

WELCOME TO TUMO!



TUMO's learning labs create dynamic, hands-on learning experiences. There's a reason we not only don't require lab leaders to have teaching expertise, but also encourage first-timers – we believe that your industry-related and lived experiences are the most valuable additions to our curriculum!



In this guidebook, we've compiled the most essential information you'll need to create successful lab proposals and lesson plans. Here are some of the topics we'll cover:

- 1. Starting Out with the Topic**
- 2. What Unites Our Best Labs**
- 3. What Should Your Lesson Plan Look Like**
- 4. What to Expect from Students**
- 5. Wrapping Up Your Lab**

1. Starting Out with the Topic

As you start thinking about what your learning lab will be all about, there are a few key directions that we'd recommend looking into.

- **Deliverables Can Vary**

When it comes to deliverables, you have a few major options to consider:

Result-Oriented

In this case, your pitch is a project or a final result and your curriculum is built to achieve the intended result. For example, you might propose creating an animated short film, working with TUMOians as a team to bring the animation to life.



Skill-Oriented

Think of a skill or software that is of great value in your industry, and mastering it can help TUMO students become more competitive in the field. If you're thinking of one, you can turn it into a learning lab topic.



Within these categories, you can choose between three types of projects:

Individual project: each student comes up with their own work.

Small group project: you divide your lab cohort into small groups who collaborate on their final projects.

Large group project: the entire cohort works together on one big project.

Inevitably, most learning labs combine result-oriented and skill-oriented deliverables in one curriculum. Keep in mind that these categories are not mutually exclusive.

- **Skip the kid-friendly version**

When you think about the topic, project, or software you'll use in your lab, don't feel pressured to simplify or make it child-friendly. Our teens are accustomed to near-professional environments and industry-standard tools, and even if there's a need to learn something new – they're always up for pushing their limits just a little bit!

- **Make it relevant**

Selecting a topic for a lab project can be a challenge, but these hints can make it easier:

Make sure that the topic is relevant to the current landscape of your professional field. For example, when proposing a music lab, one would avoid focusing on outdated topics such as creating ringtones.



Sometimes, labs focus on “extinct” techniques that can be reimagined with a modern twist. For example, while vinyl records aren't the dominant format for music consumption today, this retro medium offers students the chance to design album covers and sleeves, blending classic elements with modern aesthetics.



2. What Unites Our Best Labs



There are some in-class instructional approaches that have proven to create optimal student experiences and produce great results. We advise you to try combining a few of the following tips in your lab.

1. Start with the desired learning outcomes and break down the steps needed to achieve them, ensuring each lesson builds toward a clear objective.
2. Combine hands-on projects with targeted instruction to encourage students' creative freedom under your structured guidance.
3. Empower students by treating them like capable professionals, giving them responsibility and fostering a collaborative learning environment.
4. Create opportunities for peer-to-peer learning through discussions, group work, or collaborative projects to build teamwork skills and deepen understanding.
5. Offer feedback and critique throughout the learning process, helping students make adjustments and improve their work before the final project is due.
6. Personalize lessons by sharing your own professional experiences, making the material more relatable and engaging for students.
7. Stay in regular contact with the learning lab team to align goals, share progress, and ensure that you're provided with all the support you need.
8. Incorporate videos, audio, images, and digital tools to cater to different learning styles and keep the content engaging.
9. Lead regular and quick discussions to ensure students are following along and grasping the material before moving on.
10. Give students time to pause and reflect on what they've learned, fostering deeper comprehension and allowing them to think about future applications.
11. Establish rituals, like starting the class with music or a routine activity, to create a positive and focused learning atmosphere.
12. Avoid homework assignments unless it has more to do with thinking about a topic or coming up with an idea for their project.

3. What Should Your Lesson Look Like?

Once you've confirmed the key objectives of your learning lab, you can move on to the next stage of planning its day-to-day content.

For a typical lab, you'll have ten sessions of three to four hours spread over two weeks. In a lesson plan, you estimate what activities you'll incorporate into each session. This will help you ensure that your daily activities cater to the overall objective of the lab. It will also help you stay on top of the progress you've made and make adjustments as needed.

When designing your lesson plan, pay attention to these components and tips:

- Define the learning objectives of each session and keep in mind how they will cater to the overall objective of your lab.
- Divide each session into sections; don't plan only one thing for the whole session. Plan the whole session minute by minute so that you always have a plan both in your mind and on paper.
- Incorporate at least a few activities that will help you assess student learning, whether it's a small task, a quiz, or a discussion.
- Make sure that each session balances engaging activities, hands-on components, and instructional content.
- Once your lab enters its second phase, where there is more practice and fewer lectures, try to come up with activities and different tasks, discussions, and feedback mechanisms to avoid monotonous work.
- Create a list of all the materials you'll need for the lab as a whole and for individual sessions. Think broadly about what you'll need, including hardware, software, stationery, transportation, assistance, or anything else.
- Consider the physical environment that will help you maximize the efficiency of a specific session. For a whole group brainstorming or design-thinking session, a room without desks and computers might work; for individual and small group work, a room with computers will suit best; for a site visit, an art or history museum will be best; for your presentation, you might need an exhibition area or a park. Indicate the type of learning environment you need in each day's plan.

If you wish, you can use this [lesson plan template](#) to avoid missing any essential information.

- **Historically Proven**

We've put together a couple of lesson plans that have been successful. While we encourage you to take a look at them to get a general idea of what your lesson plan could look like, it's not necessary to feel obligated to use them as references. We acknowledge that each learning lab has its own path to success, and your unique approach is the best fit for your lab.



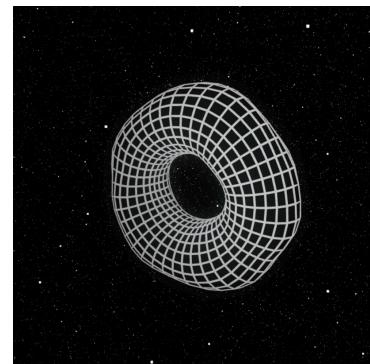
Vehicle Legos in 3D

Guillaume Kurkdjian


 [Lesson Plan](#)


Visual & Musical Multimedia

Kristian de Leon and Adam Lutz


 [Lesson Plan](#)

4. What to Expect from the Students

TUMO is a program that welcomes teens regardless of their age, performance at school, economic background, or other criteria. At TUMO, there are no exams or grades, and students learn because they want to. While this diversity can sometimes make classroom management more challenging, with students in the same group having differing skill levels, it also brings great benefits, such as increased collaboration and support among students.

While TUMO's learning labs team mostly organizes the selection process based on the students' background, you can optionally tailor your lab admission prerequisites. If needed, you can give a task or a survey to students and admit them yourself.

5. What's in the End?

- **Presentation**

We're sure that by the end of the learning lab your students will have created amazing results, and showcasing them is an especially motivating part of every lab! The final presentation is not a mandatory part of each lab. Nevertheless, whether big or small, it gives students an opportunity to reflect on their learning experience, remind themselves of all they've accomplished, and practice their presentation skills. For the rest of the TUMOians, watching cool projects brought to life by their peers is a source of inspiration to continue learning and participating in more learning labs. Win-win, it is!

Our final presentations are usually open to students and families. They tend to last somewhere between 40 and 60 minutes and consist of two major parts – showcasing the work and reflecting on the lab process.



- **Student Evaluation**

As you already know, we don't have grades at TUMO. Instead, lab leaders give students personalized feedback and assign completion statuses based on their involvement. Here's a short description of each:

Incomplete: the final result is incomplete or absent.

Participated: The student has participated in the lab and produced a final result, but the quality doesn't meet the lab leader's minimum expectations.

Completed: the final result is complete and meets the lab leader's minimum expectations.

Completed with a star: the final result is outstanding and exceeds the lab leader's expectations.

- **Feedback**

Our goal is to ensure that your time at TUMO was pleasant and seamless. Therefore, we'd love to have your feedback once the lab is over. We'll send you a short survey on the last day of your lab, and we hope that you'll find time to complete it.

