DISCOVERY PROJECT

PROJECT TITLE

Choose a creative name for your work!

RESEARCH TEAM

Who is working on this investigation?

1.
2.
3.
4.
5.

TEAM CONTRACT

Research is better when we work together! Read this aloud and sign below:

> *"We promise to listen to each other, share the work fairly, and encourage each other. If we get stuck, we will ask for help instead of giving up."*

Team Signatures:

INSPIRATION & TOOLS

Every great investigator needs a toolkit. Use these links (ask an adult for help!) to find ideas and help you organize your work.

Science Ideas

Science Buddies

Look at the "Project Library" to see what other kids have discovered.

Social Studies Ideas

Project Archive

Look at photos of display boards from other students to get ideas.

Giving Credit (Citations)

When you learn something new, you must list where you found it. These tools help you write your **Bibliography**.

MyBib

A free tool to make citations easy.

Citation Machine

Ask a parent to help navigate this one!

📖 WORDS TO KNOW

To be a researcher, you need to speak the language! Here is what these big words mean.

GENERAL TERMS

- **Abstract:** Think of this like the *"Movie Trailer"* for your report. It is a short summary at the very beginning that tells people what you did and what you learned.
- **Bibliography:** The *"Ingredient List."* It is a list of all the books, websites, and people you used to get your information.
- **Discipline:** The *"Lens"* you are looking through. Are you looking at the world like a Scientist? Or like a Historian?
- **Primary Source:** *"Being There."* Information from someone who was actually at the event (like a diary, a letter, or a photo taken at the time).
- **Secondary Source:** *"Hearing About It."* Information written later by someone who studied the event (like a textbook or an encyclopedia).

SCIENCE WORDS

- **Hypothesis:** A *"Smart Prediction."* It is a guess you make *before* you start, based on what you already know.
- **Variable:** The *"Parts that Change."*
  - *Independent Variable:* The **one** thing you change on purpose.
  - *Dependent Variable:* The thing you measure (to see if it worked!).
  - *Controlled Variable:* The things you keep exactly the same to be fair.
- **Engineering Design Process:** The method inventors use: Think it, Build it, Test it, Fix it!

SOCIAL STUDIES WORDS

- **Exposition:** A project that *"Tells the Story"* of a person, place, or event in history.
- **Anthropology:** Asking: *"How do people live?"* (Studying culture, traditions, and beliefs).
- **Sociology:** Asking: *"How do groups act?"* (Studying families, communities, and friends).
- **Economics:** Asking: *"How do we use money?"* (Studying buying, selling, and trading).

PICK YOUR PATH

Your group must choose **ONE** path. What are you most curious about?

PATH A: SOCIAL STUDIES

1. Anthropology (Culture):
How people live, celebrate, and believe.
(Ex: Ancient Egypt, Native American Legends, Holidays)

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2. Economics (Money & Trade):
How people earn money and what they buy.
(Ex: How Factories Work, The History of Money, Trading Cards)

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3. Geography (Man & Nature):
Maps, land, and how we treat the Earth.
(Ex: Recycling, Maps of Our City, National Parks)

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4. History (The Past):
True stories about things that happened long ago.
(Ex: The Civil War, Famous Presidents, The First Airplane)

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5. Political Science (Government):
Rules, laws, and leaders.
(Ex: How Voting Works, The Supreme Court, The Army)

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6. Sociology (Groups):
How people act in families and communities.
(Ex: Family Traditions, How Social Media Changes Us)

PATH B: SCIENCE

1. Biology (Life):
Studying living things like plants, animals, and humans.
(Ex: How Plants Grow, Animal Habits, Germs)

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2. Chemistry (Matter):
Mixing things to see how they change!
(Ex: Making Slime, Baking Science, Crystals)

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3. Physics (Energy & Motion):
How things move, fly, and use power.
(Ex: Magnets, Electricity, Gravity, Paper Airplanes)

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4. Earth & Environmental (The Planet):
Studying rocks, weather, and water.
(Ex: Volcanoes, Tornadoes, Clean Water)

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5. Engineering (Building):
Using science to build a solution to a problem.
(Ex: Building a Strong Bridge, Designing a Robot)

✓✓ WHAT KIND OF PROJECT?

Once you select a discipline, decide **HOW** to investigate it. Check the box that matches your plan.

👥 IF YOU CHOSE SOCIAL STUDIES:

- ☐ **The Fixer (Problem Solving)**
  Find a problem in the world (like "Litter in the Park") and come up with a real plan to fix it.
- ☐ **The Storyteller (Exposition)**
  Research a topic deeply and tell its story. (e.g., "The History of Video Games").
- ☐ **The Teacher (Demonstration)**
  Show the audience *how* to do something or make something from history (e.g., "How to Weave a Basket").

🧪 IF YOU CHOSE SCIENCE:

- ☐ **The Tester (Experiment)**
  Ask a question, make a guess (hypothesis), and run a fair test to see what happens.
- ☐ **The Inventor (Engineering)**
  Find a problem and build a machine or structure to solve it.

✏️ Our Chosen Topic Title:

_____

_____

DETECTIVE WORK

Great detectives ask lots of questions! Break your big topic into small questions. Assign one to each team member.

Our Main Topic:

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5 Keywords (Words we will type into Google):

Question Type	What do we want to know? *(Write the full question)*	Who will find the answer?
WHO? *(People)*		
WHAT? *(Things/Events)*		
WHEN? *(Time/Dates)*		
WHERE? *(Places)*		
WHY? *(Reasons)*		
HOW? *(Process)*		
MYSTERY? *(Your Choice!)*		

BIBLIOGRAPHY

You must have at least **3 different sources**. This is how you give credit to the people who taught you!

Source 1: Book

Title of Book:

Author (Who wrote it?):

Publisher (Company Name):

Year (Copyright Date): _____

Source 2: Website

Title of Article:

Name of Website:

Full Web Address (URL):

Date You Visited: _____

Source 3: Primary Source

(Interview, Video from the event, Diary, Letter, Site Visit)

What is it?

Who did you watch or talk to?

Date: _____

Source 4: Book

Title of Book:

Author (Who wrote it?):

Publisher (Company Name):

Year (Copyright Date): _____

💻 Source 5: Website

Title of Article:

Name of Website:

Full Web Address (URL):

Date You Visited: _____

🎙 Source 6: Primary Source

(Interview, Video from the event, Diary, Letter, Site Visit)

What is it?

Who did you watch or talk to?

Date: _____

MY RESEARCH NOTES

Student Name: _____

Scholars don't copy! *Read the sentence, close the book, and then write what you learned in your own words.*

Fact / Detail ***(What did I learn?)***	**Source #**	**Think Like a Scholar** ***(Why does this matter? What does it mean?)***
		I think this is important because...
		This makes me wonder...
		This connects to...
		I was surprised that...

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SCIENCE: THE EXPERIMENT PLAN

Use this page if you are a "Tester" doing an experiment.

1. THE VARIABLES

Independent Variable
(The ONE thing I will change on purpose):

Dependent Variable
(The thing I will measure or count to see the result):

Controlled Variables
(The things I must keep EXACTLY the same so it is a Fair Test):

1.

2.

2. THE HYPOTHESIS (MY PREDICTION)

MY PREDICTION: If I change the Independent Variable...

THEN the Dependent Variable will...

I think this will happen BECAUSE...

3. MATERIALS LIST

List everything you need (tools, ingredients, supplies).

4. PROCEDURE (STEPS)

Write the steps 1, 2, 3... like a recipe.

SCIENCE: THE INVENTION PLAN

Use this page if you are an "Inventor" building a solution.

1. DEFINE THE PROBLEM

`The problem I want to solve is...`

2. CONSTRAINTS (RULES & LIMITS)

(Example: It must be smaller than a shoebox, or cost less than $5).

1.

2.

3. DESIGN IDEA (PROTOTYPE)

Sketch or describe your idea here:

Materials I need:

4. TEST & FIX

Test 1: Did it work?

How I will fix it for Test 2:

Test 2: Did it work?

How I will fix it for Test 3:

Test 3: Did it work?

How I would fix it for another test:

❗ SOCIAL STUDIES: THE FIXER

Use this page if you are solving a community problem.

1. THE PROBLEM

The problem in our community is...

2. THE PROOF

How do you know this is a real problem? (Did you see it? Read about it?)

I know this is a problem because...

3. THE SOLUTION

My plan to fix this is...

4. CAN WE REALLY DO IT?

This plan is a good idea because...

SOCIAL STUDIES: THE STORYTELLER

Use this page if you are researching history or culture.

1. THE TOPIC

I am telling the story of...

People should know about this because...

2. THE CHAPTERS

Break your story into 3 parts.

Part 1: _____

In this part, I will explain...

Part 2: _____

In this part, I will explain...

Part 3: _____

In this part, I will explain...

SOCIAL STUDIES: THE TEACHER

Use this page if you are showing HOW to do something.

1. THE SKILL

I will teach the audience how to...

This skill comes from the culture/time period of...

2. MATERIALS

What do you need to show this skill?

3. STEPS

How do you do it?

Step 1: First, you must...

Step 2: Next, you...

Step 3: Finally, you...

4. WHY DO WE DO THIS?

This skill was important to people because...

SHOWING YOUR DATA

Don't just tell us—SHOW us! Choose a way to draw your information so it is easy to understand.

TYPES OF VISUALS

Line Graph: Best for showing change over time.
(Example: How tall a plant grows over 10 days).

Bar Graph: Best for comparing amounts.
(Example: Asking the class "Pizza vs Tacos").

Pie Chart: Best for showing parts of a whole.
(Example: Percentages of a budget).

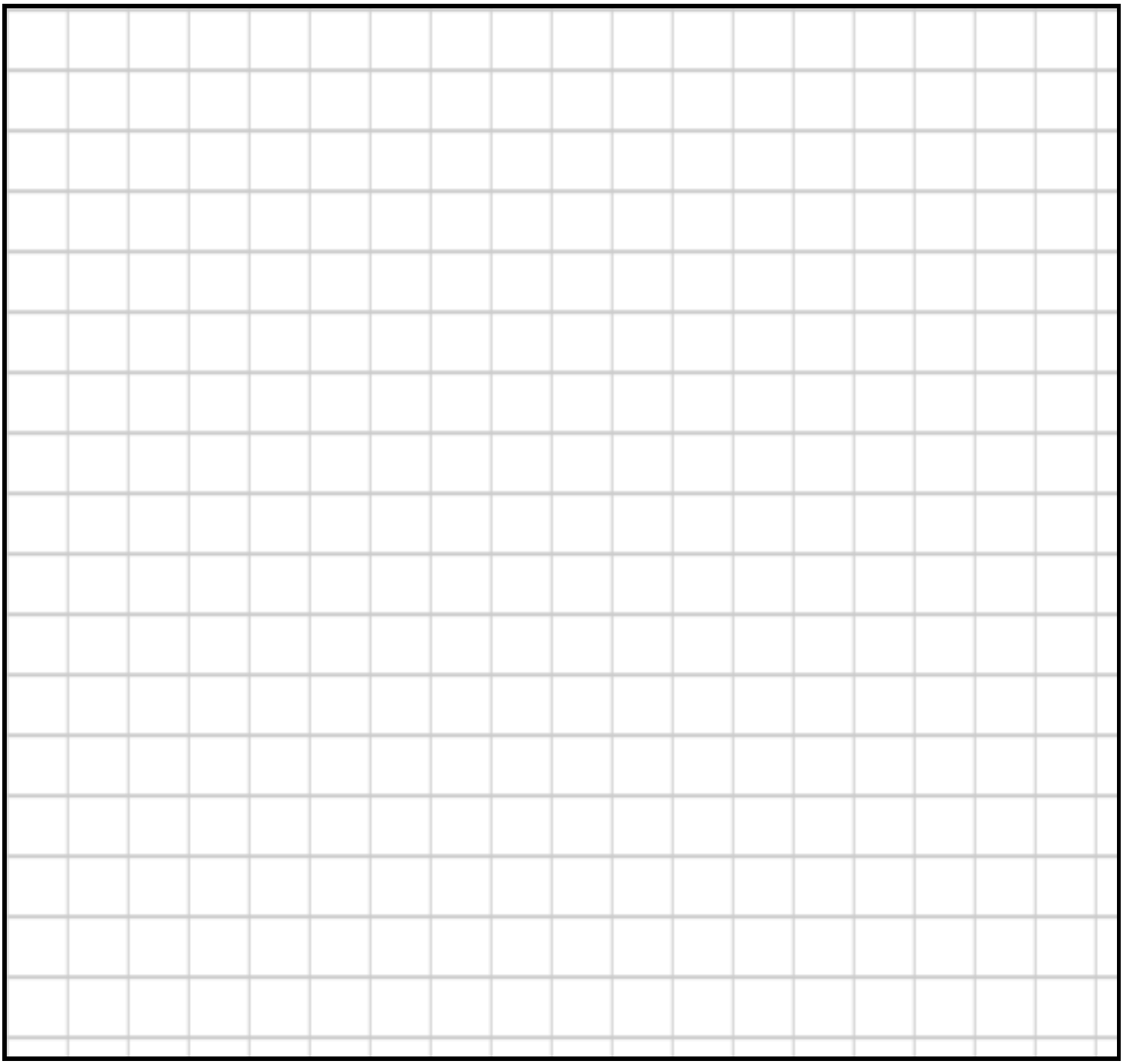
Map: Best for Geography or History.
(Example: Drawing a battle plan or a trade route).

Timeline: Best for History sequences.
(Example: Listing events in order from first to last).

🖉 DRAW YOUR VISUAL

Use this grid to draw your graph, map, or timeline. Add your own labels!

Title of Visual:



DRAFTING: SCIENCE EXPERIMENT

Use this guide if you tested a hypothesis.

1. INTRODUCTION

My project is about...

I chose this question because...

2. BACKGROUND RESEARCH

Before I started, I learned that...

3. METHOD (HYPOTHESIS & STEPS)

My hypothesis was that IF I change... THEN...

To test this, I...

4. RESULTS

The data showed that...

5. CONCLUSION

My hypothesis was [correct / incorrect] because...

DRAFTING: ENGINEERING DESIGN

Use this guide if you built a solution.

1. THE PROBLEM

I identified a need for...

2. BACKGROUND RESEARCH

I researched other inventions like...

3. DESIGN & BUILD

My design rules (constraints) were...

I chose to use these materials because...

4. TESTING

When I tested my first prototype, it...

I improved my design by...

5. CONCLUSION

My final design is successful because...

DRAFTING: THE FIXER

Use this guide for Social Studies Problem Solving.

1. THE PROBLEM

The problem I investigated is...

2. EVIDENCE

Research proves this is a problem because...

3. MY SOLUTION

My plan to solve this is...

4. WHY IT WILL WORK

This is a good solution because...

DRAFTING: THE STORYTELLER

Use this guide for Social Studies Exposition.

1. INTRODUCTION

I am telling the story of...

2. THE STORY (BACKGROUND)

The most important thing to know is...

I also learned that...

3. PRIMARY SOURCE

When I interviewed/visited... I learned...

4. CONCLUSION

This topic is important to us today because...

DRAFTING: THE TEACHER

Use this guide for Social Studies Demonstration.

1. INTRODUCTION

I am demonstrating how to...

2. HISTORICAL CONTEXT

This skill was used by...

3. THE STEPS

To do this, you first need to...

Then, you must...

4. CONCLUSION

Learning this skill helps us understand...

THE ABSTRACT (PROJECT TRAILER)

This is the summary everyone reads first. Combine these 3 parts into one paragraph for your final report!

Part 1: The Goal

`My project explores the question of...`

Part 2: The Action

`To find the answer, I...`

Part 3: The Discovery

`I discovered that...`

THE FINAL DISPLAY

THE BOARD LAYOUT

Use a tri-fold board. Make sure your font is big enough to read from far away!

LEFT	CENTER	RIGHT
The Plan	**The Evidence**	**The Result**
Question	**TITLE**	Data
Hypothesis	Photos	Conclusion
Abstract	Graphs	Future Ideas
	Models	

AM I READY?

Check the boxes when you are done!

- [ ] **My Topic:** Is it specific? (Not just "Dogs", but "How Dogs Learn").
- [ ] **My Sources:** Did I use 3 or more different sources and list them?
- [ ] **My Notes:** Did everyone on the team write facts in their own words?
- [ ] **My Report:** Did I use full sentences and explain my ideas?
- [ ] **My Visuals:** Do I have a graph, map, or timeline?
- [ ] **Spelling:** Did I check my spelling?

THINKING ABOUT MY THINKING

(Metacognition)

What was the hardest part of working with your team, and how did you solve it?

What is one thing you know now that you didn't know before you started?