Raising Researchers

A Parent’s Guide to the Independent Investigation Method

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Why use a formal process for teaching research?

• To ensure the same learning opportunities for all students across the campus/district
• To use the same terminology in all grade levels so that students comprehend and advance their skills
• To facilitate students to become independent learners and problem solvers
All students can do research!

Using IIM, students will learn that:

• Research is a **sequential process**
• Research is used to **answer questions**
• There are many **sources** of information
• Sources must be cited using a standard format for their **bibliography**
• They need to put information in their **own words**
• Information must be **organized** for use in a product
• They should **share** what they have learned with an appropriate audience
Top 10 skills

in 2020

1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Judgment and Decision Making
8. Service Orientation
9. Negotiation
10. Cognitive Flexibility

Source: Future of Jobs Report, World Economic Forum
1. Topic
2. Goal Setting
3. Research
4. Organizing
5. Goal Evaluation
6. Product
7. Presentation
Step 1: Topic

- Researchers record information they already know (facts) and things they want to learn (questions) about a topic they have chosen or have been assigned.

TEKS:

- The student uses problem-solving skills and decision-making skills, working independently and with others, in a variety of settings.
Graphic Organizers
5th Grade Topics
(a few examples)

- Space Storms
- Genetic Mutations
- Nebulae
- Atlantis
- Wildfires
- Deep Sea
- Service Animals
- Ocean Pollution
6th Grade
Topics: Conflict, Catastrophe or Social Inequality
(a few examples)

- Japan Tsunami
- Romanian Revolution
- Fukushima
- Women's Movement of Saudi Arabia
- Chernobyl
- Vietnam War
Step 2: Goal Setting

- Researchers set goals by developing questions to guide their study. Other goals might include time management plan, key vocabulary, types of sources, and amount of information.

TEKS:
- The student generates questions and conducts research using information from various sources.
TPSP Goals

For students to be prepared to write a strong research paper and present their product at the GTA Showcase in May, the following goals are minimum expectations.

5th Grade

- 3-5 Guide Questions
- 3 Sources (2 types)
- 5-10 Glossary Words (defined then used in context)
- 15-20 notefacts per question
Step 3: Research

Researchers use a variety of resources and strategies to gather and record information, focusing on goals set in Step 2.

TEKS:

- The student reads widely for different purposes in varied resources
- The student acquires an extensive vocabulary through reading and systematic word study
- The student uses multiple sources, including print such as an encyclopedia, technology, and experts, to locate information that addresses questions
Don’t Plagiarize!

A Plagiarist is

• Uninformed
• Careless
  • Lazy
• Dishonest

Prevent plagiarism by

• Telling students what it is and not to do it.
• Modeling how to paraphrase and summarize.
  • Checking after 3-5 notefacts.
• Varying the sources and the products.
Steps to Taking Notefacts

- Each resource you use will have its own number. Put that number in the large magnifying glass and on all the small magnifying glasses next to each notefact.
- Record the required information for your bibliography on the solid lines.
- Notefacts are short (note) and true (fact).
- Notefacts should be:
  - Written in your own words
  - Short but complete enough to make sense
  - Related to your goal-setting questions
  - Written between the dotted lines – one notefact per space
  - Documented by page number
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they are usually fast.
What is a Kachina? It is a spirit, a supernatural being. (Plagiarized)

The Hopi reservation is in the middle of the Navajo reservation (Too many words)

grew corn, squash, beans, melons, made baskets, silver jewellery, pottery, lived in pueblos on mesas, had religious ceremonies in kivas (Too much in 1 notefact)

religious ceremonies (Incomplete information)
Step 4: Organizing

- Researchers organize information to allow them to analyze and interpret findings for use in a paper or project.

TEKS:

- The student applies critical-thinking skills to organize and use information acquired from a variety of sources including electronic technology.
- The student organizes information in systematic ways, including notes, charts, and labels.
- The student sequences and categorizes information.
Step 5: Goal Evaluation

- Researchers check to see if they have fulfilled the assignment requirements and evaluate the quality of their work during the first four steps.

TEKS:
- The student uses writing as a tool for learning and research.
- The student evaluates his/her own research and raises new questions for further investigation.
- The student uses a decision-making process to identify a situation that requires a decision.
Step 6: Product

- Researchers create a product to show what they have learned.

TEKS:
- The student demonstrates learning through productions and displays such as oral and written reports, murals, and dramatizations.
5th Grade
TPSP: Story Quilt

• Students work collaboratively to plan, design, and sew a quilt based on their research.
• Students choose colors and patterns of fabric to represent various themes of their research.
• Group Dynamics skills are important during this process.
6th Grade
TPSP: Global Impact

- Product Choice:
  - Ted Talk
  - Community Awareness Event
  - Scrapbook
- Map (tech based or poster)
- 3 Artifacts/ Souvenirs
  - one created by student
- Country Flag Banner
- Showcase Presentation / Elevator Speech
Step 7: Presentation

- Researchers present their findings to an appropriate audience.

**TEKS:**
- The student communicates effectively in written, oral, and visual forms.
Timeline: 5th Grade

- October – Whole Class Intro to IIM
- November – Choose Topic & Generate Guide Questions
- November / December – Research in Science
- **December 17th – Notefacts Due**
- December 18-20 – Organize Notefacts in Humanities
- January – Group Dynamics Lessons / Write Rough Draft in Humanities
- **February 1st – Rough Draft Due**
- February – Peer Editing & Revisions
- **February 15th – Final Copy Paper Due**
- February – Plan Quilt
- March / April – Sew Quilts
- **May 1st – GTA Student Showcase @ ESC**
TPSP Timeline: 6th Grade

- September – Choose Topic & Create Guide Questions
- October – IIM Refresher
- October / November – Research in World Cultures class
- November – Organize Notefacts / Develop Thesis Statement
- December – Write Rough Draft in ELA class
- December 21st – Rough Draft Due
- January – Edit / Revise
- January 25th – Final Copy Due
- February – Product Development
- March 18th – Event Deadline
- April 22nd – Elevator Pitch Due
- May 1st – GTA Student Showcase @ ESC
How Can Parents Support Their Child With TPSP?

• Help locate appropriate resources
  – Take to the library
  – Print out articles

• Ask probing questions about his/her topic

• Praise effort, progress, and ability to work with a group

• Give due date reminders

• Encourage student to communicate with teachers when questions / problems arise

• Another link for IIM information:
  http://www.smore.com/kbq3n-iim-research