



Муниципальное бюджетное образовательное учреждение средняя общеобразовательная школа №46 с углубленным изучением отдельных предметов

STRUCTURAL COMPOSITIONAL MODELING OF RESEARCH PAPER



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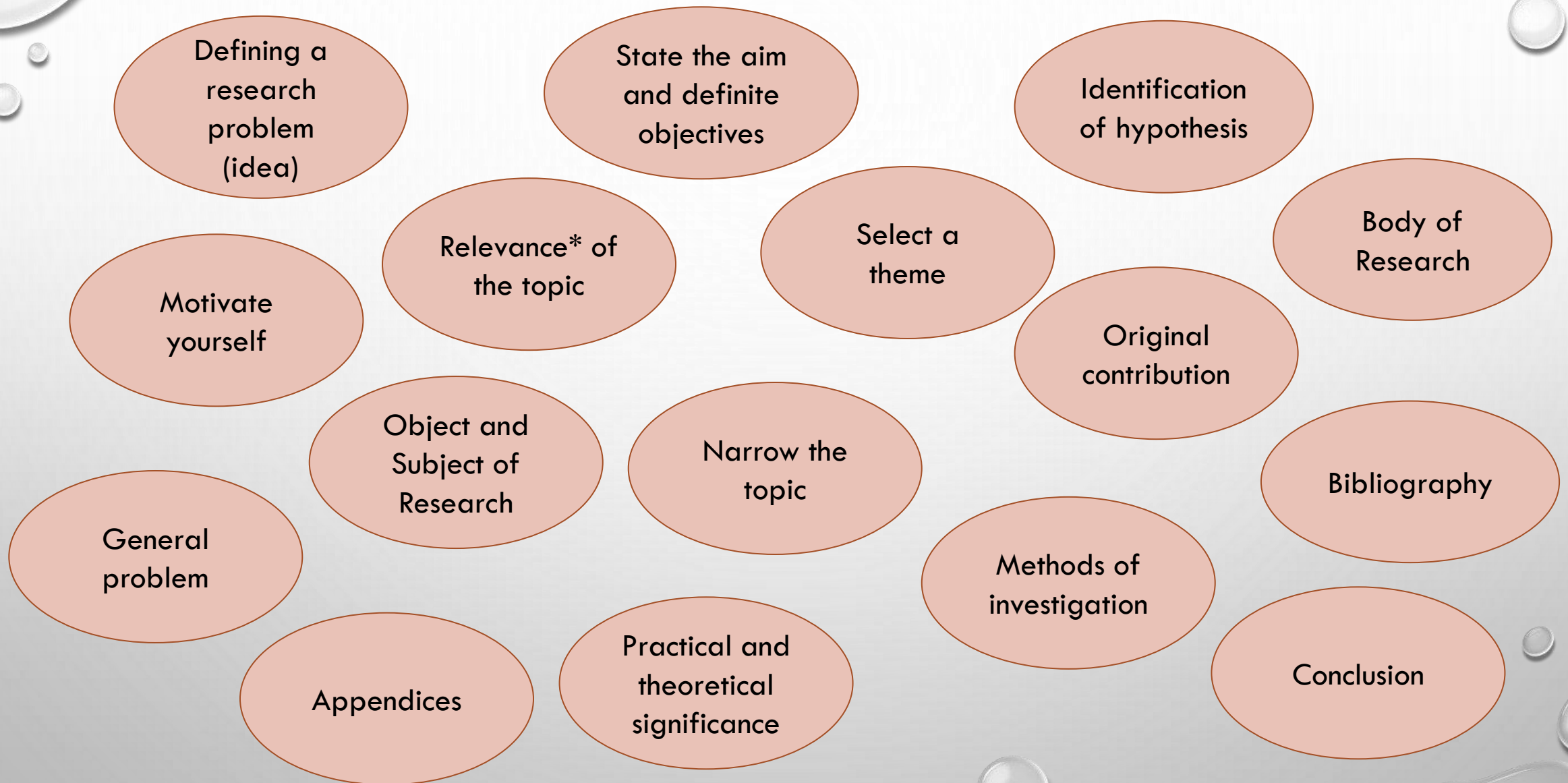


WHAT IS A RESEARCH PAPER?

It is a piece of scientific writing based on its author's original research on a particular topic, and the analysis and interpretation of the research findings. It involves crafting an organized argument based on the sophisticated analysis of current research

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STEPS FOR WRITING A RESEARCH PAPER



*relevance - актуальность



DEFINING A RESEARCH PROBLEM (IDEA)

A REAL LIFE (OBSERVING THE COMPLICATIONS AND
ISSUES IN YOUR LOCAL WORKPLACE)

THE SCHOLARLY ARENA* (REVIEWING RECENT
LITERATURE, REPORTS, OR DATABASES IN YOUR FIELD)

*scholarly arena – научная арена

• THERE ARE 2 TYPES OF MOTIVATION:

- INTRINSIC (FROM WITHIN)
- EXTRINSIC (FROM OUTSIDE)



Intrinsic

Acceptance

Curiosity

Honor

Independence

Order

Power

Social contract

Social status

Extrinsic

Employee of the month award

Benefit package

Bonuses

Organized activities

The background is a light gray gradient. In the top-left and bottom-right corners, there are several realistic-looking water droplets of various sizes, some overlapping. In the center of the slide, there is a faint, large, light-gray watermark. The watermark consists of a circular emblem with a cross in the middle, surrounded by text in a circular arrangement. Below the emblem, there is more text, possibly a motto or name, also in a circular or semi-circular arrangement.

CHOOSING A THEME

UNFORTUNATE THEME

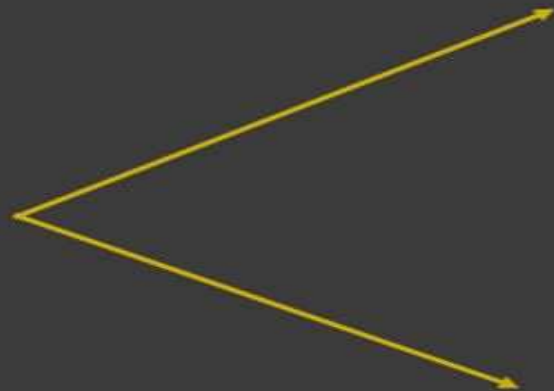


SUCCESSFUL THEME



EXISTING KNOWLEDGE & NEW KNOWLEDGE

2 Key Thrusts



Sharing existing knowledge
"Knowing what you know"

Knowledge for Innovation
"Creating and Converting"



HOW TO CONNECT...

NEW KNOWLEDGE & YOUR THEME





THE MOST COMMON PIECES OF ADVICE:

- **THINK OF SOMETHING FROM YOUR EVERYDAY LIFE;**
 - **THINK ABOUT THE TOPICS FROM YOUR COURSES, THE NEWS,
CLASSES, GROUP YOU WORK WITH;**
 - **THINK ABOUT YOUR OWN INTERESTS;**
- 



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- 

???? TOPIC ?????

OWN INTERESTS

SPHERE

DREAM



FOUR W'S

WHO?

WHERE?

WHEN?

WHAT?



WORLD WAR II



**Interests:
Technologies**



**DREAM:
CAR for riding
impassible roads**

**Subjects:
Physics
Design**

Who ?
Constructors
Designers
Travellers

Where?
Russia
The World
Everywhere
Impassible roads

A DREAM CAR

When?
1941-
1945

What?
Safety
Go-anywhere
mobility
Negotiation-ability
Design
Comfort



THEME

TANKS OF WORLD WAR II

THEME: “TANKS OF WORLD WAR II”



????? **NARROW THE TOPIC** ?????

HOW TO NARROW THE TOPIC

Why is this an important (controversial, interesting) subject?

Who are the important people involved?

Questions for narrowing the topic

What are the major issues?

How has the problem (or issue) developed? **When?**
Where?

What are my opinions regarding the topic?

TOPIC:

Tanks of WW II

TOPIC: *Tanks of WW II*

How?	When?	Who?	Where?	Why?
Development	1945	Soldiers	USSR	Battles
Technologies	1960	Tankman	Germany	Military
Industry	1943	Engineers	Great Britain	Equipment
				Armored Vehicle

TOPIC: *The development of military equipment before the key battles in the USSR exemplified by tanks.*

Who?	When?	Where?	Why?	How?
Soldiers	1945	USSR	Battles	Development
Tankman	1960	Germany	Military Equipment	Technologies
Engineers	1943	Great Britain	Armored Vehicle	Industry

RESEARCH QUESTION:

How had soviet engineers developed the industry of armored vehicles by 1943?

TOPIC:

World War II

TOPIC: *World War II*

How?

Destructions

Poverty

Spirit

When?

Today

1945

1988s

Who?

Civilians

Russian soldiers

*Members of the
government*

Where?

Russia

Germany

USA

Why?

Patriotism

Motherland

Respect

TOPIC: *The influence of Russian soldiers' spirit on patriotism*

Who?

Civilians

Russian soldiers

*Members of the
government*

When?

Today

1945

1988s

today
Where?

Russia

Germany

USA

Why?

Patriotism

Motherland

Respect

How?

Poverty

Destructions

Spirit

RESEARCH QUESTION:

*How does the spirit of Russian soldiers influence
the youth patriotism?*

OBJECT AND SUBJECT



Object

```
graph TD; Object([Object]) --- Material[Material* (human activity, the culture of particular people)]; Object --- Intangible[Intangible** (some events or things that do not have precision)];
```

Material* (human activity, the culture of particular people)

Intangible** (some events or things that do not have precision)

*material – материальный

**intangible - нематериальный

Subject



```
graph TD; A([Subject]) --- B[field of science in which the research will be conducted]; A --- C[it can be every part of your object];
```

The diagram features a central blue oval labeled 'Subject'. Two light blue speech bubbles point towards it from below. The left bubble contains the text 'field of science in which the research will be conducted', and the right bubble contains 'it can be every part of your object'. The background is light gray with several realistic water droplets of various sizes scattered around.

field of science in
which the
research will be
conducted

it can be every
part of your
object

IMPORTANT FEATURES

- an object can be both real and abstract
- a subject is included in an object
- a research paper should be based on the subject within the scope of the study

*topic: THE DEVELOPMENT OF MILITARY
EQUIPMENT BEFORE THE KEY BATTLES IN
THE USSR EXEMPLIFIED BY TANKS*

object:

military equipment in the USSR

subject:

the USSR tanks in the Great Patriotic War

topic: ***THE INFLUENCE OF RUSSIAN SOLDIERS'
SPIRIT ON PATRIOTISM***

object:

Patriotism

subject:

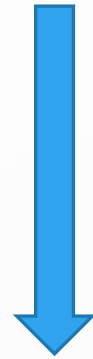
Russian soldiers' spirit

SMART Board

Writing A Hypothesis



What is the hypothesis?



**Prediction
statement**

What is the main problem for us?



Writing Good Hypotheses

Is it difficult or easy



**Learning
Targets**



- Differentiate between the independent and dependent variable.
- Write a hypothesis that includes an independent variable, dependent variable, and prediction.



TWO KEY COMPONENTS

What is IV?

What is DV?

Does chocolate cause pimples?





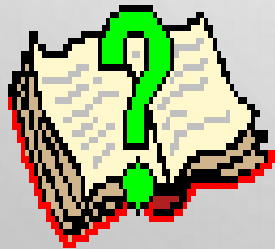
Independent variable: **Chocolate**



Dependent variable: **Pimples forming**

If I eat chocolate, then I will get pimples because butterfat and vegetable oils will clog my pores.

WRITING A HYPOTHESIS



2

**Make a
question**

3

**Independent
Variable**

1

Observation

4

**Dependent
Variable**



**Put the words or
collocations in the
correct order**

Form a Hypothesis

- **Hypothesis**- a testable explanation of an observation.
- A hypothesis is **NOT just an educated guess** about what you think will happen. It must be able to be tested!



A hypothesis often follows a basic format of
"If {this happens} then {this will happen} because..."

The basic format might be:

"If {these changes are made to a certain independent variable}, **then** we **will** observe {a change in a specific dependent variable} **because** {your prediction}"

BASIC FORMAT:

**If _____,
then _____ will
because _____.**

If you write the hypothesis correctly, then it will be easy to verify it because your hypothesis will include both a dependent and independent variables.

A Hypothesis Checklist

Does your hypothesis focus on something that you can actually test?

Does your hypothesis include both an independent and dependent variable?

Can you manipulate the variables?

Can your hypothesis be tested?

Any hypothesis will need proof.

Your audience will have to see evidence and reasons to believe your statement.

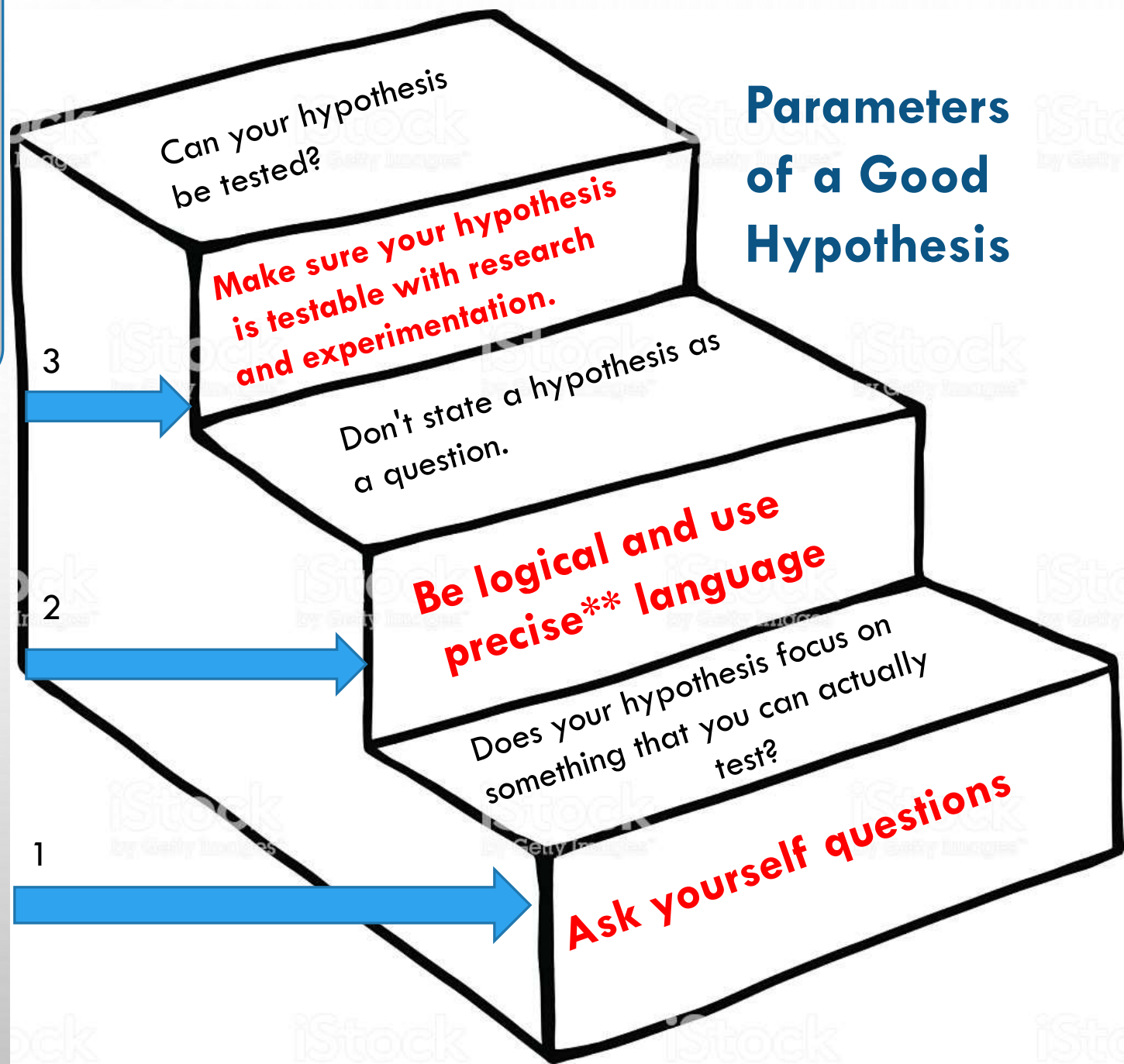
Keep your language clean and simple.
State your hypothesis as concisely*, as possible.

You believe in something, and you're seeking to prove it.

Brainstorm. Define the independent and dependent variables very specifically.

*concisely – кратко, сжато

** precise – точный, определенный, аккуратный



Attempt to write a hypothesis now!

- A hypothesis is the answer to a question
- A hypothesis is a proposal to a statement
- The word hypothesis comes from the Greek word *Hypothesis* meaning proposal. Therefore, a hypothesis is **a sentence that tries to provide a proposal or an answer to a debatable question.**
- For example....
- Question topic: **Why did my brother take part in the procession of the *Immortal Regiment** last year?**

Provide reasons for
your answers



*the *Immortal Regiment* - «Бессмертный полк»

Attempt to write a hypothesis now!

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- For example....
- Question topic: *Why did my brother take part in the procession of the Immortal Regiment last year?*
 - to honor the memory of the great-grandfather
 - to thank the grandfather for the victory
 - to observe photos of people who took part in the war
 - to march with veterans
 - to lay flowers at the eternal flame*
 - because millions of people do it
 - to spend time with his family
- A hypothesis must:
 - Attempt to provide a reason for an event
 - Be able to be justified
 - A reasonable solution to the question being asked



*the eternal flame - вечный огонь

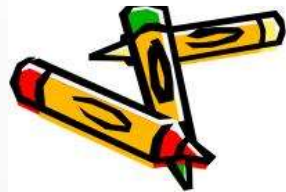
Practice Problem

Non-Testable:

Does participation in the procession of the *Immortal Regiment* affect my brother's formation of patriotism?

Testable:

How does my brother's participation in the procession of the *Immortal Regiment* influence his sense of patriotism?





*If my brother takes part in the procession of the Immortal Regiment, then he will have a feeling of patriotism because these processions lead to the understanding that people themselves create their own history, and the motives of their behaviour are determined by a patriotic public consciousness**

* МОТИВЫ ИХ ПОВЕДЕНИЯ ОПРЕДЕЛЯЮТСЯ ПАТРИОТИЧЕСКИМ ОБЩЕСТВЕННЫМ СОЗНАНИЕМ



The development
of military
equipment before
the key battles in
the USSR
exemplified by*
tanks

* на примере



SMART Board

Practice Problem

Tank factory problems

Problematic issues:

- *How did soviet engineers influence the industry of armored vehicles in 1943?*
- *How much and what kind of military equipment was produced?*
- *How did it affect the results of the war?*

Independent Variable: SOVIET ENGINEERS

Dependent Variable: THE INDUSTRY OF ARMORED VEHICLES

Hypothesis

If Soviet engineers had not developed new armored vehicles by 1943, then the consequences of the War would have been unpredictable because German armored vehicles had primacy over Russian ones.

The aim: to ANALYZE THE GERMAN AND SOVIET MILITARY EQUIPMENT IN WAR



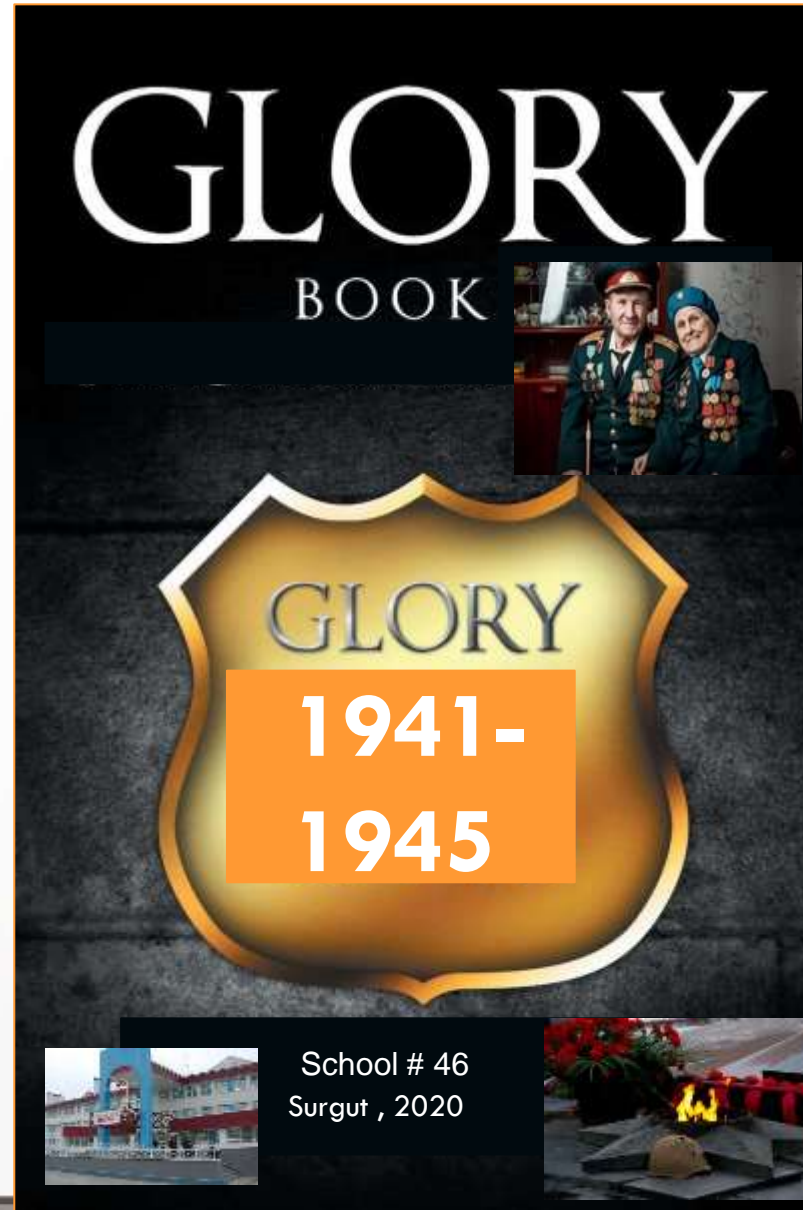
The tank industry
of the USSR in the
years of the Great
Patriotic War



A FEW EXAMPLES

If the students of our school create the Book of Glory about their great-grandparents and relatives who died, fought or worked in the rear* during the War years, they will certainly have a feeling of patriotism and pride because everyone will study the history of their own families.

* in the rear — В ТЫЛУ



To write a good hypothesis

1. Keep it simple and concise, be as specific as possible. Write the hypothesis in 1 sentence.
2. Don't use words like I, think, believe, all, never, sometimes – they make the hypothesis too broad and personalize it.
3. Make sure it can be tested by getting numerical data.

A FEW EXAMPLES

If soldiers listen to the War Songs, then it will help them strengthen their spirit* and become morally more stable because the War Songs reflect the essence** of patriotism.

*strengthen the spirit – укрепить дух;

** essence – смысл, сущность



A FEW EXAMPLES

If students are told about the Great Patriotic War, its heroes and the feat of the entire Russian people* in an accessible** and exciting way, then children will form feelings of pride and love for their Motherland and War Veterans because they will definitely want to emulate*** the War Heroes.

*the feat of the entire Russian people –
подвиг всего русского народа

**accessible – доступный

*** to emulate - следовать примеру, подражать



A good hypothesis is...

- ✓ Simple & clear
- ✓ Written as a statement
- ✓ Establishes
 - participants (who)
 - variables (what's involved)
 - prediction of an outcome (evidence)
- ✓ Testable

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