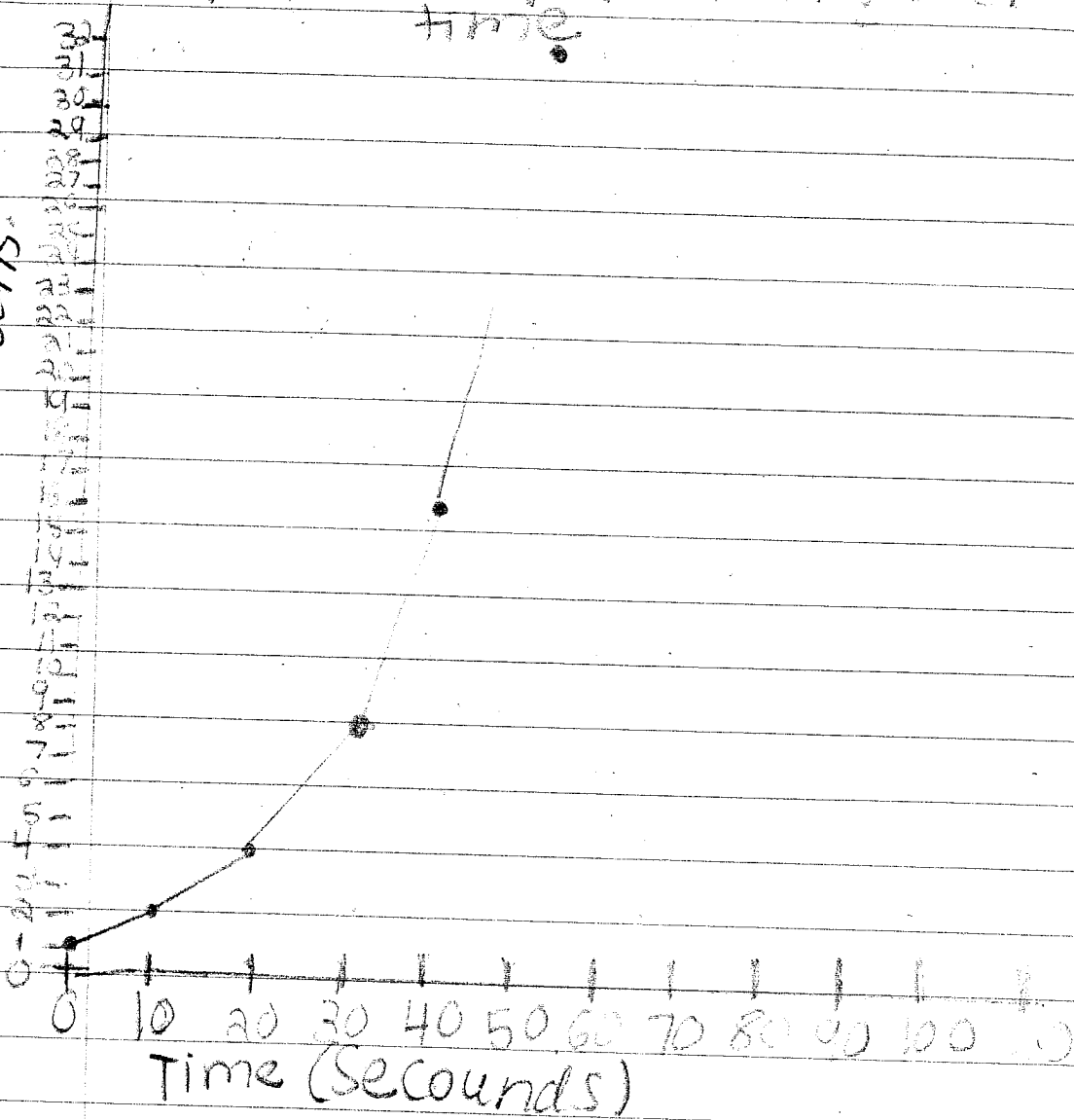


ALICE

Act 48: Fungi reproduction Yeast cell populations over time.

119

Number of yeast cells.



Act 48: Fungi Reproduction

Use the reading "How Fungi Reproduces" and the information from the Fungi Packets to answer the following questions.

1. Summarize the different types of fungi reproductive methods below. Use words and pictures:

Reproductive Methods	Description	Labeled Diagram
1. Spores	When the spores mature they are released and scattered by wind or other organisms. Hundreds of thousands are released and when conditions are right they grow into fungi.	<p style="font-size: small;">mushroom spores, fungi released and carried by winds new mushroom being grown.</p>
2. Hyphae - Asexual and Sexual Reproduction	Little hair-like objects that form on fungi and when they break off they make separate fungi.	<p style="font-size: small;">Hyphae falling Hyphae growing into fungi.</p>
3. Budding	Happens in yeast. A new individual is grown from its parent cell.	<p style="font-size: small;">parent cell new individual</p>

2. Visit <http://microbelibrary.org> Search for "Growth and Division of Budding Yeast" visit <http://www.cellsalive.com/ecoli.htm> to view binary fission of bacteria.

A. How are budding of fungi yeast cells and binary fission of bacteria different?

There aren't a lot of differences,

B. In your journal, make a graph of yeast population over time. Plot the following data:

Time (seconds)	Number of Yeast Cells
0	1
10	2
20	4
30	8
40	16
50	32

60 70 80 90 100
 64 128 256 512 1024

C. How many yeast do you predict there would be at 60 and 100 seconds? Why?
At 60 sec. I'd predict 64 yeast and at 100 sec. I'd predict 1024 yeast because the # of yeast doubles every 10 sec.

D. Based on your understanding of yeast budding, and digestion and respiration, explain why the number of yeast in a closed container would eventually start to decrease.

There would be too many yeast in one spot making it too crowded. Food and oxygen would run out fast and the yeast would start dying.

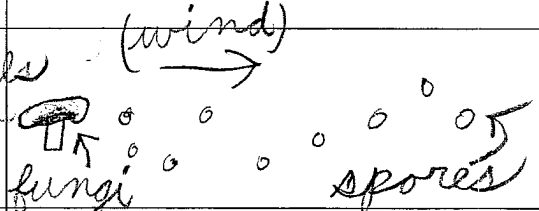
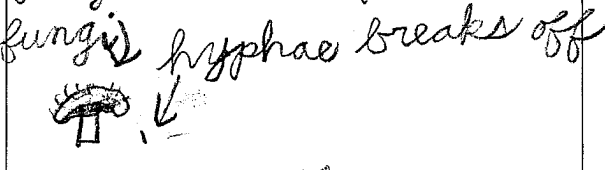
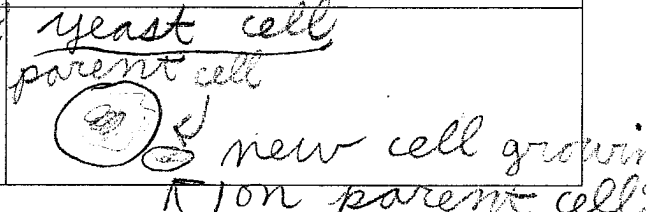
3. Why do fungi put so much energy into reproduction?

It is important to them and to make as many of their kind in the world as possible.

Act 48: Fungi Reproduction

Use the reading "How Fungi Reproduces" and the information from the Fungi Packets to answer the following questions.

1. Summarize the different types of fungi reproductive methods below. Use words and pictures:

Reproductive Methods	Description	Labeled Diagram
1. Spores	Spores blow off fungi or animals move them to new locations to grow.	
2. Hyphae - Asexual and Sexual Reproduction	Hyphae grow on fungi and break off to grow a new fungi.	
3. Budding	a new yeast cell grows off the parent cell.	

2. Visit <http://microbelibrary.org> Search for "Growth and Division of Budding Yeast" Visit <http://www.cellsalive.com/ecoli.htm> to view binary fission of bacteria.

A. How are budding of fungi, yeast cells and binary fission of bacteria different?

In the budding of yeast cells, a new cell grows on the parent cell. In binary fission of bacteria, the cell breaks apart and keeps growing.

B. In your journal, make a graph of yeast population over time. Plot the following data:

Time (seconds)	Number of Yeast Cells
0	1
10	2
20	4
30	8
40	16
50	32

C. How many yeast do you predict there would be at 60 and 100 seconds? Why?

There will be 64 cells at 60 seconds and 1,024 cells at 100 seconds because it doubles every 10 seconds.

D. Based on your understanding of yeast budding, and digestion and respiration, explain why the number of yeast in a closed container would eventually start to decrease.

It would start to decrease because there wouldn't be enough nutrients left like oxygen water and food after there has been a lot of reproduction.

3. Why do fungi put so much energy into reproduction?


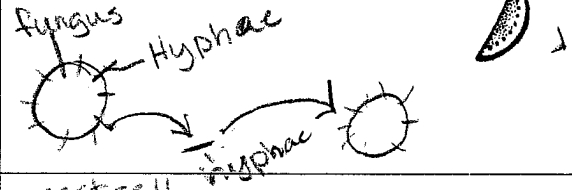
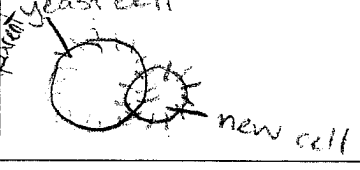
Fungi put a lot of energy into reproduction because reproduction is important to keep

Name: _____

Act 48: Fungi Reproduction

Use the reading "How Fungi Reproduces" and the information from the Fungi Packets to answer the following questions.

1. Summarize the different types of fungi reproductive methods below. Use words and pictures:

Reproductive Methods	Description	Labeled Diagram
1. Spores copy of cell releasing them.	Spores are released when mature and carried by wind or other organisms to form new fungi.	
2. Hyphae - Asexual and Sexual Reproduction tiny hair like structure	When they break off of fungus, they grow to form a separate one.	
3. Budding	When a new fungus grows from it's parent's cell.	

2. Visit <http://microbelibrary.org> Search for "Growth and Division of Budding Yeast"
Visit <http://www.cellsalive.com/ecoli.htm> to view binary fission of bacteria.

- A. How are budding of fungi yeast cells and binary fission of bacteria different?
In budding the cell grows a new cell on it's self, and in binary fission the cell splits to form 2 different cells.
- B. In your journal, make a graph of yeast population over time. Plot the following data:

Time (seconds)	Number of Yeast Cells
0	1
10	2
20	4
30	8
40	16
50	32

- C. How many yeast do you predict there would be at 60 and 100 seconds? Why?
I predict there will be 64 because if you follow the pattern, you double the previous number.
- D. Based on your understanding of yeast budding, and digestion and respiration, explain why the number of yeast in a closed container would eventually start to decrease. It decreases because the oxygen runs out because the yeast are using it, the nutrients run out since the yeast are eating them, and the temperature decreases.
3. Why do fungi put so much energy into reproduction?
To try to survive and populate the world as much as they can.

Act 48: Fungi Reproduction

Use the reading "How Fungi Reproduces" and the information from the Fungi Packets to answer the following questions.

1. Summarize the different types of fungi reproductive methods below. Use words and pictures:

Reproductive Methods	Description	Labeled Diagram
1. Spores	A small single celled reproductive body part that is capable of growing into a new organism produced by bacteria, fungi, algae, etc.	
2. Hyphae - Asexual and Sexual Reproduction	Requires 1 of their kind and is an efficient and easy way of reproduction. Requires 2 different fungi to come together.	
3. Budding	Process of where a new individual grows from its parent's cell.	

2. Visit <http://microbelibrary.org> Search for "Growth and Division of Budding Yeast" visit <http://www.cellsalive.com/ecoli.htm> to view binary fission of bacteria.

- A. How are budding of fungi yeast cells and binary fission of bacteria different?
 Budding produce single cells producing budding yeasts.
 Binary fission produce fission yeasts they differ because of hyp
- B. In your journal, make a graph of yeast population over time. Plot the following data:

Time (seconds)	Number of Yeast Cells
0	1
10	2
20	4
30	8
40	16
50	32

- C. How many yeast do you predict there would be at 60 and 100 seconds? Why?
 At 60 there will be 64 because $32 + 32 = 64$ and at a 100 there will be 1040 because $520 + 520 = 1040$
- D. Based on your understanding of yeast budding, and digestion and respiration, explain why the number of yeast in a closed container would eventually start to decrease.

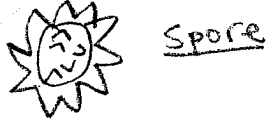
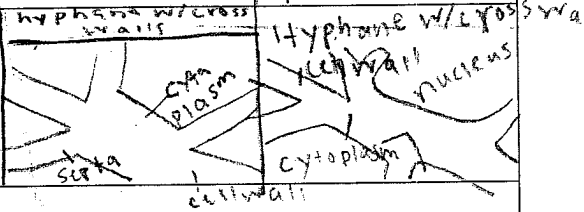

It will start to decrease because they won't have oxygen because it's closed and they would eat the food in the beginning so they will die if they don't have more.

3. Why do fungi put so much energy into reproduction?
 To reproduce they need energy for like a sexual, and sexual reproduction so they

Act 48: Fungi Reproduction

Use the reading "How Fungi Reproduces" and the information from the Fungi Packets to answer the following questions.

1. Summarize the different types of fungi reproductive methods below. Use words and pictures:

Reproductive Methods	Description	Labeled Diagram
1. Spores	so spores get released and blown by the wind	
2. Hyphae - Asexual and Sexual Reproduction	tiny hairlike structures that grow off a fungus when detached, grow into separate individual	
3. Budding	process in which a new cell individual grows from its parent cell occurs in yeast	

2. Visit <http://microbelibrary.org> Search for "Growth and Division of Budding Yeast" visit <http://www.cellsalive.com/ecoli.htm> to view binary fission of bacteria.

A. How are budding of fungi yeast cells and binary fission of bacteria different?

B. In your journal, make a graph of yeast population over time. Plot the following data:

Time (seconds)	Number of Yeast Cells
0	1
10	2
20	4
30	8
40	16
50	32

C. How many yeast do you predict there would be at 60 and 100 seconds? Why?

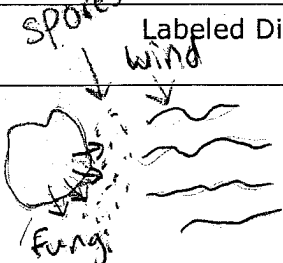
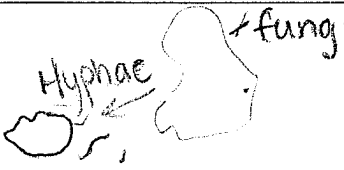
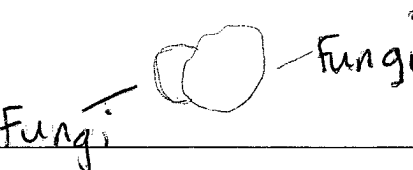
D. Based on your understanding of yeast budding, and digestion and respiration, explain why the number of yeast in a closed container would eventually start to decrease.

3. Why do fungi put so much energy into reproduction?

Act 48: Fungi Reproduction 

Use the reading "How Fungi Reproduces" and the information from the Fungi Packets to answer the following questions.

1. Summarize the different types of fungi reproductive methods below. Use words and pictures:

Reproductive Methods	Description	Labeled Diagram
1. Spores	Spores are released and carried by wind or other organisms	
2. Hyphae - Asexual and Sexual Reproduction	When they break off a fungi, they can grow to form a separate individual	
3. Budding	Where a new individual grows from its parents cell	

2. Visit <http://microbelibrary.org> Search for "Growth and Division of Budding Yeast" Visit <http://www.cellsalive.com/ecoli.htm> to view binary fission of bacteria.

A. How are budding of fungi yeast cells and binary fission of bacteria different?
 They are different because binary fission makes individual cells and budding grows on its parent's cell

B. In your journal, make a graph of yeast population over time. Plot the following data:

Time (seconds)	Number of Yeast Cells
0	1
10	2
20	4
30	8
40	16
50	32

C. How many yeast do you predict there would be at 60 and 100 seconds? Why?
 60 = 34 100 = 64 because you just add it on the 50 sec. to get 60 or 100 seconds.

D. Based on your understanding of yeast budding, and digestion and respiration, explain why the number of yeast in a closed container would eventually start to decrease. It would start to decrease because it has went through the digestion and respiration stages and is done, so it doesn't need to do anything else so it decreases.

3. Why do fungi put so much energy into reproduction? ~~and~~
 so they can grow and spread, and get more nutrients and get energy.