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**A PRIMER FOR SCHOOL LEADERS**

# The CBSE Composite Skill Lab Mandate.

*What it actually requires. How to plan for it. The mistakes to avoid.*

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*Prepared for principals and academic heads of CBSE-affiliated schools.*

*Based on the CBSE Guidelines for Setting up Composite Skill Labs (2024–25) and CBSE Circular No. Skill-75/2024 dated 23 August 2024.*

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# What you actually need to do.

If you have time for nothing else in this document, read this page. Everything that follows is detail; the five points below are the whole shape of what CBSE is asking.

## 01. WHO MUST COMPLY

Every school affiliated with CBSE must set up a Composite Skill Lab (CSL). Schools seeking fresh affiliation must already have a CSL with full equipment.

## 02. WHAT THE LAB IS

A single multi-sector lab where students from Classes VI to X build practical skills across three forms of work: life forms, machines and materials, and human services. One room, multiple sectors, the same students through the year.

## 03. THE TIME COMMITMENT

110 hours of skill education annually for every student in Classes VI–X. The NCF-SE 2023 suggests combining periods into longer hands-on sessions rather than 40-minute chunks.

## 04. THE COST

CBSE estimates ₹3–6 lakhs for typical CSL setup. The range depends on the size of the lab, the skill subjects chosen, the quality of furniture, and whether existing school spaces can be leveraged.

## 05. THE GOVERNING POLICY

CBSE Circular No. Skill-75/2024 dated 23 August 2024, aligned with the National Education Policy 2020 and the National Curriculum Framework for School Education (NCF-SE) 2023.

**A note on deadlines:** the CBSE circular requires existing affiliated schools to set up CSLs as part of ongoing compliance, and fresh affiliations require CSLs from the outset. Schools should confirm specific timelines with their CBSE regional office, as compliance windows may vary by affiliation category and renewal cycle.

## THE THREE PILLARS

# CBSE is asking for three things.

Not one. Not five. Three. Schools that fall behind on the CSL mandate usually do so because they treat it as just a room (the physical space) and forget the other two pillars. The room without the curriculum and the trained teacher is, in the words of the CBSE chairman's foreword, "an infrastructure obligation," not the educational opportunity the policy intends.

## 01

### PILLAR ONE

#### A physical space.

One room of 600 sq ft for Classes VI–XII, OR two rooms of 400 sq ft each (one for Classes VI–X, one for XI–XII).

Ventilated. With electrical wiring, water access, two clear walls, and ideally near an open area for gardening work.

## 02

### PILLAR TWO

#### A curriculum.

110 hours of skill education per year, across three forms of work.

Three projects per grade (one from each form of work) for Classes VI–VIII. Two vocations from each form of work for Classes IX–X. An annual Kaushal Mela where students show their work.

## 03

### PILLAR THREE

#### Trained teachers.

Teachers identified and trained for skill education: pedagogy, curriculum content, and the practical-technical aspects of running multi-sector projects.

Where in-house teachers aren't available, locally trained resource trainers can deliver under the supervision of a regular teacher.

## Why this matters.

Buying the lab without budgeting for teacher training and timetable redesign is the single most common reason CSLs go quiet within a year. Treat all three pillars as one project, not three.

## WHAT 'THREE FORMS OF WORK' MEANS

# Three categories. Eleven sectors. One lab.

The Composite Skill Lab is called "composite" because it covers multiple sectors in one room. But the CBSE doesn't want you to pick eleven sectors. It wants you to pick three, one from each of the three categories below. The remaining sectors are options for later years.

Read this page as a menu. Your school's job is to choose one item from each of three sections, based on your local context, available teachers, and existing infrastructure.

### FORM OF WORK 01

## Work with Life Forms.

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Hands-on work with plants, animals, food production, and natural processes. Best for schools with outdoor space, an interest in sustainability, or a tradition of school gardens. Lowest equipment cost; highest dependence on local context.

**Sectors in this category:** Agriculture & Gardening, Food Production.

**Examples of projects:** kitchen garden, hydroponics, terrace farming, food preservation, baking, plant nurseries.

### FORM OF WORK 02

## Work with Machines & Materials.

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Building, making, and designing with tools, electronics, software, and materials. This is where existing Atal Tinkering Labs and computer labs can be leveraged. Highest equipment cost in most cases; most appealing to students.

**Sectors in this category:** Electronics & Mechatronics, Apparel & Fashion, Automotive, Carpentry & Woodwork, IT & ITeS, AVGC & Media Content Creation.

**Examples of projects:** home automation with sensors, tie-and-dye textiles, basic robotics, simple wooden products, animation, coding, websites.

### FORM OF WORK 03

## Work in Human Services.

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Skills that involve serving others: caring, advising, organising, transacting. The most flexible category in terms of cost; some sectors need only computers and printed materials.

**Sectors in this category:** Healthcare, Beauty & Wellness, Retail, Banking/Finance/Insurance (BFSI), Tourism & Hospitality.

**Examples of projects:** first aid training, mock retail stores, financial literacy modules, tourist guide booklets, organic soap-making, family health handbooks.

# Five steps. In this order.

CBSE's official guidance describes a five-step process. The order matters. Schools that skip Step 1 (sector identification) and start with Step 4 (buying equipment) end up with expensive labs that don't fit either their context or their available teachers.

## 01 Identify your sectors.

Pick three skill subjects, one from each form of work, based on local context, available teachers, and existing resources. Don't pick what sounds impressive; pick what your school can actually teach well.

*Time needed: 2–3 weeks of consultation with academic head and teachers.*

## 02 Develop infrastructure.

Identify the room (600 sq ft or 2× 400 sq ft). Verify ventilation, electrical wiring, water access, free wall space, and proximity to outdoor area. Audit what you already have versus what needs to be built or repaired.

*Time needed: 2–4 weeks of survey and minor civil work.*

## 03 Fix the layout.

Design the room layout to be modular: work tables that can be rearranged, storage cupboards along walls, peg boards for tools, a teacher's desk, a safety corner. CBSE provides sample 400 sq ft and 600 sq ft layouts in the official guidelines.

*Time needed: 1–2 weeks with a vendor or in-house designer.*

## 04 Install tools and furniture.

Procure based on chosen sectors. CBSE provides sector-specific tool lists (Annexure 1 of the official guidelines). Don't buy beyond what you'll use in Year One. You can expand later as the programme matures.

*Time needed: 4–6 weeks for procurement and installation.*

## 05 Embed safety.

Two wide exit doors, fire extinguisher and sand buckets, a stocked first aid kit, PPE for students, a clearly marked safety corner, periodic drills. Safety is a Day-One requirement, not an afterthought.

*Time needed: 1–2 weeks of training and installation.*

# Room requirements at a glance.

These are the non-negotiables for the CSL room. If your existing space doesn't meet them, you'll need either a new room or modifications before installation can begin.

REQUIREMENT	SPECIFICATION
<b>Room size</b>	Single room of minimum 600 sq ft for Classes VI–XII, OR two rooms of minimum 400 sq ft each (one for Classes VI–X, one for XI–XII).
<b>Student capacity</b>	Designed to accommodate a batch of 25–40 students working in groups.
<b>Ventilation</b>	Windows AND exhaust fans. Cross-ventilation strongly preferred.
<b>Electrical wiring</b>	Combination of 15-ampere and 5-ampere switches and sockets, ideally on all walls.
<b>Lighting &amp; fans</b>	Adequate for comfortable, precision work, not just basic illumination.
<b>Water &amp; drainage</b>	Sink with water tap and drainage outlet, required if the chosen sectors involve flowing water (agriculture, food production).
<b>Wall space</b>	At least two clear walls for peg boards, posters, and 'speaking walls' displays.
<b>Adjacent area</b>	Preferably close to an open outdoor area, for gardening or projects that benefit from space.
<b>Exit doors</b>	Two wide doors for unobstructed emergency exit.
<b>Flooring</b>	Concrete or rubber mats. Adaptable to multi-sector use, durable under vibration and tool loads.

## CAN WE USE OUR EXISTING ATL OR IT LAB?

Existing labs can be leveraged to deliver part of the skill curriculum, but cannot be converted to a CSL. The CBSE position is specific:

- **ATL / Agile ATL:** can deliver Mechatronics/Electronics, but cannot be converted into a CSL (government-funded for a specific purpose).
- **IT Lab:** can deliver computer-based subjects (Coding, AI, Graphic Design), but cannot be converted into a CSL.
- **Maker Space:** comes closest to a CSL and CAN be converted, if size and specification requirements are met.
- **Home Science Lab:** can deliver Food Production, but cannot be converted into a CSL.

# How the curriculum actually fits.

CBSE asks for 110 hours of skill education per year for every student in Classes VI–X. Spread across roughly 33 working weeks of the academic year, that is about 3.5 hours per week, every week.

The NCF-SE 2023 timetable suggests grouping these periods into longer hands-on sessions rather than splitting into multiple short ones. A 40-minute slot is enough to start a project; a 90-minute slot is enough to actually build something.

## Annual hours for Classes VI-VIII (Middle Stage)

SUBJECT	ANNUAL HOURS	ANNUAL PERIODS
Mathematics	115	172.5
Science	160	240
Social Science	160	240
Art Education	100	150
Physical Education	100	150
<b>Vocational Education (Skill / CSL)</b>	<b>110</b>	<b>165</b>

Source: NCF-SE 2023, Section 4.4.2.

## What 110 hours actually looks like in your timetable

The NCF-SE 2023 model timetable for the Middle Stage assigns Vocational Education two double-periods per week (Wednesday and Friday afternoons in the sample), roughly 80 minutes each session. With two working Saturdays per month, students get a third weekly block.

In practice, this is the equivalent of about three weekly skill sessions. Schools that try to fit it into one 40-minute slot per day end up with thin engagement; longer blocks produce real project work.

## The Kaushal Mela

At the end of each academic year, each school must organise a Kaushal Mela, a skills fair where students demonstrate their projects to the school community, parents, and other stakeholders. This is not an awards ceremony or a parade. It's a presentation of project work: what students built, what they learned, and how they used those skills at home.

**Note:** The Kaushal Mela is the assessment, not a marketing event. Schools that approach it as a presentation moment for visitors usually fail at the educational moment for students.

# Safety is the first day, not the last.

CBSE's guidelines devote an entire chapter to safety. The reasoning is straightforward: a CSL contains sharp tools, electrical equipment, heat sources, and chemicals. Students from Classes VI to X (ages 11 to 16) will be using them daily. Safety has to be embedded into the design of the room, the training of the teachers, and the daily rhythm of the classroom.

## The eight minimum safety items

<b>Fire extinguisher</b> CO <sub>2</sub> 2 Kg, ABC type, mounted within reach.	<b>First aid kit</b> Bandages, gauze, antiseptic, burn cream, scissors.
<b>Hand gloves</b> Sturdy, washable. 15 pairs per class of 40.	<b>Aprons</b> Small and medium sizes, 15 per class.
<b>Sand buckets</b> Two 10-litre buckets for fire suppression.	<b>Rubber matting</b> On floor either side of workbenches. 8 mats.
<b>Safety corner</b> Dedicated rack near the entrance with all PPE.	<b>Drills</b> Fire and evacuation drills every term, scheduled.

## Roles and responsibilities

Every adult in or near the CSL has a specific safety role. CBSE explicitly names five:

**Principal.** Establish safety protocols, conduct routine safety audits, ensure mandatory safety training for all staff.

**Teachers.** Supervise during all lab activities, deliver safety instructions before each session, know emergency exit routes.

**Students.** Follow all safety guidelines, report unsafe conditions immediately, use tools only under supervision.

**Lab in-charge.** Maintain tools and equipment, assist teachers with supervision, manage inventory.

**Cleaning staff.** Use lab-appropriate cleaning materials, dispose of hazardous waste properly, know first aid kit and fire extinguisher locations.

# Five mistakes that make CSLs go quiet.

We have spent eight years watching school maker labs, Atal Tinkering Labs, and skill-education programmes succeed and fail. The reasons for failure repeat. Below are the five patterns we see most often.

- 01** **Treating the CSL as a CSL-replaces-ATL exercise.**

The CSL is a different mandate from the ATL. Schools with existing ATLs should run BOTH. The ATL continues to deliver tinkering and innovation work, while the CSL delivers the broader multi-sector skill education across all three forms of work. The ATL CANNOT be converted into a CSL. Trying to merge them creates a lab that does neither well.
- 02** **Buying equipment before choosing sectors.**

The most expensive way to set up a CSL is to buy a 'CSL package' from a vendor before deciding which three sectors your school will actually teach. Sectors first. Equipment second. The CBSE-published sector-specific tool lists exist for exactly this reason.
- 03** **Skipping teacher training.**

A CSL with great equipment and an untrained teacher will go quiet within six months. The single highest-leverage investment in a CSL is not the equipment. It's the teacher who knows how to run project-based learning, manage a multi-sector classroom, and assess work that doesn't fit on a 100-mark scale.
- 04** **Documenting after the fact.**

Inspection-ready evidence (student portfolios, project journals, photos, assessment notes) should be created as a by-product of the weekly rhythm, not assembled in a panic three weeks before an inspection. Document as you go. The CSL guidelines explicitly require portfolio-based and observation-based assessment, not just written tests.
- 05** **Treating Kaushal Mela as an event.**

The Kaushal Mela is an assessment, not a marketing event. Schools that approach it as a parade for visitors usually under-deliver on the educational moment for the students. Plan it as part of the curriculum from Day One; the visitors will come.

# Your next 90 days.

If you've read this far, the natural question is what to actually do this term. Here's a 90-day plan that any school can adapt. It assumes you are starting roughly from scratch.

## **Weeks 1-2 · Decide which sectors are right for your school.**

Form a small committee with your academic head, one or two senior teachers, and ideally a parent or alumnus from an industry-adjacent background. Look at the 13 CBSE sectors. Pick three, one from each form of work, based on (a) what your school already has the teachers or infrastructure for, (b) what your local context offers (industries, NGOs, farms, hospitals), and (c) what your students would find genuinely interesting.

## **Weeks 3-4 · Audit your existing space and equipment.**

Walk through the school with a checklist. Which existing rooms could meet the 600 sq ft or 2× 400 sq ft requirement? What electrical, ventilation, or water work would they need? What existing equipment (from an ATL, IT lab, or Maker Space) can be leveraged for the sectors you've chosen? At the end of this audit, you should have a realistic budget estimate and a list of what needs to be procured.

## **Month 2 · Train one or two anchor teachers.**

Identify the teachers who will run the CSL programme: ideally one anchor teacher per form of work, or one anchor teacher who can coordinate across sectors. Begin their training before the lab is fully built. The training matters more than the equipment, and it takes longer to deliver well. Don't wait for the lab to be ready before starting.

## **Month 3 · Begin a small pilot.**

Start with one class (ideally a Class VI section) running one project from one form of work, in whatever space and with whatever equipment you have available. Document what works, what doesn't, and what would scale. By the end of Month 3, you will know what your full CSL implementation needs to look like for Term Two.

# If you want a thinking partner.

Hankernest works with CBSE schools on the three steps the CSL mandate quietly assumes are easy and actually are not: choosing the right sectors for the school's context, training the teachers who will actually run the lab, and designing the year-long curriculum that turns 110 hours into real student work.

We don't sell hardware. We don't have a subscription model. We help schools build the programme. If anything in this primer raised a question or a half-formed plan, the easiest next step is a 30-minute conversation. No deck, no sales pitch.

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*This primer was prepared by Hankernest in May 2026 based on the CBSE Guidelines for Setting up Composite Skill Labs in Schools (Department of Skill Education, CBSE) and Circular No. Skill-75/2024 dated 23 August 2024. For the full official text, visit [cbseacademic.nic.in/web\\_material/skilledu/comp\\_skill\\_lab.pdf](https://cbseacademic.nic.in/web_material/skilledu/comp_skill_lab.pdf). Schools should verify specific compliance requirements with their CBSE regional office.*