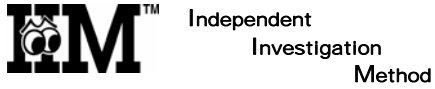


**Put Rigor in Your Secondary Curriculum
with Authentic Research Studies** ¹



**Presented by
Virginia Morse & Cindy Nottage**



**CHOOSE A MODEL THAT
WORKS FOR YOU!** ²



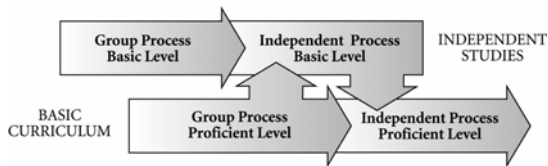
**Big 6
I-Search
Your Own Process**

*Note: Each model should have
consistent vocabulary and be
aligned with state standards.*

A K-12 RESEARCH MODEL FOR ALL ABILITY STUDENTS ³



**Independent Investigation Method:
The Model**



IIM⁴: Independent Investigation Method

A PROVEN MODEL

Standards-based

For all ability students

Meets different learning styles

Teaches authentic life-long skills

Works with all basic subject areas

Connects with other teaching initiatives

Gets kids excited about learning

Ways to Prevent Plagiarism When⁵
Requiring a Written Product

Process

Plagiarism

Resources

WEBSITE IDEAS:
www.iimresearch.com/teacher_lounge

Products



Topic – Laying the⁶
Groundwork

Teaching research goes more smoothly by planning ahead, designing key questions that frame the study, and introducing the research process vocabulary and steps to students. TEKS Language Arts

The student generates questions and conducts research using information from various sources.

TEACHER PREP WORK AT STEP 1- TOPIC

Prep Step: Laying the Groundwork

7

You can:

- Plan the time frame for the study
- Introduce the research process vocabulary & steps
- Write Essential Questions, if this is a class unit of study
- Teach research design components
- Choose strategies to be used and/or need to be taught at each step
- Choose grading procedure and present to students
- Plan an interdisciplinary assignment with a colleague
- Arrange for immersion activities
- Decide on research outcome(s) – position paper, creative writing, hands-on, performance

The 7 Steps of the Independent Investigation Method

8



 **Prep Step**



9

TEACHER/ESSENTIAL QUESTION(S)

At the end of the unit, what are the ESSENTIAL understandings each student should have?

1. Check state standards
2. Look at your curriculum guide
3. Student interest
4. Other ideas?

FOR THIS UNIT

What are the environmental and cultural effects of a NATURAL DISASTER?

10-11

Designing a Research Study

Types of Research

I. *Descriptive* *“How are things now?”*

II. *Historical* *“How did things used to be?”*

III. *Experimental* *“What if...?” “What is the effect of ...?”*

12

STEP 1 Topic

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

TEKS Social Studies Skills

The student uses problem-solving and decision-making skills, working independently and with others, in a variety of settings.

STUDENT WORK AT STEP 1 – TOPIC

13

STEP 1 Topic

You can:

- Raise controversial issue about class unit topic
- Distribute interest center materials for class browsing
- Dress-up for role play (John Adams, Harriet Beecher Stowe)
- Choose topics from common pre-reading – Textbook chapter, etc.
- Plan a speaker or field trip
- Make class concept map of unit topic
- Combine literature with other subject area – SS, math, science
- Use information from one study (biomes) as foundation for next (geology)
- Have curriculum content (geology) and tested skills (narratives) drive study

Students can:

- Choose from teacher list
- Participate in a “Ques-Cussion”
- Do a “Quick Write” about topic
- Conduct a presearch of targeted reading to narrow topic
- Record prior knowledge and questions on concept map

Pursue areas of passionate interest in depth within topics of study 14

**THE HOOK!
(WHAT INVITES STUDENTS TO LEARN?)**

- An interest center
- Make a display of pictures/ newspaper clippings/magazine articles
- Invite an expert to make a presentation – meteorologist, volcanologist, physician...
- Show a video about natural disasters

QUES-CUSSION 15

Ques Cussion - an immersion activity that connects students' prior knowledge and interests with the class unit. Our unit is Natural Disasters. The teacher introduces the topic with a video, a literature passage, and current events related to natural disasters. Now the class will work in small groups for a **Ques Cussion**. The teacher begins with a starter question. A student will respond with another question that relates to the first. No answers or statements are allowed. Each group has a recorder to write down all the questions. The timer is set for 5 0minutes. Students choose their favorite question to share. This leads students to choose independent topics that they have some passion about.

STEP 1 Topic Presearch 16

| | |
|------------------|--|
| Area of Interest | 2004 tsunami |
| Possible Topic | Information, Ide |
| Diseases | Who controlled? Who |
| Outcomes | Long term effects? Bad ones? Any positive outcomes? |
| World Response | Offering \$. Services? Any looting? |

Use this form to write ideas about your topic.



Goal setting

18

Researchers set goals by developing questions to guide their study. Other goals might include a time management plan, types of resources, and amount of information and key vocabulary words to be gathered.

TEKS English Language Arts and Reading

The student forms and revises questions for investigations, including questions from reading, assignments, and units of study.



Goal Setting

19

You can:

- Design and post broad Essential (Teacher Questions) from local, state, and/or national standards as foundation of unit and student research
- Give specific goals for amount and type of resources, and number of notefacts and glossary entries
- Require research and focus questions beyond knowledge level
- Model the use of opinion questions that encourage analysis of information

Students can:

- Develop research questions based on topic and Essential (Teacher Questions)
- Write sub-questions (focus questions) to guide research
- Use activities to vary types and levels of focus questions: cubes, spinner, question starters, Blooms



Goal Setting

20

IIM Goal Setting at the Proficient Level

Class Unit: Natural Disasters

Student Topic: December 26, 2004 tsunami

Teacher (Essential) Question:

What are the environmental and cultural effects of a natural disaster?

Research Question:

What benefits, if any, may result from the December 26, 2004 tsunami?

Notefact # Goal: 75

Glossary Entry # Goal: 15

Resource # Goal: 4

Primary Source # Goal: 1

Resource Type Requirements:

Book, Internet, Primary source

Research Question: What benefits, if any, may result from the 2004 Tsunami?

Focus Questions:

A. STUDENT QUESTIONS GO HERE

Good Questions Cubes

Cube 1



Cube 2

22

Who
What/Which
Why
When
Where
How

Can
Would
Is
Will
Might
Did



23

You can also add or substitute the **GREEN** words to get new ideas.

Predict
Analyze
Verify
Compare
Contrast
List

Workshop idea: Jann Leppien – University of Great Falls, MT

GOOD QUESTIONS CUBES 24
ACTIVITY



AT YOUR TABLE, USE YOUR CUBES TO WRITE AS MANY DIFFERENT FOCUS QUESTIONS AS YOUR GROUP CAN THINK OF FOR YOUR RESEARCH QUESTION:

Based on a study of the 2004 disaster, what benefits, if any, might result from a tsunami?

STEP 2 Goal Setting – Proficient Level

25

Research Question: What benefits, if any, may result from the December 26, 2004 tsunami?

Focus Questions:

- A. Where was the greatest devastation? Casualty rates?
- B. How was the environment affected?
- C. What effects did the tsunami have on the people?
- D. When the world heard the news, how did countries/individuals respond?
- E. Predict which outcomes from the disaster might be positive?

STEP 3

Research

26

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

TX - English Language Arts and Reading

The student:

- reads widely for different purposes
- acquires an extensive vocabulary
- represents text information in different ways
- listens actively and purposefully

You can:

- Teach students to take notes from a variety of sources
- Teach about different types of plagiarism and how to avoid it
- Tell students you can track plagiarism on Internet sites
- Bookmark Internet sites – be sure to preview them
- Partner with the librarian, G/T specialist, computer teacher or teachers from other disciplines
- Help students identify key words for library or Internet search

Students can:

- Use different formats for notefacts – cards, charts, grids . . .
- Attach copies of Internet/Encarta articles to final paper
- Write observation, opinion, new idea at bottom/back of card or beside notefact in different color ink
- Practice notetaking in other assignments
- Use highlighter tape to highlight key words in books
- Write glossary words on source cards

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.

WEBSITE IDEAS:

www.iimresearch.com/teacher_lounge

Why Cite Your Sources?

- Give credit to the author/creator
- Share your sources with other researchers
- Prove the authenticity of your sources
- Allow others to validate your information

FREE ELECTRONIC CITATION SITES

www.citationmachine.net

www.noodletools.com

www.easybib.com

www.oslis.k12.or.us/secondary/

Taking Notefacts on Note Cards

- **SOURCE CARD FORMAT**
 - In upper right, put number to identify source (#1, #2, etc); make one card per source
 - Use MLA or APA format to record source information
 - Record if it is a primary source
- **NOTEFACT CARD FORMAT**
 - In upper right, put # of source and letter of *Focus Question* (A, B, C, etc.)
 - Write notefacts about that *Focus Question*
 - Record number of notefacts in lower left
- **HOW TO WRITE NOTEFACTS**
 - Paraphrase information
 - Keep notefacts short, but complete enough to make sense
 - Write page number from source beside notefact
 - Add your opinions/ideas in different color

HANDOUT

Organizing

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

TEKS Social Studies Skills

The student applies critical-thinking skills to organize and use information acquired from a variety of sources including technology.

Organizing

You can:

- Give credit for supplementary notefacts not necessary to support thesis statement
- Assign graphic organizer to organize thinking
- Post graphic organizers as learning tool for other students about different unit topics

Students can:

- Organize notefacts by focus question
- Identify sub-categories for large body of information
- Develop thesis statement from categorized notefacts
- Identify notefacts essential to proving thesis statement
- Represent information on graphic organizer
- Present thesis statement and graphic representation to classmates

Organizing, Analyzing, and Interpreting Research Data

- Sort notefact cards by focus questions
- Thinking about your **Research Question** and the notefacts you have taken, write a **thesis statement** you want to prove in your paper/product.
- Separate notefacts **essential** to proving your thesis statement from **supplementary** notefacts.
- Using your **essential** notefacts, choose narrower categories if necessary.
- Conduct further research if needed to support your thesis statement.
- Organize your data on a graphic organizer.

Manual p.147

Developing a Sound Thesis

A good thesis should:

- **Be one (1) arguable point**
- **Your opinion in statement form – not a question**
- **Restricted to ideas you intend to discuss**
- **Have unity – a single purpose**

Summarized from *12 Easy Steps to Successful Research Papers* by Neil W. Meriwether. NTC Publishing Group, 1997.

Goal Evaluation

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

TEKS English Language Arts and Reading

The student:

- **uses writing as a tool for learning and research**
- **evaluates his/her own research and raises new questions for further investigations.**

You can:

- Check new vocabulary through written paragraph, poem, acrostic, riddle . . .
- Use Teacher Questions for open ended test
- Use rubric to evaluate process

Students can:

- Write paragraph about one focus question
- Write position statement and supporting paragraph
- Play class game to share/review information
- Reflect on the process of being a researcher

ASSESSMENT IDEAS

- IIM Goal Evaluation page
- Glossary Activity
- Paragraph writing
- Visual representation of facts
- Test related to Essential Question
- Whole class review

"Speaking Of"

(The purpose is to have students use what they have learned to connect with what other students have learned.)

Everyone in the class stands up. The goal of the game is not to be the last to sit down. The teacher begins by speaking about the class unit. When a student makes a connection with his own topic, he says "speaking of _____" (what the connecting term is) and continues talking about that until another student says "speaking of". Then the first student sits down. The game continues until there is only one student left standing.



Product

45

Researchers write papers and create projects to show what they have learned.

TEKS Social Studies Skills

The student communicates in written, oral, and visual forms.

TEKS English Language Arts and Reading

The student produces visual images, messages, and meanings that communicate with others.



Product

46

You can:

- Set standards for quality product on rubric/checklist
- Assign one product type to all students
- Vary products to address different talents/learning styles
- Assign different types of writing that require understanding of notes and eliminate plagiarism (poetry, play, fiction, autobiography, journal, letters, personal narrative, persuasive essay, instructional writing)

Students can:

- Write research paper/report
- Choose from variety of product types to match topic and audience
- Use rubric criteria to design quality product



Product

48

Developing a Product

AUDIENCE

| | | | |
|-------------|--------------|-----------|------------|
| Business | Competition | Community | Government |
| Parents | Professional | Publisher | School |
| Other _____ | | | |

PRODUCT CHOICE

Action: Campaign, dance, debate, demonstration, lesson, performance

Collection: art gallery, exhibit, learning center, list, portfolio, scrapbook

Model: costume, invention, musical instrument, puppet, reproduction

Technology: animation, audio/video tape, photography, web page,

Visual Representation: artwork, brochure, cartoon, collage, graph, map

Written Work: book, diary, editorial, letter, news article, poem, report, script



Presentation

49

Researchers present their findings to an appropriate audience.

TEKS English Language Arts and Reading

The student speaks clearly and appropriately to different audiences for different purposes and occasions.



Presentation

50

You can:

- Set up venue to feature student work: museum, theater, courtroom, laboratory
- Set quality presentation standards on rubric/checklist
- Give test based on information from all presentations

Students can:

- Identify proper audience for product
- Practice necessary skills
- Record information from other students' presentations on study guide based on Teacher Questions

54



Active Learning Systems is an educational publishing and consulting company. In 1985, Cindy Nottage and Virginia Morse developed the Independent Investigation Method (IIM), a research process for students in grades K-12, for use in their own classes. In 1992, to meet the demand for training in the model, they founded Active Learning Systems. The company now publishes and sells a variety of IIM materials and provides training for educators internationally. For a complete listing of their materials and training options, visit their website.

www.iimresearch.com

Want to get in touch with us? 55

- CALL: 1-800-644-5059
- E-MAIL: info@iimresearch.com
- CHECK OUT OUR WEBSITE
www.iimresearch.com
- ORDERING OR SHIPPING INFO

Call Kim at the 800 #.

(Be sure to use your 10% off code "TAGT" when ordering from the office)

We love to hear from you – problems, successes, just to chat.
