

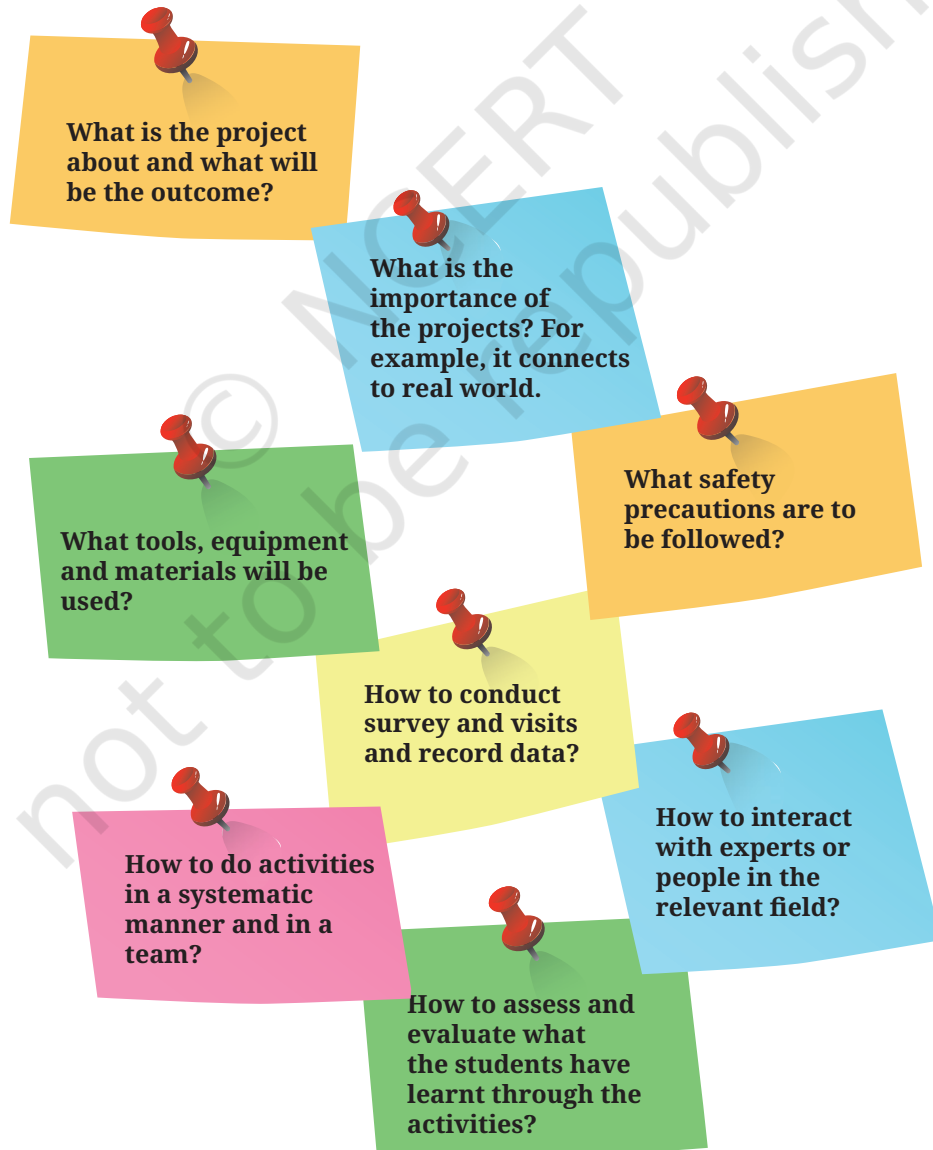
Annexures for Teachers

ANNEXURE 1

Project Template

Developing effective projects in schools requires careful planning, clear objectives, and engaging activities that align with educational goals.

The diagram given below summarises the key questions that need to be addressed while developing the project.



Name and Brief Introduction of the Project

Choose a title that is descriptive and engaging, and gives a clear idea of the broad purpose of the project.

1. Explain why the project is important.
2. Highlight its relevance to the students' lives, education, or the community.
3. Address the benefits of the project.
4. Describe how the project relates to real-world scenarios, tasks or problems.
5. Explain the practical implications and potential impact of the project.



What will I be able to do?

Achievable and measurable objectives aligned with the curricular goal, competencies and grade-wise learning outcomes have to be defined for each project. Activities must be designed for the fulfilment of these objectives.

Define two or three simple objectives in words that students can understand. These objectives indicate what students will be able to do at the end of the project. Students must be able to respond to the following questions:

1. What will you be able to do by the end of the project?
2. What will you learn?



What will I need?

Ensure that the required resources are accessible and locally available, and help students identify what is required for the project.

Students must be able to:

1. Provide a brief overview of the tools, equipment, materials and other resources needed for the project.



How do I keep myself and others safe?

This section should include all the safety precautions to be taken during the project, including cybersecurity and Internet safety measures. Students should also wear appropriate clothing, such as long sleeves, pants, and sturdy shoes while doing activities in the field.

Safety precautions related to tools, materials, equipment, and internet use must be explained and demonstrated. Students must be able to respond to the following questions:

1. How will you ensure your safety and that of others during the project?
2. What will you do to ensure no one is physically or emotionally hurt?
3. How will you ensure the safety of plants and animals, if relevant?
4. How will you maintain confidentiality (that is, you will not share information about anyone without checking with them first)?
5. What will you do to keep yourself safe on the internet?



What do I need to know before I start?

Prepare students to begin work by recalling prior knowledge, introducing concepts through activities that require them to work with tools and materials, exploring the environment and basic skills related to the project, and so on. Clearly define roles and responsibilities for all participants, and ensure everyone understands their tasks and how they contribute to the project.

Students must be able to respond to the following questions:

1. Is there anything you need to learn before starting your project?
2. Do you need to meet an expert who can teach you how to do the activities related to the project?

3. Is there anything in your locality that you need to find out about?
4. Do you need to conduct a survey, take up field visits, or something similar before you start?



What do I have to do?

Students need to take up various activities required for the completion of the project. Frame questions that will help them to think about what is to be done, and subsequently, record data or information related to the project. Students must be able to do the following:

1. Follow the project plan and execute tasks according to the timelines.
2. Observe others to learn practical skills and techniques, such as proper tool usage, effective planting methods, and maintenance practices.
3. Monitor progress regularly and adjust as necessary.
4. Keep records of all activities and challenges faced during the activities.
5. Document what they have learnt, their successes and challenges for future reference.

As they complete each activity, students can be asked the following:

- i. The materials you used and how you used them.
- ii. The tools you used and how you used them.
- iii. The process you followed, such as the selection of materials/ tools, sequence of tasks, and how you completed each one.
- iv. If you collected information/data/objects, describe them and explain why they are useful.
- v. If you made something, include a photograph or a sketch.
- vi. If you grew a plant, record its growth.
- vii. What safety precautions did you take while doing the activities?
- viii. Did you use any AI tools? If yes, which ones did you use and how did you use them?

- ix. Did you share the outcome of your project with others outside the school? Describe your plan and how you executed it.
- x. Did you do something to keep the environment clean or to recycle waste? Record the details.



What did I learn from others?

Learning from others is a crucial aspect of any project. Therefore, students should reflect on what they have learnt from others. It can help improve their soft skills, deepen their understanding, and enhance the project's overall success.

Engaging with others enables students to communicate effectively, share ideas, and collaborate on tasks. Diverse perspectives and ideas are introduced, which help students learn from the viewpoints of others. This can help them approach problems in new ways, and enhance their creativity and problem-solving skills. Listening to others, such as workers in the world of work, experts, professionals, and the like provides valuable insights that can help improve learner's practices.

Students must be able to identify what they learnt during field trips, online and offline interactions with experts, from family and friends, and community members, and other sources. They must be able to respond to the following questions:

1. What did you learn from field trips, interactions, video lectures, or experts?
2. What did you learn from your friends? Did you help them with something?
3. What did you learn from family members, siblings, and community elders?
4. What did you learn from people in the community?



What did I do and how long did it take?

In order to develop the capacity for time-based planning, students must record the entire process followed, the sequence of

activities, and the time taken for each activity. This can be done as they proceed or at the end of the project. Students must be able to respond or think back on what they did and how long it took them to plan and execute the activities.



What else can I do?

Students need to think of other setting, in which they can apply their learning from the projects, especially outside the school. For example, students can participate in workshops, coding classes, and exhibitions or fairs. They can also apply their learnings from the projects at home and in various other places. They can celebrate cultural heritage months, international days, or multicultural festivals, and organise cultural events, culinary events, skill exhibitions, etc. They can integrate subjects through interdisciplinary projects, like historical re-enactments, science and art collaborations, or literary functions through performances.

Students must be able to respond to the following questions:

1. What else can you do to apply your learning from the project?
2. Do you see any scope to expand the current project? How?



Think and Answer

Students must reflect on what they have learned from their recent experiences. A set of questions must be designed to assess learning of key aspects of the project and related concepts across curricular areas.

Some of the questions that can be asked include the following:

1. What did you enjoy doing?
2. What were the challenges you faced?
3. Question(s) related to the project itself.
4. What are some examples of jobs related to the activities you just did? What other jobs are related to the project?

ANNEXURE 2

Curricular Goals and Learning Outcomes for Grade 6

The table below details the Competencies (C) for the Middle Stage and Learning Outcomes (LOs) defined for Grade 6 for attainment of each Curricular Goal (CG).

Competency	Learning Outcomes
CG-1 Develops in-depth basic skills and allied knowledge of work and their associated materials/procedures	
C-1.1 Performs procedures competently through required tools/equipment	LO 1—Selects tools appropriate for specific task LO 2—Uses tools correctly to complete given task
C-1.2 Approaches tasks in a planned and systematic manner	LO 3—Demonstrates appropriate stepwise process for completing the given task LO 4—Develops time-based plan for completion of task
C-1.3 Maintains and handles materials/equipment for the required activity	LO 5—Describes the steps necessary to keep materials and equipment ready for use LO 6—Follows the safety protocol while handling tools/materials

CG-2 Understands the place and usefulness of vocational skills and vocations in the world of work	
C-2.1 Describes the contribution of vocation in the world of work	LO 7—Describes the importance of vocation in the world around them
C-2.2 Applies skills and knowledge learned in the area	Not to be assessed in this grade
C-2.3 Evaluates and quantifies the associated products and materials	LO 8—Identifies criteria for evaluating quality of products LO 9—Identifies criteria for evaluating quantity of products
CG-3 Develops essential values while working across areas	
C-3.1 Develops the following values while engaging in work: <ul style="list-style-type: none"> • Attention to detail • Persistence and focus • Curiosity and Creativity • Empathy and sensitivity • Collaboration and teamwork • Willingness to do physical work 	LO 10—Keenly observes the usage of tools and materials during the demonstration and asks relevant questions LO 11—Demonstrates care and respect towards people doing physical labour, irrespective of gender LO 12—Plans tasks with peers and helps others during difficulties at work LO 13—Reworks/redoes task for improved efficiency LO 14—Asks questions about the functioning of tools and machines, and gives suggestions for alternative use LO 15—Willingness to do physical work while enjoying working with tools and materials
CG-4 Develops basic skills and allied knowledge to run and contribute to a home	
C-4.1 Applies the acquired vocational skills and knowledge in home setting	LO 16—Identifies where at home such skills and knowledge are relevant

ANNEXURE 3

Exemplar Projects for Grades 6 to 8

Given below is the list of projects for each form of work, which can be taken up for Vocational Education in the Middle stage (Grades 6 to 8).

Work with Life Forms	Work with Machines and Materials	Work in Human Services
1. Keyhole garden	1. Coding to create animation and games	1. Cooking without fire
2. School kitchen garden	2. Basic maker skills (simple machines)	2. Cooking with fire
3. Hydroponics	3. Making a tree guard	3. Food stall in school/market
4. Grow what you eat	4. Garden seating bench	4. Taking care of own health
5. Nutrient Film Technique Hydroponics	5. Making products from bamboo	5. My health and my family's health
6. Small nursery in school (local fruits)	6. Bamboo stool	6. Healthy mind and healthy body
7. Nursery in polyhouse	7. Working with electronics	7. Class museum
8. Making a terrarium	8. Working with microcontrollers	8. Making a comic book
9. Biodiversity register	9. Make your own robot	9. Visit to heritage sites/old houses
10. Image recognition: AI model	10. Pottery	10. Family budget navigator
11. Using AI to identify plant diseases and pests	11. Stitch and sew	
12. Understanding animal behaviour	12. Making a wooden stool	

<p>13. Surveying medicinal plants, herbs and spices</p>	<p>13. Household water connection</p> <p>14. Fashion and garments</p> <p>15. Weaving on a loom-table mat with a motif</p> <p>16. Food preservation through organic techniques</p> <p>17. Making a wooden stool/shoe rack</p> <p>18. Make a pad/photo frame/pen stand</p> <p>19. 3D printing</p> <p>20. School band from waste materials</p> <p>21. Using artificial intelligence</p>	<p>11. Draw <i>mehndi</i> on hands</p> <p>12. Beauty–basic grooming</p> <p>13. Ancient history broadcasts</p> <p>14. Podcasts</p>
---	--	---

ANNEXURE 4

Time Allocation and Mapping of Learning Outcomes

The tables below indicate the allocation of time and mapping of Learning Outcomes for the activities included in the examples of projects for Grade 6.

Time Allocation: The time allocated for the activity is suggestive. Teachers can make necessary adjustments based on the class size and complexity of the project.

Cross-curricular Connections: The projects can be drawn from other subjects in the Middle Stage— Language, Mathematics, Science, Social Science, Art Education and Physical Education and Well-being. This allows for a more holistic learning experience. Connection to other curricular areas is also indicated in the upcoming tables.

Student Reflection: Reflection prompts are included (‘What did I learn?’ and ‘What else can I do?’) to encourage students to think critically about their work.

Safety: The tables emphasise safety precautions (LO 6) for activities involving tools or potential hazards.

Open-ended Learning: The ‘What else can I do?’ section (LO 16) encourages students to explore connection with home and extend their learning.

Learning Outcomes: Each project focuses on developing specific skills and knowledge (LO 1–9), along with essential values related to work (LO 10–15).

Please note that LO 10 to LO 15, which refer to the essential values developed while working across areas, are applicable across all activities.

Project 1: School Kitchen Garden

Connection with other curricular areas: Science and Art Education

Activities	Required Periods: 53	Related Learning Outcomes	LO 10, LO 11, LO 12, LO 13, LO 14 and LO 15 to be observed throughout the project
<i>What will I be able to do?</i>	2	LO 1, LO 2, LO 3, LO 7	
<i>What will I need?</i>			
<i>How do I keep myself and others safe?</i>		LO 6	
<i>What will I need to know before I start?</i>			
<i>Field visit—Visit to farm/park/nursery</i>	6	LO1, LO 3, LO 5, LO 7	
<i>What do I have to do?</i>			
<i>Start preparing your kitchen garden</i>	8	LO 3, LO 4	
<i>Protecting your garden</i>	6	LO 1, LO 2, LO 3, LO4, LO 5, LO 6, LO 8, LO 9	
<i>Watering schedule</i>	2		
<i>Making a fence</i>	4		
<i>Neem leaves based pesticide</i>	2		
<i>Using mulch</i>	2		
<i>Making vermicompost</i>	6		
<i>Observing your plants grow</i>	2	LO 3, LO 8, LO 9	
<i>Looking at output</i>	4	LO 8, LO 9	
<i>What did I learn from others</i>	6	LO 1, LO 5, LO 7	
<i>What did I do and how long did it take?</i>	1	LO 4	
<i>What else can I do?</i>	1	LO 7, LO 8, LO 9	
<i>Think and Answer</i>	1	LO 16	

Project 2: Biodiversity Register

Connection with other curricular areas: Science and Art Education

Activities	Required periods: 54	Related Learning Outcomes	LO 10, LO 11, LO 12, LO 13, LO 14 and LO 15 to be observed throughout the project
<i>What will I be able to do?</i>	2	LO 1, LO 7	
<i>What will I need?</i>			
<i>How do I keep myself and others safe?</i>		LO 6	
<i>What will I need to know before I start?</i>			
<i>What is around us?</i>	4	LO1, LO 3, LO 5, LO 7	
<i>Meet an expert</i>	6		
<i>How do I keep myself and others safe?</i>			
<i>What do I have to do?</i>			
<i>Survey of surroundings</i>	2	LO 3, LO 4	
<i>Preparation to record in the biodiversity register</i>	4		
<i>Filling in the biodiversity register</i>	15	LO 1, LO 2, LO 3, LO 5, LO 6, LO 8, LO9	
<i>Identifying unknown</i>	6		
<i>Presentation of biodiversity register</i>	8		
<i>What did I learn from others?</i>	2	LO 1, LO 5, LO 7	
<i>What did I do and how long did it take?</i>	1	LO 4	
<i>What else can I do?</i>	2	LO 7, LO 8, LO 9	
<i>Think and Answer</i>	2	LO 16	

Project 3: School Maker Laboratories

Connection with other curricular areas: Science

Activities	Required Periods: 55	Related Learning Outcomes	
<i>What will I be able to do?</i>	4	LO 1, LO 7	
<i>What will I need?</i>			
<i>How do I keep myself and others safe?</i>		LO 6	
<i>What will I need to know before I start?</i>			
<i>Simple machines in our surroundings</i>	3	LO 7	
<i>What do I have to do?</i>			
<i>Using levers to make toys—catapult, robotic arm scissors, lazy and tongs</i>	6	LO 1, LO 2, LO 3, LO 5, LO 6, LO 8, LO 9	
<i>Using propellers to make toys—elastic band boat</i>	4		
<i>Using a wheel and axle to make toys—rubber band car, air balloon car</i>	3		
<i>Using more than one simple machine to make toys—windmill</i>	4		
<i>Knowing and maintaining a bicycle</i>			
<i>Parts of a bicycle</i>	4		
<i>Common problems in a bicycle</i>	4		
<i>Visit to a bicycle repair shop</i>	6		
<i>How does the bicycle work?</i>	6		
<i>Planning for a Mela</i>	3		
<i>What did I learn from others and how did I use it?</i>	2		LO 1, LO 5, LO 7
<i>What did I do and how long did it take?</i>	2		LO 4
<i>What else can I do?</i>	2		LO 7, LO 8, LO 9
<i>Think and Answer</i>	2	LO 16	

LO 10, LO 11, LO 12, LO 13, LO 14 and LO 15 to be observed throughout the project

Project 4: Animation and Games

Connection with other curricular areas: Cross-cutting, Physical Education and Well-Being

Activities	Required Periods: 45	Related Learning Outcomes	LO 10, LO 11, LO 12, LO 13, LO 14 and LO 15 to be observed throughout the project
<i>What will I be able to do?</i>	2	LO 1, LO 7	
<i>What will I need?</i>			
<i>How do I keep myself and others safe?</i>		LO 6	
<i>What will I need to know before I start?</i>			
<i>The games we play</i>	2	LO1, LO 3, LO 4, LO 5	
<i>Model your favourite game</i>	4		
<i>Trying out online games</i>	4		
<i>Preparing to make your own game with animation</i>	4		
<i>What do I have to do?</i>			
<i>Build characters, objects and backdrop of your game</i>	2	LO 1, LO 2, LO 3, LO 5, LO 6, LO 8, LO9	
<i>Programming your characters and objects</i>	2		
<i>Create an animated birthday card for your friend</i>	2		
<i>Designing your own game</i>	4		
<i>Coding your game</i>	8		
<i>Trying it out</i>	1		
<i>Sharing your game</i>	1		
<i>Making it better</i>	2		
<i>What did I learn from others?</i>	1	LO 1, LO 5, LO 7	
<i>What did I do and how long did it take?</i>	2	LO 4	
<i>What else can I do?</i>	2	LO 7, LO 8, LO 9	
<i>Think and Answer</i>	2	LO 16	

Project 5: School Museum

Connection with other curricular areas: Social Science, Language Education

Activities	Required periods: 50	Related Learning Outcomes	LO 10, LO 11, LO 12, LO 13, LO 14 and LO 15 to be observed throughout the project
<i>What will I be able to do?</i>	3	LO 1, LO 7	
<i>What will I need?</i>			
<i>How do I keep myself and others safe?</i>		LO 6	
<i>What will I need to know before I start?</i>			
<i>Visiting a museum</i>	6	LO1, LO 3, LO 5, LO 7	
<i>Your own history</i>	4		
<i>What do I have to do?</i>			
<i>Identifying artefacts and learning about them</i>	8		
<i>Identifying the final artefacts</i>	4		
<i>Keeping the artefacts safe</i>	4	LO 1, LO 2, LO 3, LO 4, LO 5, LO 6, LO 8, LO9	
<i>Preparing presentation of artefacts</i>	6		
<i>Holding an exhibition during Kaushal Mela or school event</i>	6		
<i>What did I learn from others and how did I use it?</i>	3	LO 1, LO 5, LO 7	
<i>What did I do and how long did it take?</i>	2	LO 4	
<i>What else can I do?</i>	3	LO 7, LO 8, LO 9	
<i>Think and Answer</i>	2	LO 16	

Project 6: Cooking without Fire

Connection with other curricular areas: Science

Activities	Required periods: 48	Related Learning Outcomes	LO 10, LO 11, LO 12, LO 13, LO 14 and LO 15 to be observed throughout the project
<i>What will I be able to do?</i>	2	LO 1, LO 7	
<i>What will I need?</i>			
<i>How do I keep myself and others safe?</i>		LO 6	
<i>What will I need to know before I start?</i>			
<i>Reading recipes</i>	2	LO 1, LO 2, LO 3, LO 5, LO 6, LO 7, LO 8, LO 9, LO 16	
<i>Deciding which items to make</i>	5		
<i>How to measure, use tools and store food</i>	6		
<i>Disposing of waste</i>	2		
<i>What do I have to do?</i>			
<i>Making beverages</i>	3	LO 1, LO 2, LO 3, LO 5, LO 6, LO 8, LO 9	
<i>Making dishes that require cutting and mixing</i>	4		
<i>Making dishes that require cutting and assembling</i>	8		
<i>Planning a Mela</i>	6	LO 4	
<i>What did I learn from others and how did I use it?</i>	3	LO 1, LO 5, LO 7	
<i>What did I do and how long did it take?</i>	2	LO 4	
<i>What else can I do?</i>	3	LO 7, LO 8, LO 9	
<i>Think and Answer</i>	2	LO 16	

Notes

© NCERT
not to be republished

Notes

© NCERT
not to be republished