

Materials Reference Page

Biology Lesson Plans

Module needs at a glance (estimated per class):

- Qty. 5 - Premade [mycelium bears](#)
- Qty. 1 - [Teacher party pack](#) including 15 mini bags of GIY material and molds
- Qty. 2 - [GIY material](#)
- Qty. 1 - [Living material](#)

Lesson 1: Introduction

- 3-5 [pre-made mycelium bears](#)
- These can be continuously reused as they will not get damaged during the activity.

Lesson 2: Fungi life cycle

- 1 bag [GIY material](#)
- Prepare growth material and stop after [regrinding](#) of material. Allow mycelium to continue growing until mushrooms form, then separate this material for different student groups.
- If preferred, you could also use a [pre-prepared bag of living material](#).

Lesson 3: Fungi protein synthesis

- No mycelium materials needed

Lesson 4: Being Multicellular

- It is possible to use the same [GIY material](#) prepared from the previous lesson.
- If preferred, you could also use a [pre-prepared bag of living material](#).

Lesson 5: The food chain

- [Teacher party pack](#)
- Students will also need to obtain small amounts of local substrates to experiment on. These could be different types of wood shavings, coconut husks, coffee grounds, etc).
- You can collect and save the GIY material that was removed from the bags. These could be repurposed to Lesson 6 or 7 by adding them to a new sterilized gallon-sized ziplock bag. Mix in 1.5 cups of water and 15 g of flour. Continue with [instructions](#) as “Pour into bag and seal” in Step 1.

Lesson 6: Feed the Fungi

- All that is needed is living mycelium that can be observed digesting starch.
- Teachers could use the same living material prepared from a previous lesson, or use [1 bag of GIY material](#).

Lesson 7: Cellular respiration in fungi

- Any living mycelium material.
- Teachers could use the same living material prepared from a previous lesson, or use [1 bag of GIY material](#).

Lesson 8: The problem with plastic

- No mycelium materials needed

Lesson 9: Mycelium as an alternative

- No new mycelium materials needed
- Continuation of the same mycelium molds created in Lesson 5.

Lesson 10: Show what you know

- No new mycelium materials needed

Chemistry Lesson Plans

Module needs at a glance (estimated per class):

- Qty. 1 - [Teacher party pack](#) including 15 mini bags of GIY material and molds
- Qty. 15 - [mycelium bears](#)
- Qty. 2 - [large square mycelium planters](#)

Lesson 1: What do material scientists do?

- [Teacher party pack](#) including 15 mini bags of GIY material and molds

Lesson 2: Composites versus chemical compounds

- No mycelium materials needed

Lesson 3: Mycelium as a composite material

- 4-7 [pre-made mycelium bears](#)

Lesson 4: Adhesion and electronegativity

- No mycelium materials needed

Lesson 5: Is mycelium safe?

- 4-7 [pre-made mycelium bears](#)

Lesson 6: Is mycelium water repellent?

- 4-7 [pre-made mycelium bears](#)

Lesson 7: Biodegradable and compostable materials

- 2 [large square mycelium planters](#)

Lesson 8: Advocate for mycelium

- No new mycelium materials needed
- Continuation of completed mycelium products that began in Lesson 1.

Engineering Lesson Plans

Module needs at a glance (estimated per class):

- Qty. 1 - [Teacher Party Pack - living material](#)
- Qty. 4 - [GIY material](#)

Lesson 1: Mycelium and its possibilities

- [Teacher Party Pack - living material](#) with 15 mini growth forms included

Lesson 2-8:

- No mycelium materials needed

Lesson 9: Build your prototype

- [GIY material](#)

Lesson 10: Evaluate and improve

- No new mycelium materials needed
- Continuation of the same GIY material from Lesson 9.