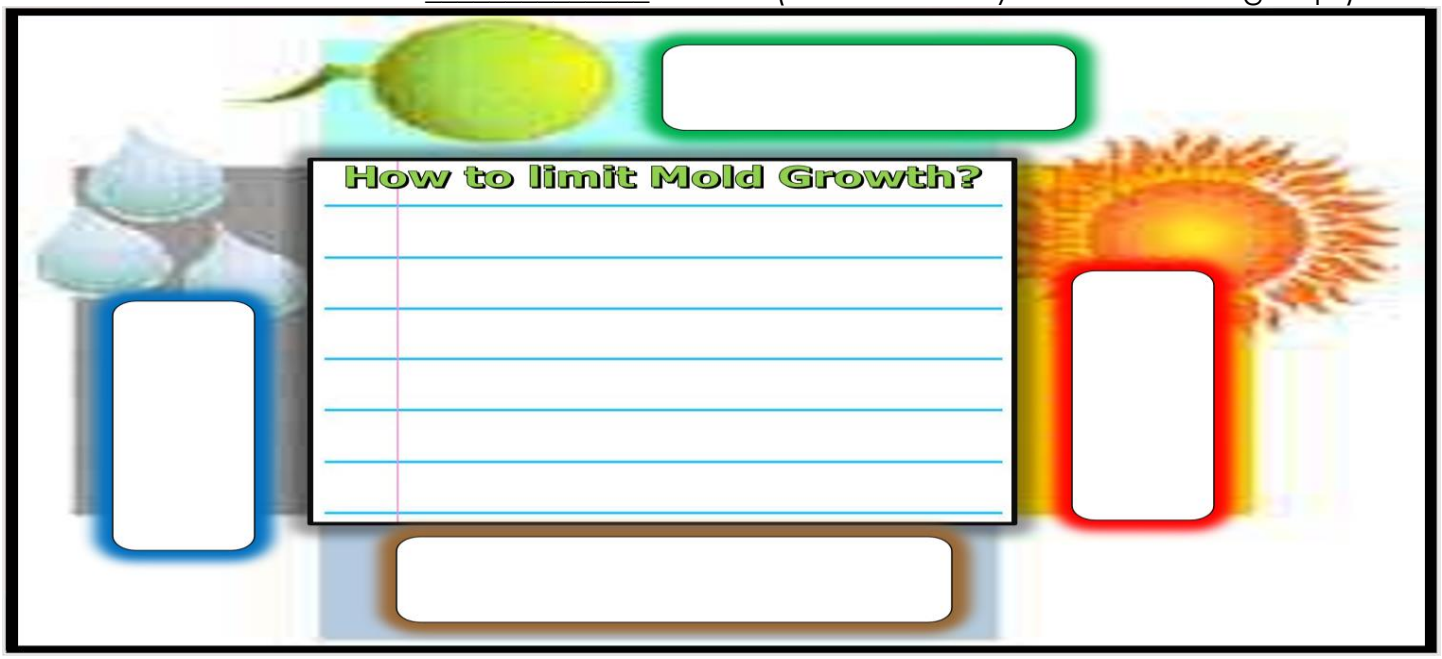
A)	B)	C)



Fungi produce a _____during their reproductive cycle.

Sporulation / releases spores which are tiny _____ bodies.

To prevent mold growth …
Limit _____
Limit _____ temperatures (refrigerate food)
_____ spores from entering (use bags and containers)
Limit available _____sources (remove moldy food from the group.)



Across

1. Fungi can have the role... Fungi absorbs nutrients (SPONCH) from living cells.
4. These are eukaryotic, single-celled-microorganisms classified as members of the fungus kingdom. Yeasts are unicellular organisms that evolved from multicellular ancestors
6. The anaerobic (no oxygen) conversion of sugar into carbon dioxide and alcohol by yeast.
8. H_____ / Part of the Mycelium- The part of the fungus that feeds, grows, and ultimately may produce a mushroom.
9. Kingdom Fungi: Multi-cellular (many celled) organisms that ingests food by _____ and reproduce using spores.
12. Kingdom _____: Multi-cellular (many celled) organisms that ingests food by absorption and reproduce using spores.
15. This Division are known as the Primitive Fungi. C_____
18. Some fungi reproduce sexually, where two _____ spores form a diploid.
19. Fungi also have cell walls consisting largely of _____ instead of cellulose.
21. Fungi can have the role... M_____ symbionts – Fungus helps organisms (plants) grow.
23. Most yeasts reproduce asexually by mitosis, and many do so by the asymmetric division process known as _____.

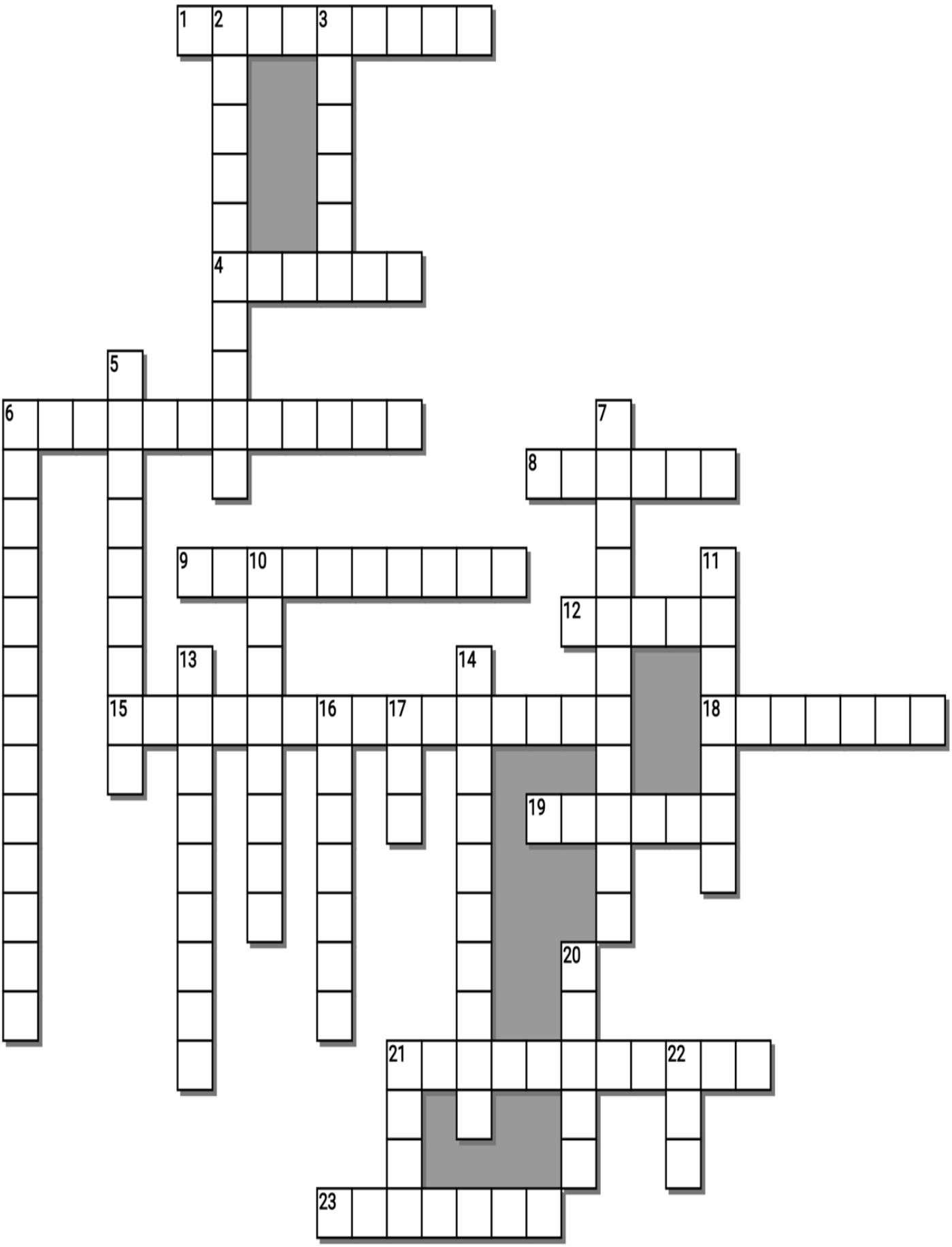
Down

2. This Division is the Sac Fungi, 75% of all Fungi. Yeast. Truffles
3. Kingdom Fungi: Multi-cellular (many celled) organisms that ingests food by absorption and reproduce using _____.
5. Deuteromycota / "I_____" Fungi: The leftovers . Much classification unknown, asexual spore formation. Includes Athletes foot, Penicillin.
6. Asexually, Fungi reproduce by -Budding / Splitting in two. -_____ / Break off and grow. -Sporulation / releases spores which are tiny repoductive bodies.
7. Asexually, Fungi reproduce by -Budding / Splitting in two. -Fragmentation / Break off and grow. -S_____ / releases spores which are tiny repoductive bodies.
10. Fungi can have the role... _____ decomposes dead things...logs, feces, corpses, and recycles nutrients
11. Mycophycophyta / "_____" Fungi and algae (Protist) live together (symbiotic)
13. Lichen: Algae and fungus growing together in a _____ relationship.
14. This Division include the molds. / Some Mycorrhizal fungi in soil. Starts with a Z_____
16. Some fungi reproduce sexually, where two haploid spores form a _____.
17. Haploid cells have half the number of chromosomes (n) as diploid - i.e. a haploid cell contains only ____ complete set of chromosomes.
20. Kingdom Fungi: _____-cellular (many celled) organisms that ingests food by absorption and reproduce using spores.
21. To prevent _____ growth ... Limit moisture Limit warm temperatures (refrigerate food) Limit spores (use bags and containers) Limit available food sources (remove moldy food from the group.)
22. Diploid cells contain ____ complete sets (2n) of chromosomes.

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

Possible Answers

ASCOMYCOTA , CHYTRIDIOMYCOTA , FERMENTATION, FRAGMENTATION, FUNGI, HYPHAE, IMPERFECT, LICHENS, MULTI, MUTUALISTIC, ONE, PARASITIC, SAPROBIC, SPORULATION, SYMBIOTIC, TWO, YEASTS, ZYGOMYCOTA, ABSORPTION, BUDDING, CHITIN , DIPLOID, HAPLOID,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Part 5 Review Game Lesson 7

Name:

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

Due: Today
Score ____ / 100

IDENTITY CRISIS	DA VISION	MOLDY CHEESE	ROOM MUSH	WHIMISCAL 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 ___ /5 Answer: _____

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Part 6 Kingdom Fungi

Name:

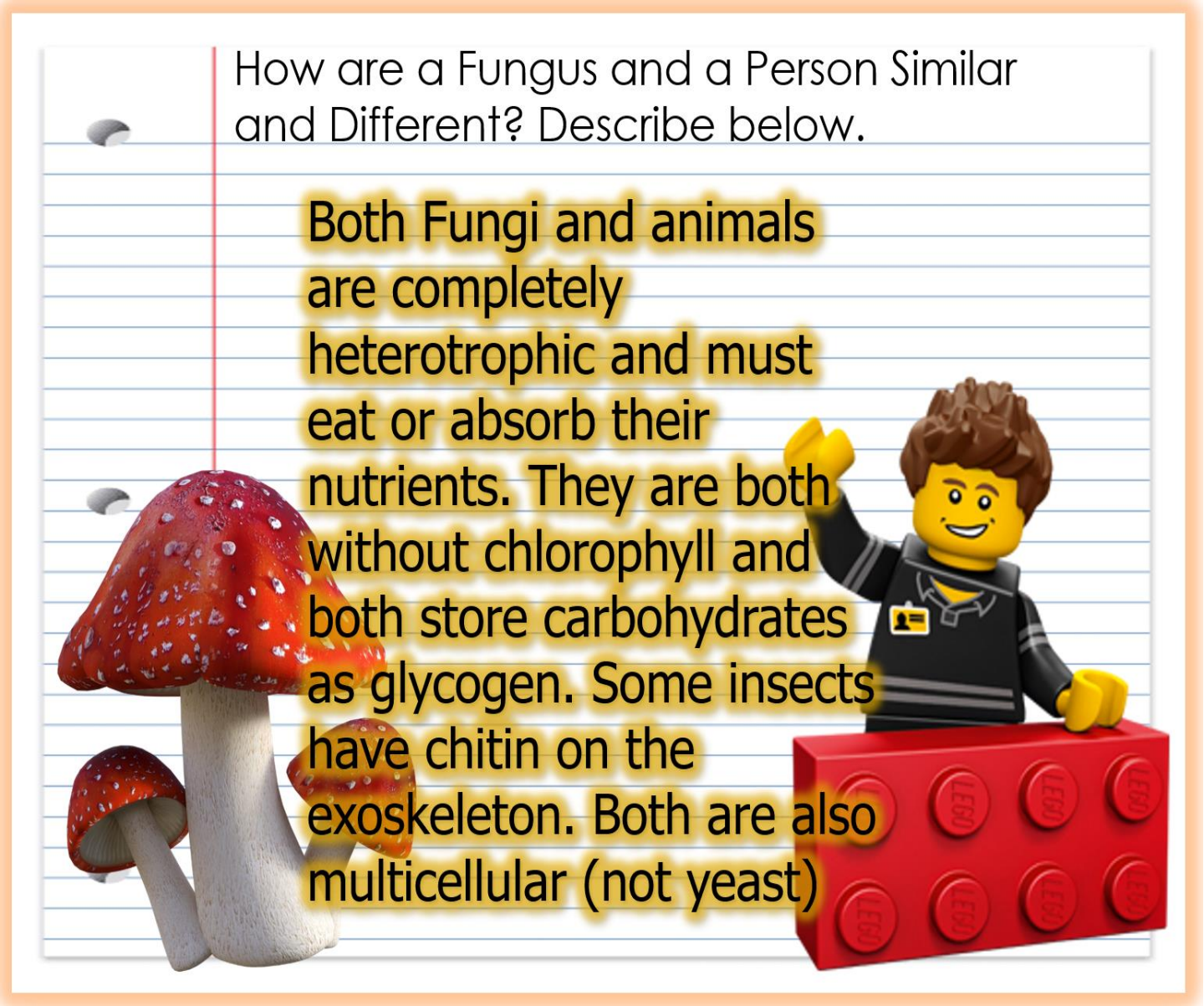
Part 5 Lesson 1 Kingdom Fungi

Kingdom Fungi: Multi-cellular (many celled) organisms that ingests food by absorption and reproduce using spores.

Kingdom Fungi are inside out compared to us. They absorb their food on the outside instead of on the inside like animals.

Fungi also have cell walls consisting largely of chitin instead of cellulose.
Fungi are more closely related to animals than they are to plants.
They are heterotrophic like animals and not photosynthetic like plants.

How are a Fungus and a Person Similar and Different? Describe below.



Next page. What are some positives and negatives of the Kingdom Fungi? This list will be on going throughout this unit of study. Record positives when you see a "+", and negatives when you see a "-".

Some fungi are decomposers which mean that they break down plant and animal debris, thus cycling nutrient and increasing their availability in the soil. They can also propel nitrogen fixation and phosphorus mobilization, two of the main nutrients required for plant development and productivity. They also are a food source and can help fight bacterial infections (Penicillin)

Fungi create harm by spoiling food, destroying timber, and by causing diseases of crops, livestock, and humans. Fungi, mainly molds like Penicillium and Aspergillus, spoil many stored foods. Fungi cause the majority of plant diseases, which in turn cause serious economic losses and starvation.

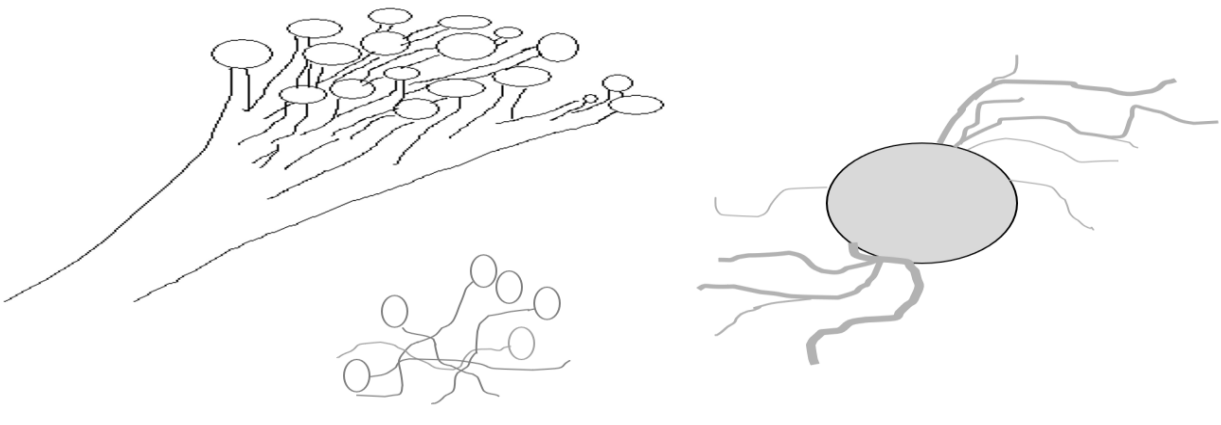
Divisions of Fungi

Chytridiomycota / Primitive Fungi

Live on land and water.

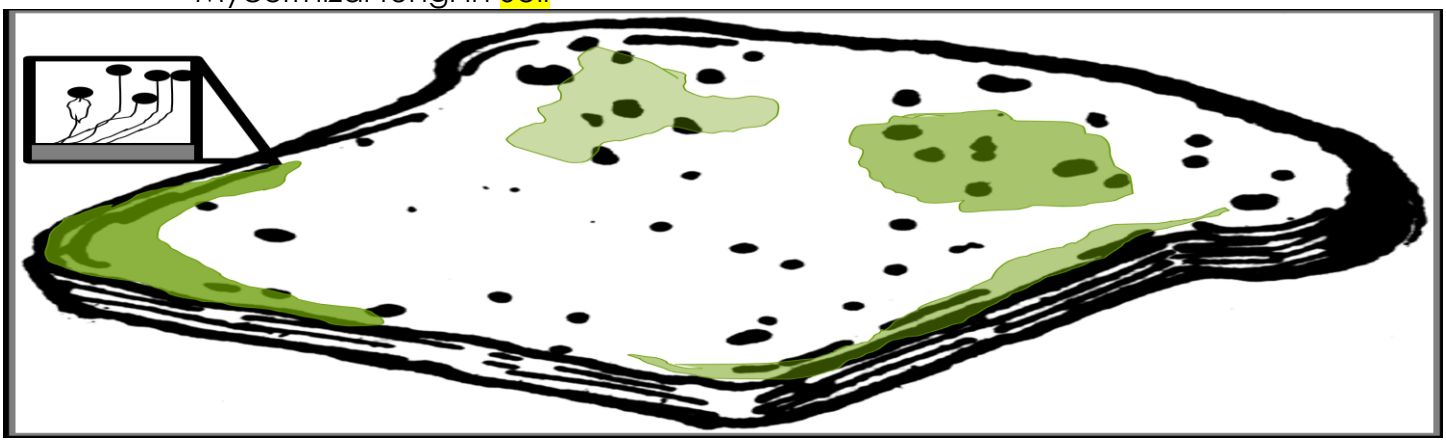
Great Decomposers

Make some sketches of the Primitive Fungi below. This will be important for the quiz.



Zygomycota / Molds

- Mycorrhizal fungi in Soil



Bread / Mold Experiment

Each table group will get 8 slices of plain white bread and 8 sandwich bags.
Label each bag with a Sharpie and date.
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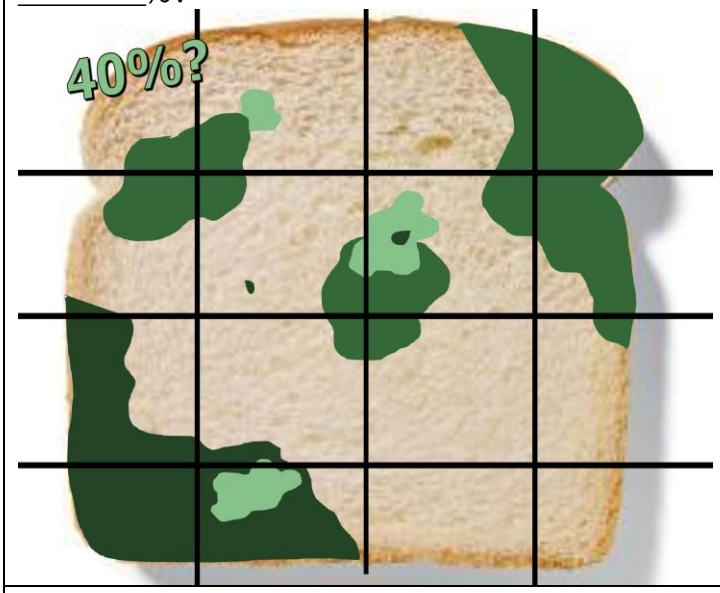
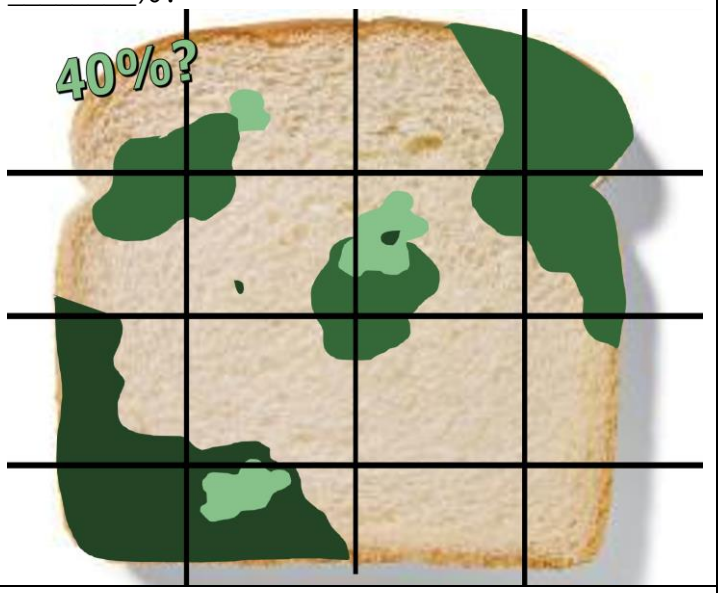
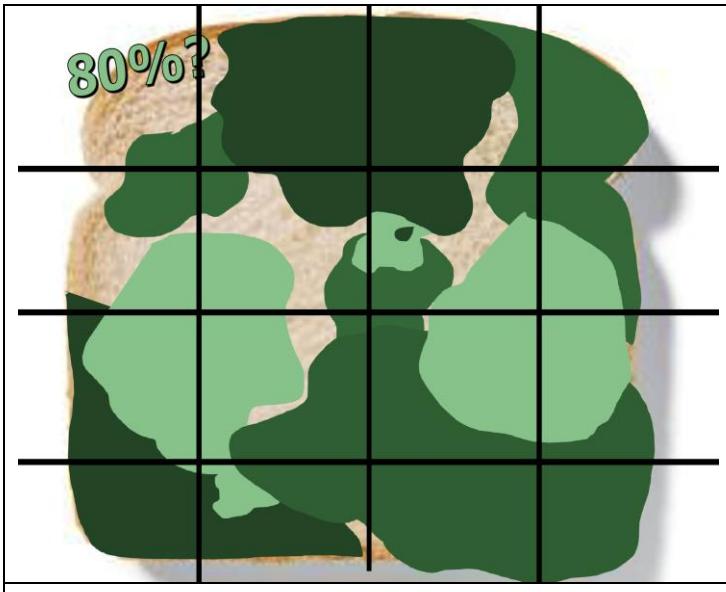
Control: Untouched straight into bag.
Hands: Everyone touch bread front and back.
Washed hands: Everyone touch bread front and back after washing hands with soap for 20 seconds.
Chromebooks: Wipe bread on keyboard both sides of bread
Desk: Drag bread on both sides on desks/table
Outdoors: Move across soil on both sides
Your Choice: Lockers? Bathroom? Cafeteria?
Spray the bread with a **fine mist** of water from a spray bottle. Don't soak it – one spray works.
Seal bags and place in a warm dark area. Try not to stack the bread on top of each other.
Observe in 7-10 days.

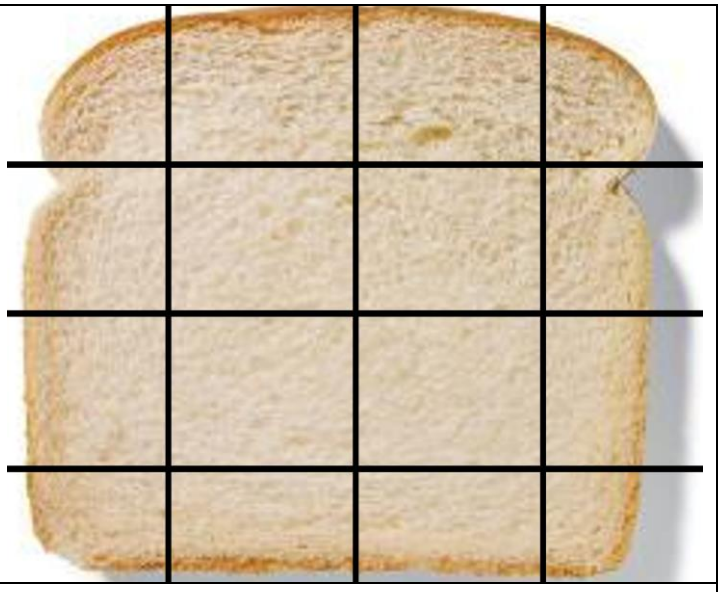
You could also investigate mold growth in bag vs. no bag, shade vs. light, types of bread, moisture vs. dry.

DON"T TAKE BREAD OUT OF SANDWICH BAGS! LEAVE IN SEALED BAGS

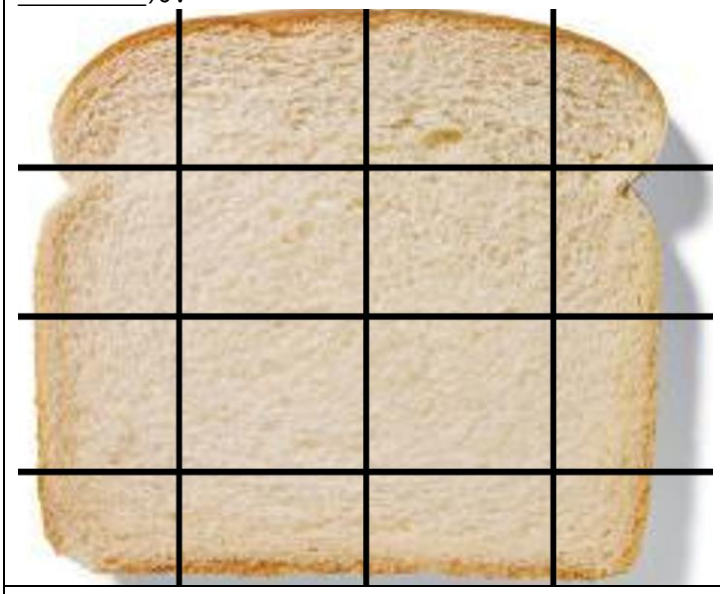
Please use a color of the mold (colored pencil) and sketch where / how much mold is on each side of bread after 7-10 days of mold growth. Estimate the % of mold that occupies the bread in the _____%?

Control #1 _____%? 	Hands: Everyone touched _____%? 
Chromebooks / Computer Keyboard _____%?	Hands: After washing hands with soap _____%?

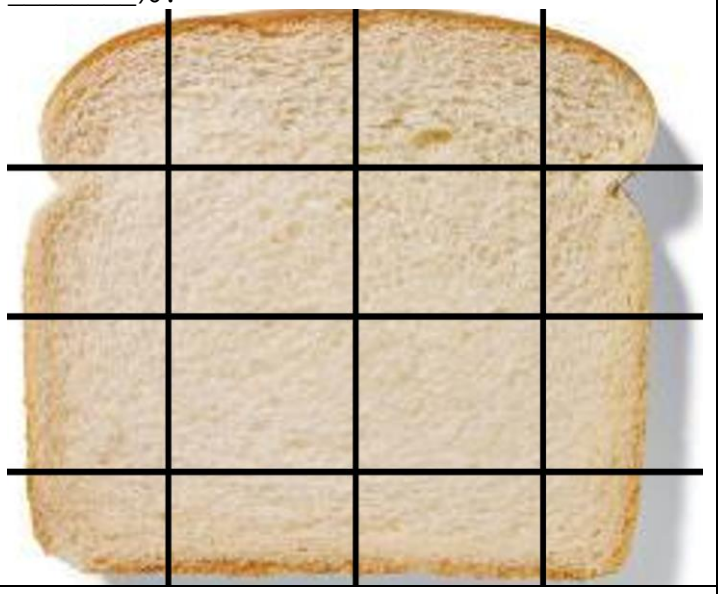




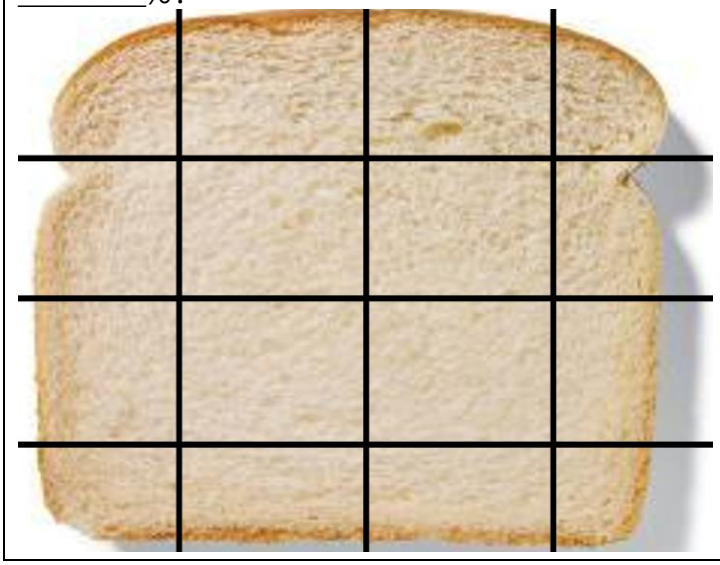
Desk – Dragging across tables or desk
_____%?



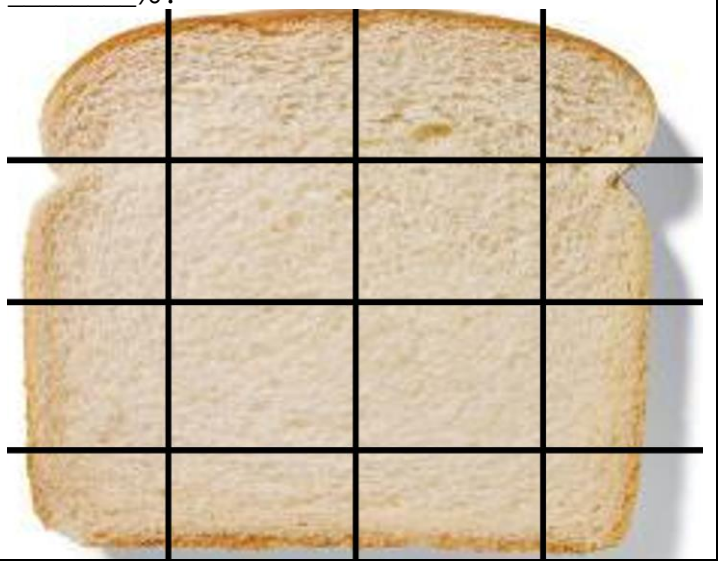
Outdoors across soil base
_____%?



Your Choice:_____
_____%?



Control #2
_____%?



Hypothesis: (Your educated guess that can be tested)
Answers will vary. Likely the dirtiest or anything that may make the bread wet.

Dependent Variable (what did we measure)?
Mold is the dependent Variable. The % that grew on the surface.

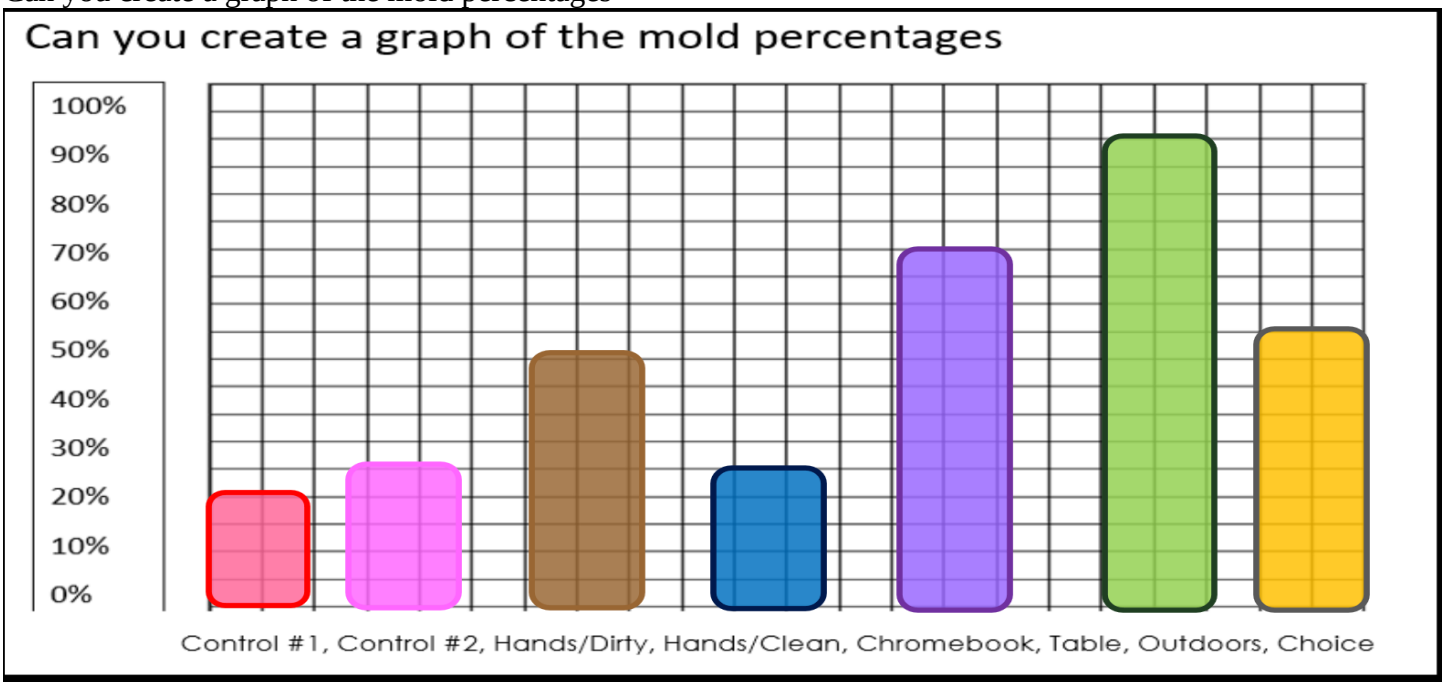
Independent Variable (What we manipulated)?
The various surfaces that the bread was placed on.

Controls (What stayed the same to ensure a fair test)
All the same bread, bags, and air. The only difference was the surfaces the bread was placed on. All bags sealed and hopefully not contaminated.

Result (What does your data suggest)
Answers will vary

Which surface produced the most mold on your bread? answers will vary
What was the percentage covered on this piece? _____%
What was the percentage covered on the control pieces _____%
How much more mold grew on that surface compared to the control groups?
Answers will vary, use the grid to help you estimate the %

Can you create a graph of the mold percentages



Control #1, Control #2, Hands/Dirty, Hands/Clean, Chromebook, Table, Outdoors,

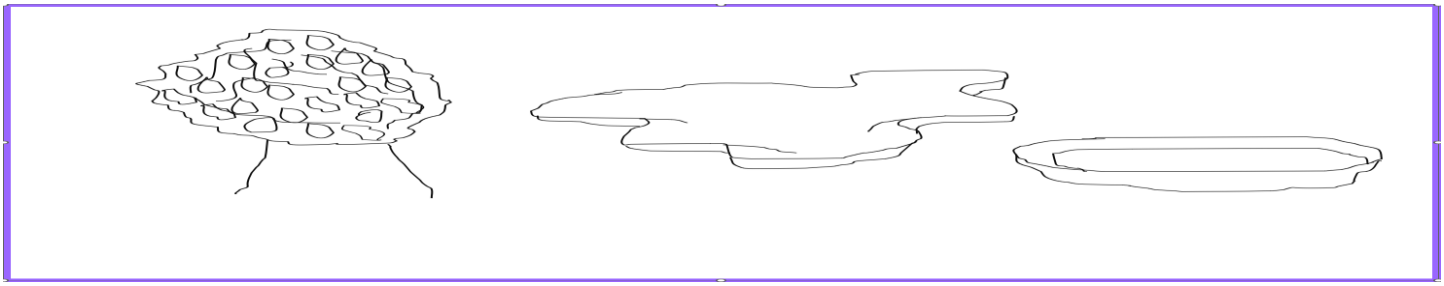
Part 5 Lesson 2 Sac Fungi

Ascomycota / Sac Fungi:

75% of all Fungi.

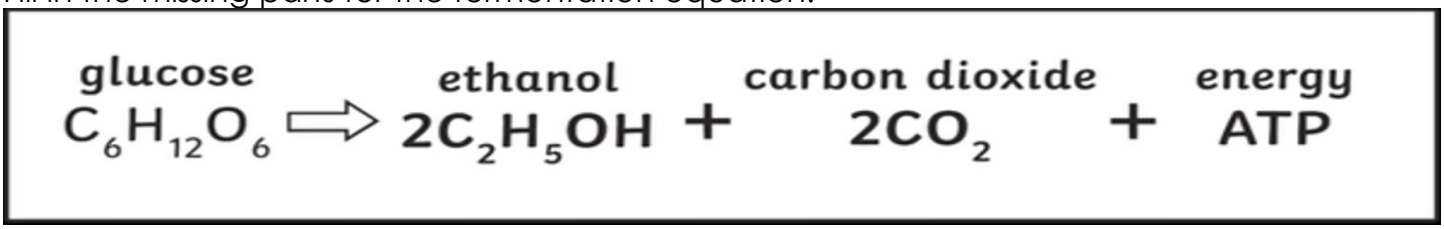
Yeast.

Truffles



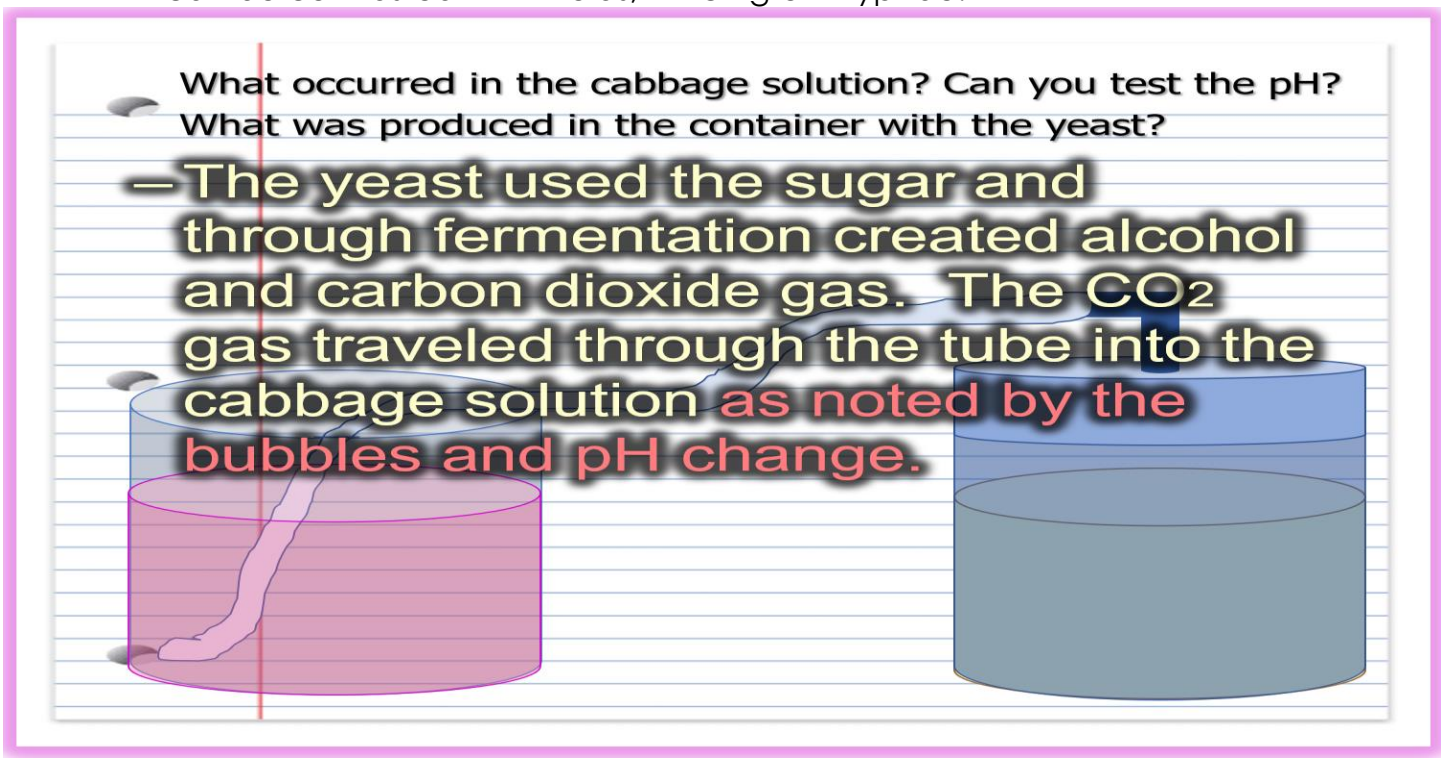
_Fermenation- The anaerobic (no oxygen) conversion of sugar into carbon dioxide and alcohol by yeast.

Fill in the missing parts for the fermentation equation.



Yeasts are eukaryotic, single-celled-microorganisms classified as members of the fungus kingdom. Yeasts are unicellular organisms that evolved from multicellular ancestors

Most yeasts reproduce asexually by mitosis, and many do so by the asymmetric division process known as budding. With their single-celled growth habit, yeasts can be contrasted with molds, which grow hyphae.



Part 6 Lesson 3 Lichens – Division Mycophycophyta

Lichen: a composite organism that arises from algae or cyanobacteria living among filaments of multiple fungi species in a mutualistic relationship.
Lichens have properties different from those of their component organisms.

Lichen: Algae and fungus growing together in a symbiotic relationship.

The fungi extract food from the environment, while the algae are photosynthetic. This is mutualistic symbiosis.

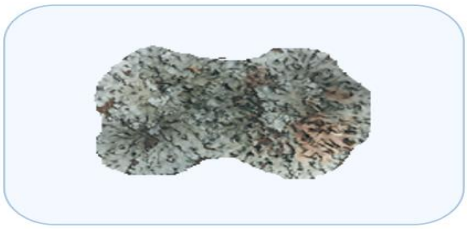
The three types of lichens (Not Plant Kingdom –Fungi and Protist)
Crustose: Forms a Crust, difficult to remove without crumbling.
Foliose: Leafy, can be peeled off rock with knife.
Fruticose: Forms shrubby Branchy. Easily removed by hand.

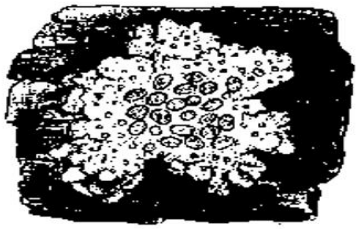
What is a lichen? Is it a plant? How does a lichen represent a mutualism between two species? Can you name the types of lichen above?

Lichens are commonly recognized as a symbiotic association of a fungus and a chlorophyll containing partner, either green algae or cyanobacteria, or both. The fungus provides a suitable habitat for the partner, which provides photosynthetically fixed carbon as energy source for the system.

Activity! Going on a short walk to observe, sketch, and identify lichens.

Lichen Observation





Fruticose **Foliose** **Crustose**

Note: You can also tape specimens into your journal. Collect outside and then bring to class. Tape into journal (clear) and then label.

Quiz Wiz 1-10 Name that type of lichen: Word Bank - Crustose, - Foliose, - Fruticose.
Crusty Leafy Branchy

1.) Crustose	6.) Foliose
2.) Fruticose	7.) Fruticose
3.) Foliose	8.) Crustose
4.) Fruticose	9.) Foliose
5.) Crustose	10.) Foliose
*11.) Sideshow Bom	Score:

Part 5 Lesson 4 Imperfect Fungi

Deuteromycota /Imperfect Fungi:

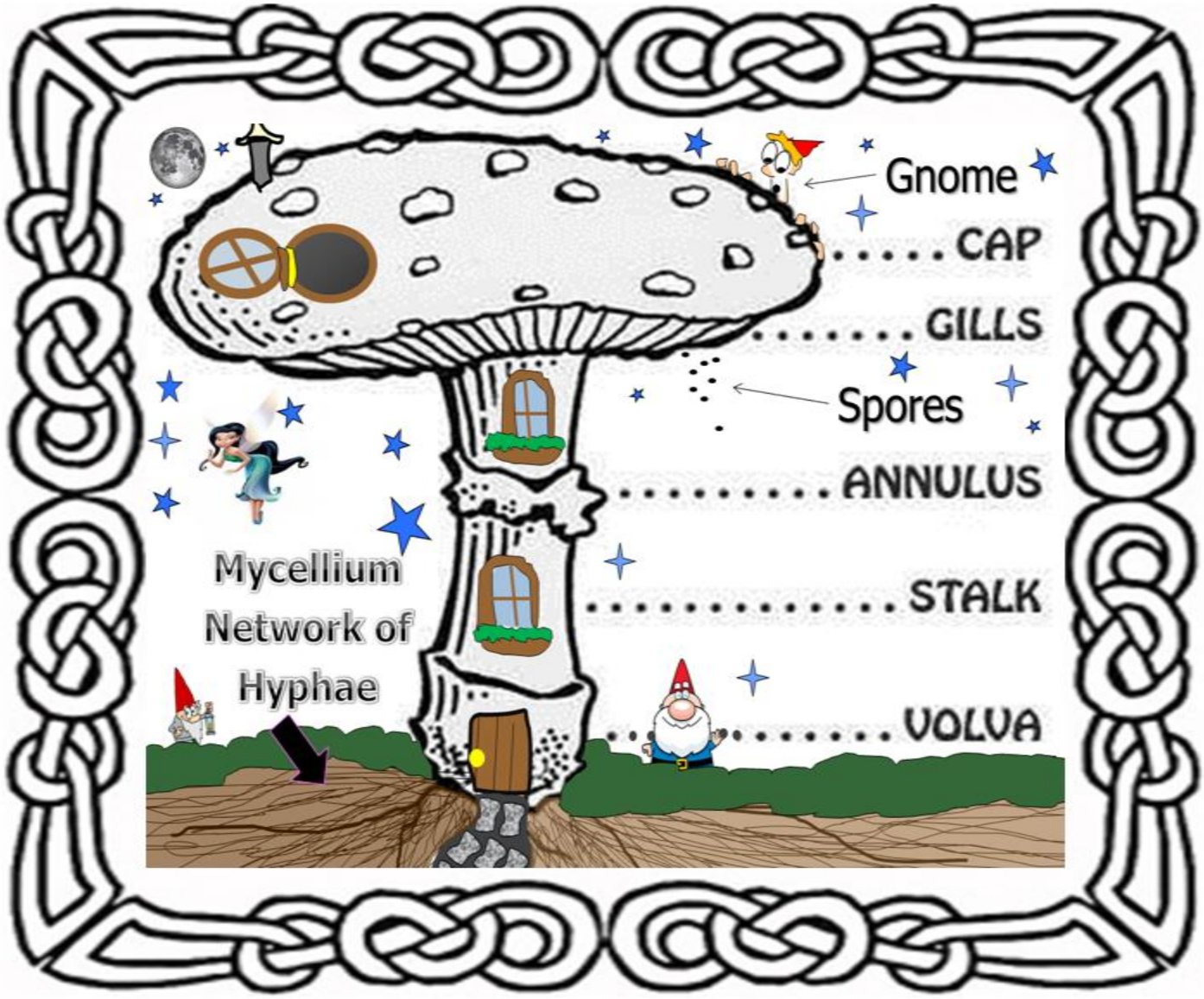
The leftovers ☹. Much classification unknown, asexual spore formation. Includes Athletes foot, Penicillin

Basidiomycota / Sac Fungi:
-Mushrooms.
-Decomposition of wood.

Quiz Wiz 1-10, Name the Division of Fungi, I'll give you a break and allow common names, unless you want to be a science hero and use their Division name.
Primitive Fungi, Molds, Sac Fungi, Lichens, Club Fungi, Imperfect Fungi

1) Zygomycota / Molds	2) Chytridiomycota / Primitive Fungi	3) Ascomycota / Sac Fungi	4) Chytridiomycota / Primitive Fungi
5) Basidiomycota / Club Fungi	6) Zygomycota / Molds	7) Deuteromycota (Imperfect Fungi)	8) Mycophycophyta / Lichens
9) Basidiomycota / Club Fungi	10) Ascomycota / Sac Fungi	*11) Smurfs, Gargamel And Azreal	

Create and label your mushroom house as described in the slideshow.

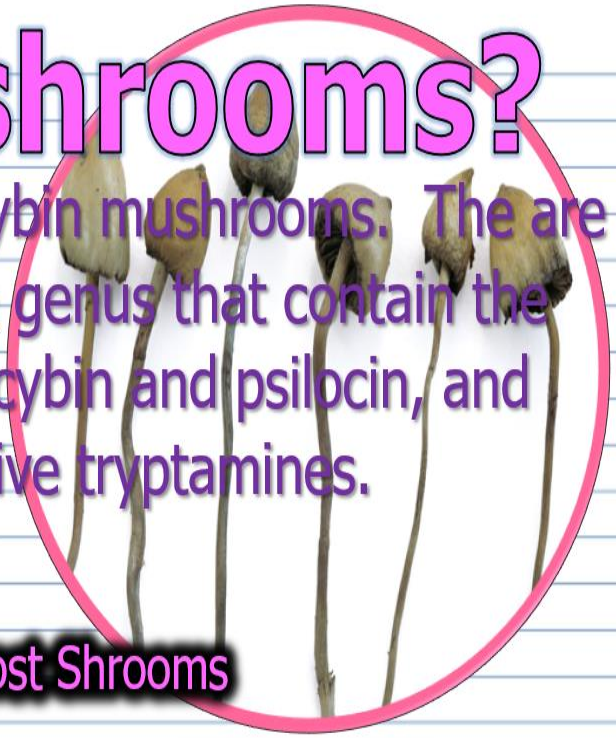


Part 5 Lesson 5 Roles of Fungi

What are "Magic Mushrooms" and some of their dangers.

Magic Mushrooms?

Magic Mushrooms are Psilocybin mushrooms. The are fungi mainly of the psilocybe genus that contain the psychedelic substances psilocybin and psilocin, and occasionally other psychoactive tryptamines.



Dangers of Shrooms

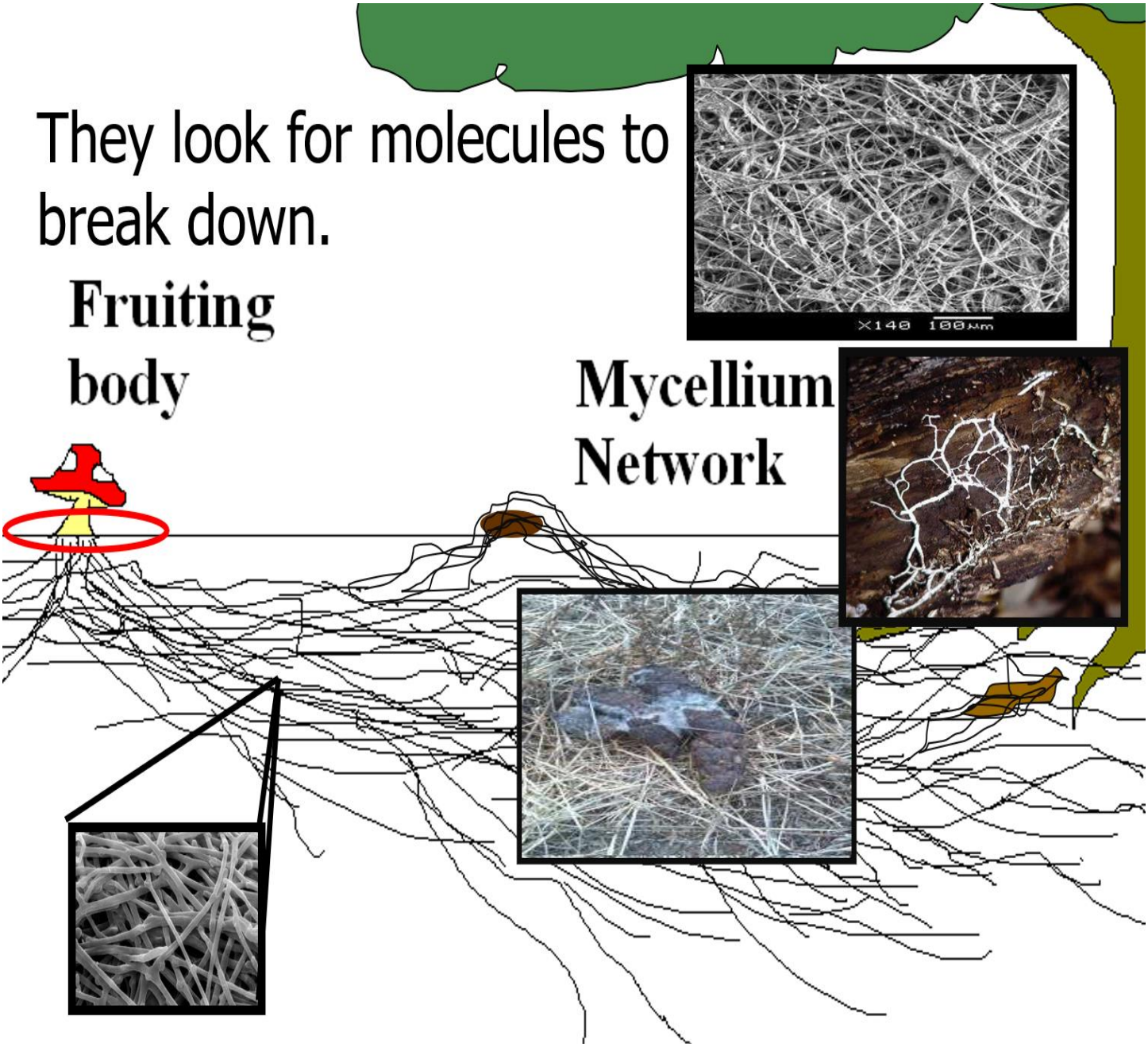
- Misidentification – Most Shrooms are deadly.
- Sickness.
- Impaired judgement.
- Mental problems can occur like schizophrenia.
- They are illegal in many places

The 3 Roles of Fungi

-Mutualistic symbionts – Fungus helps organisms (plants) grow.

-Hyphae / Part of the Mycelium- The part of the fungus that feeds, grows, and ultimately may produce a mushroom "Fruiting Body"

Draw the hyphae / mycelium network in the picture below.



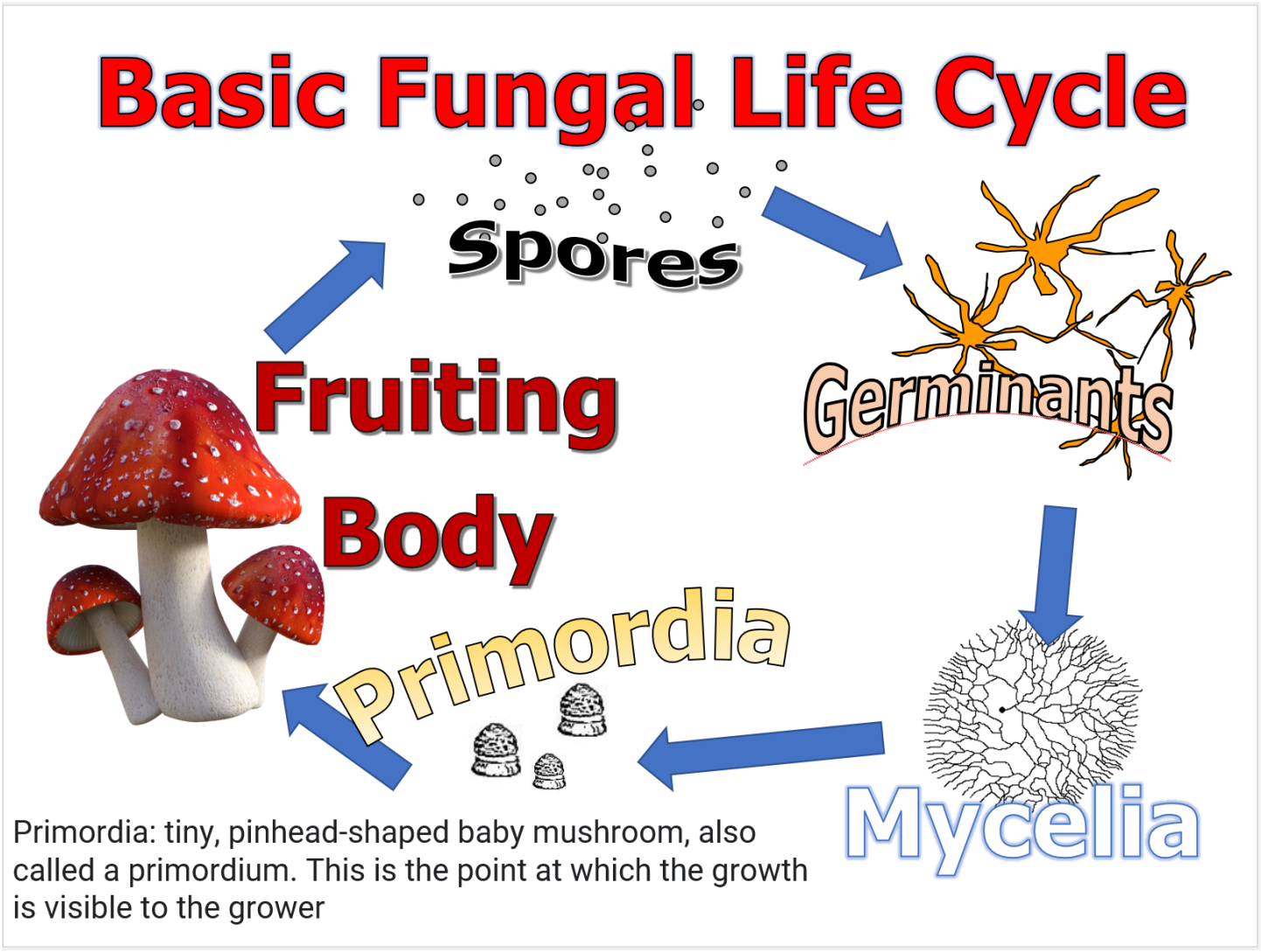
The Other Two Roles of Fungi

-Saprobic- decomposes organic matter things…logs, feces, corpses, and recycles nutrients.
-Parasitic- Fungi absorbs nutrients (SPONCH) from living cells.

Part 6 Lesson 6 Fungi Reproductive Cycles

Asexually, Fungi reproduce by
-Budding / Splitting in two.
-Fragmentation / Break Off and grow.
-Sporulation / releases spores which are tiny repoductive bodies.

Make sketches and provide important terms below as discussed in the slideshow.



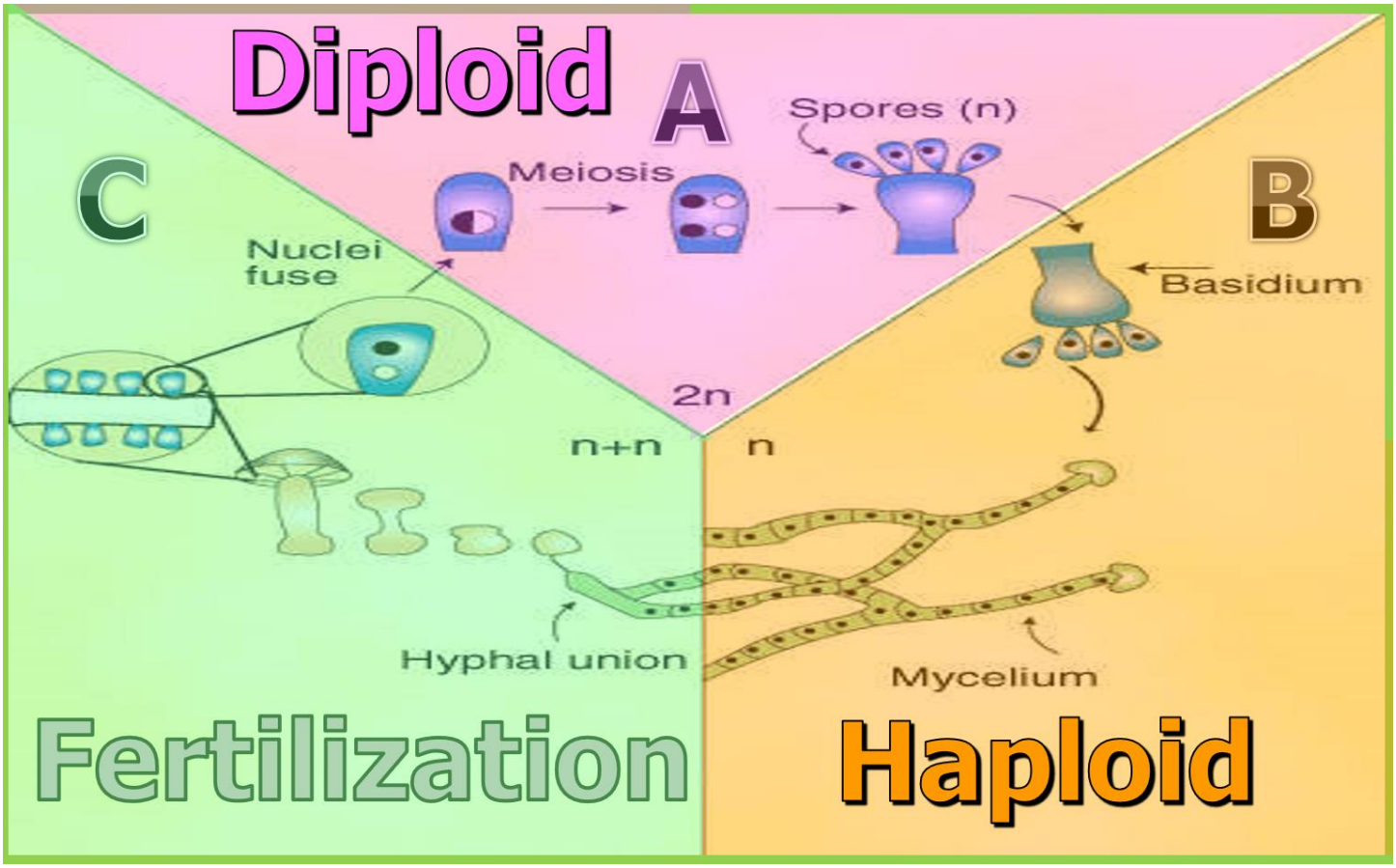
Reproductive cycles of the Fungi.

Diploid cells contain two complete sets (2n) of chromosomes.
Haploid cells have half the number of chromosomes (n) as diploid - i.e. a haploid cell contains only one complete set of chromosomes.

Some fungi reproduce sexually, where two haploid spores form a diploid.

Spores are microscopic and travel through the air. Storage containers help but spores will always enter.

Which letter is haploid, diploid, and fertilization?



Fungi produce a sporangia during their reproductive cycle.

Sporulation / releases spores which are tiny reproductive bodies.

To prevent mold growth …

Limit mositure
Limit warmer temperatures (refrigerate food)
Prevent spores from entering
Limit available food sources (remove moldy food from the group.)

Across

1. Fungi can have the role... Fungi absorbs nutrients (SPONCH) from living cells.
4. These are eukaryotic, single-celled-microorganisms classified as members of the fungus kingdom. Yeasts are unicellular organisms that evolved from multicellular ancestors
6. The anaerobic (no oxygen) conversion of sugar into carbon dioxide and alcohol by yeast.
8. H_____ / Part of the Mycelium- The part of the fungus that feeds, grows, and ultimately may produce a mushroom.
9. Kingdom Fungi: Multi-cellular (many celled) organisms that ingests food by _____ and reproduce using spores.
12. Kingdom _____: Multi-cellular (many celled) organisms that ingests food by absorption and reproduce using spores.
15. This Division are known as the Primitive Fungi. C_____
18. Some fungi reproduce sexually, where two _____ spores form a diploid.
19. Fungi also have cell walls consisting largely of _____ instead of cellulose.
21. Fungi can have the role... M_____ symbionts – Fungus helps organisms (plants) grow.
23. Most yeasts reproduce asexually by mitosis, and many do so by the asymmetric division process known as _____.

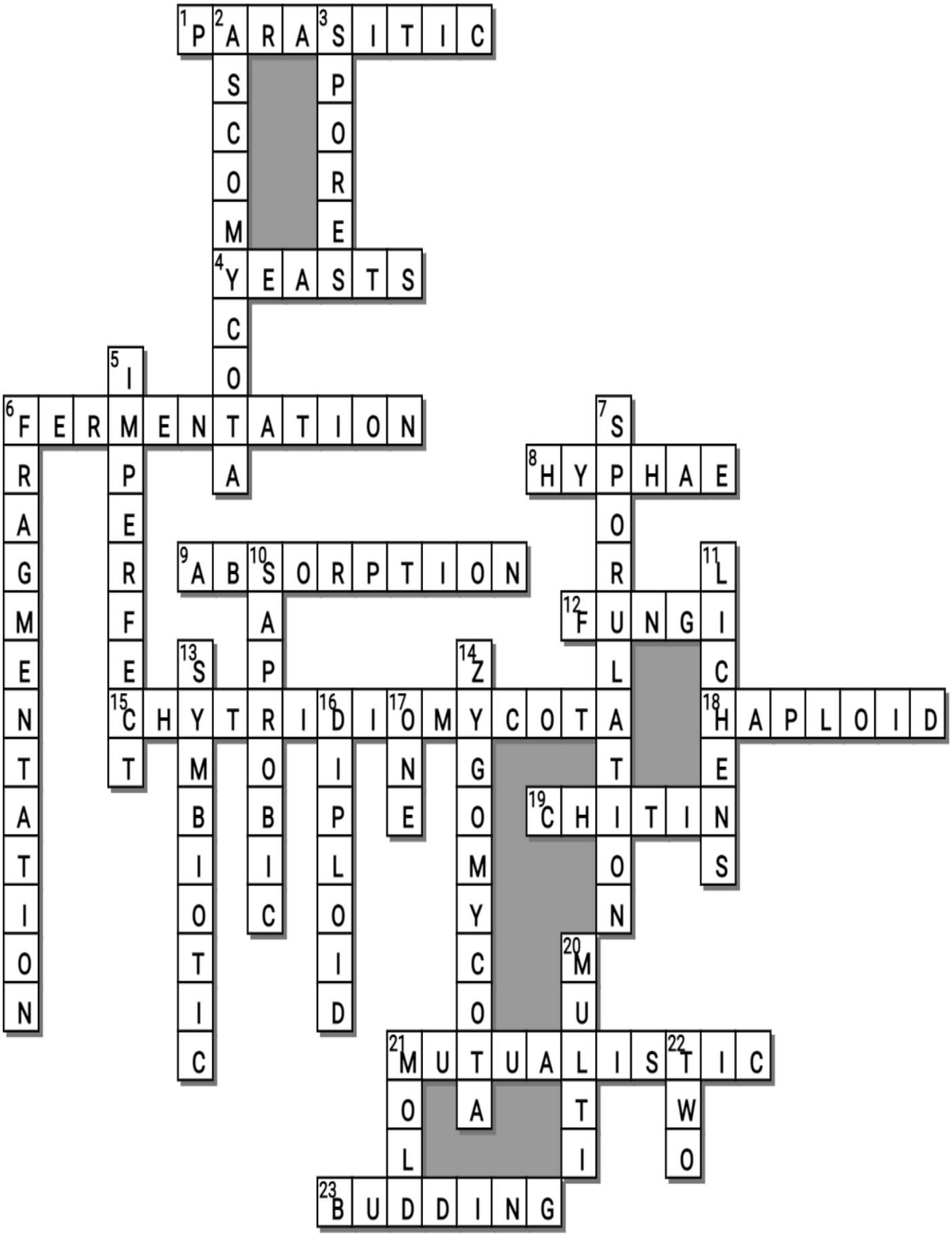
Down

2. This Division is the Sac Fungi, 75% of all Fungi. Yeast. Truffles
3. Kingdom Fungi: Multi-cellular (many celled) organisms that ingests food by absorption and reproduce using _____.
5. Deuteromycota / "I_____" Fungi: The leftovers . Much classification unknown, asexual spore formation. Includes Athletes foot, Penicillin.
6. Asexually, Fungi reproduce by -Budding / Splitting in two. -_____ / Break off and grow. -Sporulation / releases spores which are tiny repoductive bodies.
7. Asexually, Fungi reproduce by -Budding / Splitting in two. -Fragmentation / Break off and grow. -S_____ / releases spores which are tiny repoductive bodies.
10. Fungi can have the role... _____ decomposes dead things...logs, feces, corpses, and recycles nutrients
11. Mycophycophyta / "_____" Fungi and algae (Protist) live together (symbiotic)
13. Lichen: Algae and fungus growing together in a _____ relationship.
14. This Division include the molds. / Some Mycorrhizal fungi in soil. Starts with a Z_____
16. Some fungi reproduce sexually, where two haploid spores form a _____.
17. Haploid cells have half the number of chromosomes (n) as diploid - i.e. a haploid cell contains only ____ complete set of chromosomes.
20. Kingdom Fungi: _____-cellular (many celled) organisms that ingests food by absorption and reproduce using spores.
21. To prevent _____ growth ... Limit moisture Limit warm temperatures (refrigerate food) Limit spores (use bags and containers) Limit available food sources (remove moldy food from the group.)
22. Diploid cells contain ____ complete sets (2n) of chromosomes.

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

Possible Answers

ASCOMYCOTA , CHYTRIDIOMYCOTA , FERMENTATION, FRAGMENTATION, FUNGI, HYPHAE, IMPERFECT, LICHENS, MULTI, MUTUALISTIC, ONE, PARASITIC, SAPROBIC, SPORULATION, SYMBIOTIC, TWO, YEASTS, ZYGOMYCOTA, ABSORPTION, BUDDING, CHITIN , DIPLOID, HAPLOID,


1 PARASITIC
2 ASCOMA
3 SPORE
4 YEASTS
5 IMPERFECTI
6 FERMENTATION
7 SORUS
8 HYPHAE
9 ABSORPTION
10 SAPROBIC
11 LICHEN
12 FUNGI
13 SYMBIOTIC
14 ZYGOMYCOTA
15 CHYTRID
16 DIPLOID
17 OOMYCOTA
18 HAPLOID
19 CHITIN
20 MUTUALISTIC
21 MUTUALISTIC
22 TWO
23 BUDDING

Part 5 Review Game Lesson 7

Name:

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

Due: Today
Score ____ / 100

IDENTITY CRISIS	DA VISION	MOLDY CHEESE	ROOM MUSH	WHIMISCAL Bonus round 1 pt each
1) B.) A heterotrophic multi-cellular organism with cell walls that absorbs its food	6) Division Ascomycota Yeast	11) Budding	16) Basidio- -mycota	*21) Brainy Smurf
2) SPORES	7) Chytridiomycota are known as the Primitive Fungi	12) Lichens are Algae and Fungi	17) Gap Gills Stalk Volva	*22) Alice in Wonderland
3) Chitin	8) Soil	13) Foliose Lichen, Fruticose Lichen	18) Hyphae	*23) Yoda
4) On the Outside	9) Ascomycota	14) Deuteromycota	19) Diploid Haploid	*24) Toad
5) Zygomycota	10) Fermentation	15) Penicillin Fights Bacteria	20) B.) Limit cold temperatures (Place food in a warm environment)	*25) Radagast The Brown

Final Question Wager ____/5 Answer: Sporangia

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