

## Monti\_Science\_Fair\_2025\_Project\_Ideas

Stage	Project #	Project Idea
Stage 1	1	Experiment: Ask questions about the world around us and talk about how to find answers.
Stage 1	2	Model: Show how to ask questions about the world around us and talk about how to find answers.
Stage 1	3	Challenge: Build a demo to explore and ask questions about the world around us and talk about how to find answers.'
Stage 1	4	Experiment: Make predictions about what they think will happen.
Stage 1	5	Model: Show how to make predictions about what they think will happen.
Stage 1	6	Challenge: Build a demo to explore make predictions about what they think will happen.'
Stage 1	7	Experiment: Sort and group objects, materials and living things based on observations of the similarities and differences between them.
Stage 1	8	Model: Show how to sort and group objects, materials and living things based on observations of the similarities and differences between them.
Stage 1	9	Challenge: Build a demo to explore sort and group objects, materials and living things based on observations of the similarities and differences between them.'
Stage 1	10	Experiment: Use given equipment appropriately.
Stage 1	11	Model: Show how to use given equipment appropriately.
Stage 1	12	Challenge: Build a demo to explore use given equipment appropriately.
Stage 1	13	Experiment: Take measurements in non-standard units.
Stage 1	14	Model: Show how to take measurements in non-standard units.
Stage 1	15	Challenge: Build a demo to explore take measurements in non-standard units.'
Stage 1	16	Experiment: Follow instructions safely when doing practical work.
Stage 1	17	Model: Show how to follow instructions safely when doing practical work.
Stage 1	18	Challenge: Build a demo to explore follow instructions safely when doing practical work.'

Stage	Project #	Project Idea
Stage 2	1	Experiment: Know that a model represents an object or idea in a clear way.
Stage 2	2	Model: Show how to know that a model represents an object or idea in a clear way.
Stage 2	3	Challenge: Build a demo to explore know that a model represents an object or idea in a clear way.'
Stage 2	4	Experiment: Make and use a physical model of a familiar system or idea.
Stage 2	5	Model: Show how to make and use a physical model of a familiar system or idea.
Stage 2	6	Challenge: Build a demo to explore make and use a physical model of a familiar system or idea.'
Stage 2	7	Experiment: Describe the difference between a diagram and a picture.
Stage 2	8	Model: Show how to describe the difference between a diagram and a picture.
Stage 2	9	Challenge: Build a demo to explore describe the difference between a diagram and a picture.'
Stage 2	10	Experiment: Ask questions about the world around us and talk about how to find answers.
Stage 2	11	Model: Show how to ask questions about the world around us and talk about how to find answers.
Stage 2	12	Challenge: Build a demo to explore ask questions about the world around us and talk about how to find answers.'
Stage 2	13	Experiment: Make predictions about what they think will happen.
Stage 2	14	Model: Show how to make predictions about what they think will happen.
Stage 2	15	Challenge: Build a demo to explore 'make predictions about what they think will happen.'
Stage 2	16	Experiment: Sort and group objects, materials and living things based on observations of the similarities and differences between them.
Stage 2	17	Model: Show how to sort and group objects, materials and living things based on observations of the similarities and differences between them.
Stage 2	18	Challenge: Build a demo to explore 'sort and group objects, materials and living things based on observations of the similarities and differences between them.'

Stage	Project #	Project Idea
Stage 3	1	Experiment: Know that there are different types of models in science, including diagrams and physical models that we can touch.
Stage 3	2	Model: Show how to know that there are different types of models in science, including diagrams and physical models that we can touch.
Stage 3	3	Challenge: Build a demo to explore 'know that there are different types of models in science, including diagrams and physical models that we can touch.'
Stage 3	4	Experiment: Make and use physical models.
Stage 3	5	Model: Show how to make and use physical models.
Stage 3	6	Challenge: Build a demo to explore 'make and use physical models.'
Stage 3	7	Experiment: Draw a diagram to represent a real world situation and/or scientific idea.
Stage 3	8	Model: Show how to draw a diagram to represent a real world situation and/or scientific idea.
Stage 3	9	Challenge: Build a demo to explore 'draw a diagram to represent a real world situation and/or scientific idea.'
Stage 3	10	Experiment: Ask scientific questions that can be investigated.
Stage 3	11	Model: Show how to ask scientific questions that can be investigated.
Stage 3	12	Challenge: Build a demo to explore 'ask scientific questions that can be investigated.'
Stage 3	13	Experiment: Know that there are five main types of scientific enquiry (research, fair testing, observing over time, identifying and classifying, and pattern seeking).
Stage 3	14	Model: Show how to know that there are five main types of scientific enquiry (research, fair testing, observing over time, identifying and classifying, and pattern seeking).
Stage 3	15	Challenge: Build a demo to explore 'know that there are five main types of scientific enquiry (research, fair testing, observing over time, identifying and classifying, and pattern seeking).'
Stage 3	16	Experiment: Make a prediction describing some possible outcomes of an enquiry.
Stage 3	17	Model: Show how to make a prediction describing some possible outcomes of an enquiry.
Stage 3	18	Challenge: Build a demo to explore 'make a prediction describing some possible outcomes of an enquiry.'

Stage	Project #	Project Idea
Stage 4	1	Experiment: Know that models are not fully representative of a real world situation and/or scientific idea.
Stage 4	2	Model: Show how to know that models are not fully representative of a real world situation and/or scientific idea.
Stage 4	3	Challenge: Build a demo to explore 'know that models are not fully representative of a real world situation and/or scientific idea.'
Stage 4	4	Experiment: Use models to show relationships, quantities or scale.
Stage 4	5	Model: Show how to use models to show relationships, quantities or scale.
Stage 4	6	Challenge: Build a demo to explore 'use models to show relationships, quantities or scale.'
Stage 4	7	Experiment: Draw a diagram to represent a real world situation and/or scientific idea.
Stage 4	8	Model: Show how to draw a diagram to represent a real world situation and/or scientific idea.
Stage 4	9	Challenge: Build a demo to explore 'draw a diagram to represent a real world situation and/or scientific idea.'
Stage 4	10	Experiment: Ask scientific questions that can be investigated.
Stage 4	11	Model: Show how to ask scientific questions that can be investigated.
Stage 4	12	Challenge: Build a demo to explore 'ask scientific questions that can be investigated.'
Stage 4	13	Experiment: Know that there are five main types of scientific enquiry (research, fair testing, observing over time, identifying and classifying, and pattern seeking).
Stage 4	14	Model: Show how to know that there are five main types of scientific enquiry (research, fair testing, observing over time, identifying and classifying, and pattern seeking).
Stage 4	15	Challenge: Build a demo to explore 'know that there are five main types of scientific enquiry (research, fair testing, observing over time, identifying and classifying, and pattern seeking).'
Stage 4	16	Experiment: Make a prediction describing some possible outcomes of an enquiry.
Stage 4	17	Model: Show how to make a prediction describing some possible outcomes of an enquiry.
Stage 4	18	Challenge: Build a demo to explore 'make a prediction describing some possible outcomes of an enquiry.'

Stage	Project #	Project Idea
Stage 5	1	Experiment: Know that a model presents an object, process or idea in a way that shows some of the important features.
Stage 5	2	Model: Show how to know that a model presents an object, process or idea in a way that shows some of the important features.
Stage 5	3	Challenge: Build a demo to explore 'know that a model presents an object, process or idea in a way that shows some of the important features.'
Stage 5	4	Experiment: Use models, including diagrams, to represent and describe scientific phenomena and ideas.
Stage 5	5	Model: Show how to use models, including diagrams, to represent and describe scientific phenomena and ideas.
Stage 5	6	Challenge: Build a demo to explore 'use models, including diagrams, to represent and describe scientific phenomena and ideas.'
Stage 5	7	Experiment: Ask scientific questions and select appropriate scientific enquiries to use.
Stage 5	8	Model: Show how to ask scientific questions and select appropriate scientific enquiries to use.
Stage 5	9	Challenge: Build a demo to explore 'ask scientific questions and select appropriate scientific enquiries to use.'
Stage 5	10	Experiment: Know the features of the five main types of scientific enquiry.
Stage 5	11	Model: Show how to know the features of the five main types of scientific enquiry.
Stage 5	12	Challenge: Build a demo to explore 'know the features of the five main types of scientific enquiry.'
Stage 5	13	Experiment: Make predictions, referring to relevant scientific knowledge and understanding within familiar and unfamiliar contexts.
Stage 5	14	Model: Show how to make predictions, referring to relevant scientific knowledge and understanding within familiar and unfamiliar contexts.
Stage 5	15	Challenge: Build a demo to explore 'make predictions, referring to relevant scientific knowledge and understanding within familiar and unfamiliar contexts.'
Stage 5	16	Experiment: Plan fair test investigations, identifying the independent, dependent and control variables.
Stage 5	17	Model: Show how to plan fair test investigations, identifying the independent, dependent and control variables.
Stage 5	18	Challenge: Build a demo to explore 'plan fair test investigations, identifying the independent, dependent and control variables.'

Stage	Project #	Project Idea
Stage 6	1	Experiment: Describe how a model can help us understand and describe scientific phenomena and ideas.
Stage 6	2	Model: Show how to describe how a model can help us understand and describe scientific phenomena and ideas.
Stage 6	3	Challenge: Build a demo to explore 'describe how a model can help us understand and describe scientific phenomena and ideas.'
Stage 6	4	Experiment: Use models, including diagrams, to represent and describe scientific phenomena and ideas.
Stage 6	5	Model: Show how to use models, including diagrams, to represent and describe scientific phenomena and ideas.
Stage 6	6	Challenge: Build a demo to explore 'use models, including diagrams, to represent and describe scientific phenomena and ideas.'
Stage 6	7	Experiment: Ask scientific questions and select appropriate scientific enquiries to use.
Stage 6	8	Model: Show how to ask scientific questions and select appropriate scientific enquiries to use.
Stage 6	9	Challenge: Build a demo to explore 'ask scientific questions and select appropriate scientific enquiries to use.'
Stage 6	10	Experiment: Know the features of the five main types of scientific enquiry.
Stage 6	11	Model: Show how to know the features of the five main types of scientific enquiry.
Stage 6	12	Challenge: Build a demo to explore 'know the features of the five main types of scientific enquiry.'
Stage 6	13	Experiment: Make predictions, referring to relevant scientific knowledge and understanding within familiar and unfamiliar contexts.
Stage 6	14	Model: Show how to make predictions, referring to relevant scientific knowledge and understanding within familiar and unfamiliar contexts.
Stage 6	15	Challenge: Build a demo to explore 'make predictions, referring to relevant scientific knowledge and understanding within familiar and unfamiliar contexts.'
Stage 6	16	Experiment: Plan fair test investigations, identifying the independent, dependent and control variables.
Stage 6	17	Model: Show how to plan fair test investigations, identifying the independent, dependent and control variables.
Stage 6	18	Challenge: Build a demo to explore 'plan fair test investigations, identifying the independent, dependent and control variables.'