

NAME: \_\_\_\_\_

Aligned to the following standards:  
NRS.02; FFA.PL-A; FFA.PG-J; AG-NR2; AGPE01.03; CS.06; CCSS.RI.9-10.3; CCSS.SL.9-10.1; CCSS.RST.11-12.1; CCSS.RST.11-12.2; CCSS.RST.11-12.7; CCSS.RST.11-12.8; CCSS.RST.9.10.9; CCSS.WHST.9.10.2; CCSS.WHST.9.10.4; CCSS.WHST.9.10.7; CCSS.WHST.9.10.9; MP5; HS-ESS3-1; HS-ESS3-2; HS-ESS3-4; AFNR Career Cluster, Statement 1; CRP.02; CPR.04; CRP.06; CRP.07; CRP.08

# My-Celi-What?

## DIRECTIONS:

Complete the questions below as you watch the video "Mycelium SAE | Michaela Carmichael," available at <https://vimeo.com/342621734>.



Why did Michaela start this SAE?



What is mycelium?

How does mycelium filter the wastewater?

What steps did Michaela take to implement her SAE?



What pollutants did Michaela identify?

- A. E. coli
- B. Coliform
- C. Heavy metals
- D. All of the above

What career does Michaela hope to have?

How will her SAE help her in her future career?

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# Fungus to the Rescue!

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**DIRECTIONS:**

Mycelium isn't only useful for filtering water. Complete the following activities to learn more about fungi and its many potential uses.

*Part 1*

**DIRECTIONS:**

Read both of the following short articles. (You can also watch the *National Geographic* summary video rather than read the article.) Write a paragraph summarizing each article and highlighting the uses of the fungi.

- "Nine Ways Mushrooms Could Drastically Improve the World," <https://blog.ted.com/9-ways-mushrooms-could-drastically-improve-the-world/>
- "Surprising New Uses for Mushrooms, From Houses to Packaging," <https://www.nationalgeographic.com/news/2016/07/mushroom-surprising-uses-building-material-medicines-fungi/>

| Summary of "Nine Ways Mushrooms Could Drastically Improve the World" | Summary of "Surprising New Uses for Mushrooms, From Houses to Packaging" |
|----------------------------------------------------------------------|--------------------------------------------------------------------------|
|                                                                      |                                                                          |



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## Part 2

### DIRECTIONS:

Identify the fungi use that you found most interesting. In the space below, share the innovative way the fungi are being used, a potential world problem it could help solve and why it stood out to you the most. You can share this information in any format you choose. You can write a short paper or speech, draw a picture, create a video storyboard or comic strip, etc.

Aligned to the following standards:

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## Fungi Innovation Creative Project Rubric

|                                                                                                                          | 20–16 Points                                                                                                                                                                    | 15–11 Points                                                                                                                                                                                 | 10–6 Points                                                                                                                                                                                                                                                                          | 5–0 Points                                                                                                                                                                                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Content</b>                                                                                                           | Covers topic in depth with details and examples; subject knowledge is excellent; focuses on an important concept                                                                | Includes essential knowledge about the topic; subject knowledge is good; focuses on an important concept                                                                                     | Includes essential information about the topic but there are one or two factual errors; focus may be unclear                                                                                                                                                                         | Content is minimal OR there are several factual errors; focus is unclear.                                                                                                                                                                                          |
| <b>Effort</b>                                                                                                            | Product shows a great amount of time spent and very careful, neat work.                                                                                                         | Product shows a good amount of time spent and careful, neat work.                                                                                                                            | Product shows some amount of time spent and is slightly lacking neatness.                                                                                                                                                                                                            | Product shows a minimal amount of time spent and is lacking neatness.                                                                                                                                                                                              |
| <b>Originality and Creativity</b>                                                                                        | Product shows a large amount of original thought and critical thinking. Work is creative and inventive.                                                                         | Product shows some original thought and critical thinking. Work shows new ideas and insights.                                                                                                | A few original touches enhance the project to show some understanding of the material.                                                                                                                                                                                               | Shows little creativity, originality and/or effort in understanding the material or following project directions                                                                                                                                                   |
| <b>Appearance (for artistic products)</b><br><br><b>and/or</b><br><br><b>Neatness and Grammar (for written products)</b> | Makes excellent use of color, graphics, effects, etc. to enhance the product<br><br>Exceptionally neat in design, writing and layout with no grammatical or mechanical mistakes | Makes good use of color, graphics, effects, etc. to enhance the presentation<br><br>Neat in design, writing and layout with a few grammatical/mechanical mistakes, which are not distracting | Makes some use of color, graphics, effects, etc. to enhance the presentation, but occasionally these detract from the content.<br><br>Acceptably neat but may be messy at times and/or show lack of organization with several grammatical/mechanical mistakes, which are distracting | Use of minimal color, graphics, effects, etc. to enhance the presentation, which often detract from the content<br><br>Distractingly messy; does not show pride in work; has many grammatical or mechanical mistakes throughout the project; clearly not proofread |
| <b>Overall Effectiveness and Completion</b>                                                                              | Project is engagingly organized and presents material that is captivating for the intended audience.                                                                            | Project is somewhat organized, complete and holds the attention of the intended audience.                                                                                                    | Project is disorganized and incomplete at times and is somewhat able to hold the attention of the intended audience.                                                                                                                                                                 | Project is incomplete and not easy to follow.                                                                                                                                                                                                                      |