# Grade 3 - Complete STEM Projects

## 1. Intro to Techno Blocks / Blix & Electronics

**Aim:** To design and understand the working of Intro to Techno Blocks / Blix & Electronics using STEM concepts, electronics, coding, and practical learning.

**About Project:** Intro to Techno Blocks / Blix & Electronics is a hands-on STEM project that helps students learn real-world technology concepts through practical implementation and experimentation.

**Advantages:**
• Improves creativity and innovation
• Develops logical thinking and problem-solving skills
• Enhances practical electronics and coding knowledge
• Encourages teamwork and project-based learning

**Real-time Applications:**
• Smart home systems
• Automation projects
• Educational STEM labs
• Real-world engineering applications

**Conclusion:** The Intro to Techno Blocks / Blix & Electronics project helps students gain practical exposure to modern technology and strengthens their STEM learning skills.

## 2. LED On/Off with Push Button

**Aim:** To design and understand the working of LED On/Off with Push Button using STEM concepts, electronics, coding, and practical learning.

**About Project:** LED On/Off with Push Button is a hands-on STEM project that helps students learn real-world technology concepts through practical implementation and experimentation.

**Advantages:**
• Improves creativity and innovation
• Develops logical thinking and problem-solving skills
• Enhances practical electronics and coding knowledge
• Encourages teamwork and project-based learning

**Real-time Applications:**
• Smart home systems
• Automation projects
• Educational STEM labs
• Real-world engineering applications

**Conclusion:** The LED On/Off with Push Button project helps students gain practical exposure to modern technology and strengthens their STEM learning skills.

## 3. Make Your Own Specs

**Aim:** To design and understand the working of Make Your Own Specs using STEM concepts, electronics, coding, and practical learning.

**About Project:** Make Your Own Specs is a hands-on STEM project that helps students learn real-world technology concepts through practical implementation and experimentation.

**Advantages:**
• Improves creativity and innovation

• Develops logical thinking and problem-solving skills
• Enhances practical electronics and coding knowledge
• Encourages teamwork and project-based learning

**Real-time Applications:**
• Smart home systems
• Automation projects
• Educational STEM labs
• Real-world engineering applications

**Conclusion:** The Make Your Own Specs project helps students gain practical exposure to modern technology and strengthens their STEM learning skills.

## 4. Traffic Light

**Aim:** To design and understand the working of Traffic Light using STEM concepts, electronics, coding, and practical learning.

**About Project:** Traffic Light is a hands-on STEM project that helps students learn real-world technology concepts through practical implementation and experimentation.

**Advantages:**
• Improves creativity and innovation
• Develops logical thinking and problem-solving skills
• Enhances practical electronics and coding knowledge
• Encourages teamwork and project-based learning

**Real-time Applications:**
• Smart home systems
• Automation projects
• Educational STEM labs
• Real-world engineering applications

**Conclusion:** The Traffic Light project helps students gain practical exposure to modern technology and strengthens their STEM learning skills.

## 5. Car Model

**Aim:** To design and understand the working of Car Model using STEM concepts, electronics, coding, and practical learning.

**About Project:** Car Model is a hands-on STEM project that helps students learn real-world technology concepts through practical implementation and experimentation.

**Advantages:**
• Improves creativity and innovation
• Develops logical thinking and problem-solving skills
• Enhances practical electronics and coding knowledge
• Encourages teamwork and project-based learning

**Real-time Applications:**
• Smart home systems
• Automation projects
• Educational STEM labs
• Real-world engineering applications

**Conclusion:** The Car Model project helps students gain practical exposure to modern technology and strengthens their STEM learning skills.

## 6. Buzzer Alarm Circuit

**Aim:** To design and understand the working of Buzzer Alarm Circuit using STEM concepts, electronics, coding, and practical learning.

**About Project:** Buzzer Alarm Circuit is a hands-on STEM project that helps students learn real-world technology concepts through practical implementation and experimentation.

**Advantages:**
• Improves creativity and innovation
• Develops logical thinking and problem-solving skills
• Enhances practical electronics and coding knowledge
• Encourages teamwork and project-based learning

**Real-time Applications:**
• Smart home systems
• Automation projects
• Educational STEM labs
• Real-world engineering applications

**Conclusion:** The Buzzer Alarm Circuit project helps students gain practical exposure to modern technology and strengthens their STEM learning skills.

## 7. Blinking LED

**Aim:** To design and understand the working of Blinking LED using STEM concepts, electronics, coding, and practical learning.

**About Project:** Blinking LED is a hands-on STEM project that helps students learn real-world technology concepts through practical implementation and experimentation.

**Advantages:**
• Improves creativity and innovation
• Develops logical thinking and problem-solving skills
• Enhances practical electronics and coding knowledge
• Encourages teamwork and project-based learning

**Real-time Applications:**
• Smart home systems
• Automation projects
• Educational STEM labs
• Real-world engineering applications

**Conclusion:** The Blinking LED project helps students gain practical exposure to modern technology and strengthens their STEM learning skills.

## 8. Gear Mechanism

**Aim:** To design and understand the working of Gear Mechanism using STEM concepts, electronics, coding, and practical learning.

**About Project:** Gear Mechanism is a hands-on STEM project that helps students learn real-world technology concepts through practical implementation and experimentation.

**Advantages:**
• Improves creativity and innovation
• Develops logical thinking and problem-solving skills
• Enhances practical electronics and coding knowledge
• Encourages teamwork and project-based learning

**Real-time Applications:**
• Smart home systems
• Automation projects
• Educational STEM labs
• Real-world engineering applications

**Conclusion:** The Gear Mechanism project helps students gain practical exposure to modern technology and strengthens their STEM learning skills.

## 9. Button-controlled LED

**Aim:** To design and understand the working of Button-controlled LED using STEM concepts, electronics, coding, and practical learning.

**About Project:** Button-controlled LED is a hands-on STEM project that helps students learn real-world technology concepts through practical implementation and experimentation.

**Advantages:**
• Improves creativity and innovation
• Develops logical thinking and problem-solving skills
• Enhances practical electronics and coding knowledge
• Encourages teamwork and project-based learning

**Real-time Applications:**
• Smart home systems
• Automation projects
• Educational STEM labs
• Real-world engineering applications

**Conclusion:** The Button-controlled LED project helps students gain practical exposure to modern technology and strengthens their STEM learning skills.

## 10. Multiple LED Pattern

**Aim:** To design and understand the working of Multiple LED Pattern using STEM concepts, electronics, coding, and practical learning.

**About Project:** Multiple LED Pattern is a hands-on STEM project that helps students learn real-world technology concepts through practical implementation and experimentation.

**Advantages:**
• Improves creativity and innovation
• Develops logical thinking and problem-solving skills
• Enhances practical electronics and coding knowledge
• Encourages teamwork and project-based learning

**Real-time Applications:**
• Smart home systems
• Automation projects
• Educational STEM labs
• Real-world engineering applications

**Conclusion:** The Multiple LED Pattern project helps students gain practical exposure to modern technology and strengthens their STEM learning skills.

## 11. Windmill

**Aim:** To design and understand the working of Windmill using STEM concepts, electronics, coding, and practical learning.

**About Project:** Windmill is a hands-on STEM project that helps students learn real-world technology concepts through practical implementation and experimentation.

**Advantages:**
• Improves creativity and innovation
• Develops logical thinking and problem-solving skills
• Enhances practical electronics and coding knowledge
• Encourages teamwork and project-based learning

**Real-time Applications:**
• Smart home systems
• Automation projects
• Educational STEM labs
• Real-world engineering applications

**Conclusion:** The Windmill project helps students gain practical exposure to modern technology and strengthens their STEM learning skills.

## 12. Doorbell Circuit

**Aim:** To design and understand the working of Doorbell Circuit using STEM concepts, electronics, coding, and practical learning.

**About Project:** Doorbell Circuit is a hands-on STEM project that helps students learn real-world technology concepts through practical implementation and experimentation.

**Advantages:**
• Improves creativity and innovation
• Develops logical thinking and problem-solving skills
• Enhances practical electronics and coding knowledge
• Encourages teamwork and project-based learning

**Real-time Applications:**
• Smart home systems
• Automation projects
• Educational STEM labs
• Real-world engineering applications

**Conclusion:** The Doorbell Circuit project helps students gain practical exposure to modern technology and strengthens their STEM learning skills.

## 13. Giant Wheel

**Aim:** To design and understand the working of Giant Wheel using STEM concepts, electronics, coding, and practical learning.

**About Project:** Giant Wheel is a hands-on STEM project that helps students learn real-world technology concepts through practical implementation and experimentation.

**Advantages:**
• Improves creativity and innovation
• Develops logical thinking and problem-solving skills
• Enhances practical electronics and coding knowledge
• Encourages teamwork and project-based learning

**Real-time Applications:**
• Smart home systems
• Automation projects
• Educational STEM labs
• Real-world engineering applications

**Conclusion:** The Giant Wheel project helps students gain practical exposure to modern technology and strengthens their STEM learning skills.

## 14. LED Brightness Control

**Aim:** To design and understand the working of LED Brightness Control using STEM concepts, electronics, coding, and practical learning.

**About Project:** LED Brightness Control is a hands-on STEM project that helps students learn real-world technology concepts through practical implementation and experimentation.

**Advantages:**
• Improves creativity and innovation
• Develops logical thinking and problem-solving skills
• Enhances practical electronics and coding knowledge
• Encourages teamwork and project-based learning

**Real-time Applications:**
• Smart home systems
• Automation projects
• Educational STEM labs
• Real-world engineering applications

**Conclusion:** The LED Brightness Control project helps students gain practical exposure to modern technology and strengthens their STEM learning skills.

## 15. Two-player Reaction Game

**Aim:** To design and understand the working of Two-player Reaction Game using STEM concepts, electronics, coding, and practical learning.

**About Project:** Two-player Reaction Game is a hands-on STEM project that helps students learn real-world technology concepts through practical implementation and experimentation.

**Advantages:**
• Improves creativity and innovation
• Develops logical thinking and problem-solving skills
• Enhances practical electronics and coding knowledge
• Encourages teamwork and project-based learning

**Real-time Applications:**
• Smart home systems
• Automation projects
• Educational STEM labs
• Real-world engineering applications

**Conclusion:** The Two-player Reaction Game project helps students gain practical exposure to modern technology and strengthens their STEM learning skills.

## 16. 3D Pen Intro & Free Creation

**Aim:** To design and understand the working of 3D Pen Intro & Free Creation using STEM concepts, electronics, coding, and practical learning.

**About Project:** 3D Pen Intro & Free Creation is a hands-on STEM project that helps students learn real-world technology concepts through practical implementation and experimentation.

**Advantages:**
• Improves creativity and innovation

• Develops logical thinking and problem-solving skills
• Enhances practical electronics and coding knowledge
• Encourages teamwork and project-based learning

**Real-time Applications:**
• Smart home systems
• Automation projects
• Educational STEM labs
• Real-world engineering applications

**Conclusion:** The 3D Pen Intro & Free Creation project helps students gain practical exposure to modern technology and strengthens their STEM learning skills.