

Independent Study:

Section 6

INTRODUCTION

Independent study involves skills that enable learners to gather and manipulate information and to communicate the results to others. Skills of independent study may be taught in “large-group” situations (e.g., whole class), to small groups of students, or to one student at a time. The skills should be taught and then practiced with guidance to ensure that students are able to pursue independent study projects “on their own.”

The suggested sequence of stages that follows is intended as a framework for educators and students. It provides a structure which is easily adapted by educators and is easily communicated to students. A well-articulated framework will help students to gain skills of independent study so that they may successfully engage in investigations of their own.

Educators should be flexible in implementing a sequenced model, however, because “real” investigations do not usually proceed along a predetermined course. A sequenced model is useful in providing students with a general “game plan,” but it must remain flexible enough to meet the conditions of each individual pursuit. As students become increasingly proficient with their investigations, they should be encouraged to develop methods of pursuit that best suit the individual. Differing methods of investigation should be supported to the degree that they are successful. Catering to the specialized needs and abilities of each individual underscores successful implementation of this program.

How To Use This Section

This section of the curriculum guide begins with suggested guidelines that assist in the development and implementation of an independent study skills program. The guidelines are followed by a list of suggested stages of independent study. Independent school districts are encouraged to adapt the guidelines and stages to be responsive to local conditions and goals.

Following the guidelines and suggested stages, each stage is presented within a repeating structure. Each stage of independent study includes a teacher planning sheet with student outcomes and possible activities and four activity pages (A-D). Each activity page includes a brief explanation for the teacher at the top of the page and a sample activity for students at the bottom of the page. The *target outcome* for each stage appears as activity #D. Activity #D is followed by a guided self-critique called the Cooperative Review. Educators are encouraged to substitute and/or adapt the objectives, activities, and review forms as the model is “shaped” to support local goals.

SUGGESTED GUIDELINES FOR INDEPENDENT STUDY PROGRAMS

The following guidelines serve as recommendations for establishing, implementing, and maintaining an independent study program. The guidelines are as follows:

1. Skills of independent study are appropriately introduced through “whole-group” instruction.
2. Fostering *skills/ student outcomes* through direct instruction is the primary focus of the program.
3. Student outcomes and possible activities are clearly explained to students and supported through print matter/ visual aids.
4. Each stage of independent study is small enough to ensure successful completion.
5. Student progress is evaluated at each stage through clearly stated, observable outcomes.
6. Self-selection of the topic is key to student success.
7. *One* common independent study program is used across the academic disciplines.
8. An independent study model will serve as a foundation for students wishing to develop diverse methods of investigation. Flexibility should guide implementation.

SUGGESTED STAGES OF INDEPENDENT STUDY

Below is a list of stages that will help students to investigate areas that genuinely interest them through a course of independent study. Each stage serves as a temporary “stepping-stone” for students wishing to explore ideas and conduct investigations. Educators are encouraged to adapt the stages to reflect the learning conditions and goals within their educational communities. The stages are as follows:

Stage 1: Select A Topic

Stage 2: State A Challenge

Stage 3: Develop A Plan

Stage 4: Gather Information

Stage 5: Organize & Present The Findings

(Note: On the following pages, each stage is explained in detail.)

STUDENT OUTCOMES FOR STAGE 1

SELECT A TOPIC

Stage I of independent study will help students to: (A) consider existing topics for possible investigation; (B) generate many, varied topics for possible study; (C) discover and organize ideas related to several interesting topics; and/or (D) select a topic of genuine interest for further study. If a topic has already been selected, this stage should be omitted. A list of suggested outcomes and sample activities is provided below. Sample activities and instructional resources appear on the pages that follow.

| Stage 1 Planning - Select A Topic | | |
|-----------------------------------|--|---|
| Student Outcomes | Activities | |
| 1A | review and consider existing topics for possible investigation | by reviewing <i>Topic Starter Ideas</i> |
| 1B | generate many, varied topics for possible study | by applying the <i>Rules of Brainstorming</i> in a small-group or individual setting |
| 1C | access information sources and organize ideas related to several interesting topics | by exploring information sources and constructing <i>Tree Charts</i> using interesting topics |
| 1D | use criteria to select a topic of genuine interest for further study * target outcome | by rating several interesting topics using a <i>Topic Selection Grid</i> |

Independent Study

Stage 1 Warm-up: Preview Stage 1 Activities

Previewing Stage 1 activities will help students develop an awareness of the expected student outcomes and of the activities for Stage 1 of independent study. Students are to obtain a Cooperative Review and read the student outcomes in this stage. Next, they are to review the instructional materials that will assist them in completing each of the activities. This "warm-up" serves to familiarize students with Stage 1 before they begin their tasks. Sample instructional materials appear on the following pages.

| | |
|-------|--------------------------|
| Name: | <h3>Stage 1 Warm-up</h3> |
| Date: | |

Familiarize yourself with Stage 1 activities. Read the *outcomes* and *activities* listed on the Cooperative Review while looking over the available materials that are pictured below. Begin thinking about the activities that you will be involved with during this stage.

**ACTIVITIES FOR
STAGE I:
SELECT A TOPIC**

```
graph TD; 1A[1A Topic Starter-Ideas] --- 1B[1B Rules of Brainstorming]; 1B --- 1C[1C Tree Charts]; 1C --- 1D[1D Topic Selection Grid];
```

| | |
|-----------------|----------------------|
| 1D | Topic Selection Grid |
| *target outcome | |

| | |
|----|-------------|
| 1C | Tree Charts |
|----|-------------|

| | |
|----|------------------------|
| 1B | Rules of Brainstorming |
|----|------------------------|

| | |
|----|---------------------|
| 1A | Topic Starter-Ideas |
|----|---------------------|

Activity 1A

Topic Starter Ideas are provided in order to help students begin considering the types of topics in which students might be interested. Ideally, *Topic Starter Ideas* would be a document that students could add to. A chart on the wall, a page in a notebook, or an electronic file of ideas on a computer diskette could be used to supplement the starter-ideas listed below.

| | | |
|--|----------------------------|-----------------------|
| Name: Date: | Topic Starter-Ideas | 1A |
| <p>Review this list of topics and begin to consider the topics that you might like to investigate. As you review the list, place a check (✓) next to those ideas that really interest you. (If your teacher has a list of Topic-Ideas available, please review it instead of this page. It will have many more starter-ideas. List those that interest you on a piece of paper.)</p> | | |
| Aging | Flight | Occupations |
| Animals | Geology | Patterns |
| Archeology | Habitats | Personality |
| Athletes | Human Development | Physics |
| Botany | Intelligence | Space |
| Bicycles | Kayaks | Structures |
| Canada | Laws | Survival |
| Change | Leisure | Thinking |
| Chaos | Literature | Topography |
| Community | Mexico | Toys |
| Detectives | Monsters | United States History |
| Disasters | Myths | Valor |
| Earth Science | Mysteries | War |
| Ethnic Groups | Nations | Wolves |
| Famous People/Events | Oceanography | Zoology |

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Activity 1B

Brainstorming is a process that can be used to generate a large quantity of ideas. While brainstorming, individuals should focus on quantity -- not quality. Generating a quantity of ideas at the start of a project will increase the likelihood of arriving at several ideas of quality. Searching for ideas of merit through the use of critical thinking will be accomplished more efficiently after a sampling of many ideas is available from which to select. In this activity, students are to generate many, varied topics for possible study.

| | | |
|---|-------------------------------|-----------|
| Name: Date: | Rules of Brainstorming | 1B |
| <p>Now that you have considered ideas that were listed by others, it is time to develop many ideas of your own. The more possible topics you can generate, the greater the likelihood that you will end up with several ideas that are fabulous.</p> <p>Apply the "Rules Of Brainstorming" as you generate <i>many, original</i> possible topics to explore through independent study. (If your teacher has "Topic Starter Ideas" on disk, brainstorm at the computer. Start by adding your first word at the end of the teacher's list and pressing return after each word that you enter. When you have brainstormed many of your own ideas, spell check them and print them. Then use your computer to sort them alphabetically and to merge them with the original list.)</p> <p style="text-align: center;"><u>Guidelines for Effective Brainstorming</u></p> <p style="text-align: center;">Avoid all criticism and judgment. This will help you to free your mind to develop lots of ideas.</p> <p style="text-align: center;">Generate as many ideas as possible. Quantity is the goal of brainstorming. We'll look for quality, later.</p> <p style="text-align: center;">Zany, wild, silly ideas are welcome. Zany ideas will open up new avenues of thought for more ideas.</p> <p style="text-align: center;">Combine ideas and take off on the ideas of others.</p> | | |

Activity 1C

Graphic organizers allow students to structure information visually. By mapping out information on a tree chart, students develop an awareness of relationships among the various segments of information. Activity C asks students to organize ideas regarding several of their most promising topics generated in Activities 1A and/or 1B.

| | | |
|--|--------------------|-----------|
| Name: Date: | Tree Charts | 1C |
| <p>Select several (2-5) of your favorite topics from Activity 1A and Activity 1B and find out a little bit about each one. As you investigate, map out your discoveries using tree charts (or concept webs) like the sample shown on this page. You may conduct interviews, review magazine articles, view a filmstrip, or access a CD ROM/ another form of electronic database. Explore several sources of information and have fun exploring topics that interest you.</p> | | |
| <pre>graph TD; A[topic a:] --- B[]; B --- C[]; B --- D[]; C --- E[]; C --- F[]; C --- G[]; D --- H[]; D --- I[]</pre> | | |

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Activity 1D Target Outcome

After students have explored several topics of interest, they will select a topic to pursue in more depth. The topic selection grid will assist students in making informed decisions by allowing them to critique each topic based on selected criteria. Several suggested criteria appear on the grid; however, teachers and/or students may wish to substitute criteria that address their needs more accurately. The totals are meant to serve as indicators that will help students make informed decisions. The highest total does not dictate student choice, as each criterion is open to interpretation and may be unequal in value to the other criteria.

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|----------------------------|--|--|--|--|--|----|--|--|--|--|--|----|--|--|--|--|--|----|--|--|--|--|--|--|
| Name: Date: | Topic Selection Grid | 1D | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>List the topics that you are considering for your independent study project in the column on the left of the chart. Review each criterion at the top of the chart or substitute more appropriate criteria with the help of your teacher. Then rate each topic from 1 - 5 (low - high) working your way down (not across) each column. When you have finished rating, add the totals across. Use the totals and the individual ratings to help you make an informed decision about which topic to investigate. You do not necessarily have to select the topic with the highest score, but you should be able to defend your choice.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S E L E C T I O N | <p>1. available information</p> <hr/> <p>2. appropriately complex materials</p> <hr/> <p>3. interesting for the learner</p> <hr/> <p>4. potentially useful findings</p> | T O T A L S | | | | | | | | | | | | | | | | | | | | | | | | |
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| 1. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. | | | | | | | | | | | | | | | | | | | | | | | | | | |

Stage 1 Cooperative Review

At the beginning of each stage of independent study, a student will obtain a Cooperative Review, complete the name and starting date, read the outcomes, and review the support materials. As each activity is completed, the student will attach all work to the Cooperative Review and critique all progress. After the final activity of the stage is completed, the student will offer subjective comments at the bottom of the Cooperative Review and will confer with the teacher before progressing to the next stage. At the end of each stage of independent study, the teacher may find it helpful to designate a grade, point value, or other evaluative feedback. This allows the student to acquire a great deal of credit/feedback prior to the final product.

| Stage 1 Cooperative Review | | | | | | | | |
|---|--|--|--|---|-----|---|----|-----|
| student name: | | starting date: | | critique | | | | |
| schedule | | student outcomes | | na | nsh | g | vg | grt |
| 1A | Topic Starter-Ideas ____/____/____ | I reviewed and considered existing topics for possible investigation | | | | | | |
| 1B | Rules of Brainstorming ____/____/____ | I generated many, varied topics for possible investigation. | | | | | | |
| 1C | Tree Charts ____/____/____ | I accessed information sources and organized ideas related to several interesting topics | | | | | | |
| 1D | Topic Selection Grid ____/____/____ | I used criteria to select a topic of genuine interest. *target outcome | | | | | | |
| student comments: | | | | teacher comments: | | | | |
| <ul style="list-style-type: none"> • • • | | | | <ul style="list-style-type: none"> • • • | | | | |
| student signature: _____ | | | | teacher signature: _____ | | | | |
| conference date: ____/____/____ | | | | ✓ Please attach all work. | | | | |

STUDENT OUTCOMES FOR STAGE 2

STATE A CHALLENGE

Stage 2 of independent study will help students to: (A) review sample research questions; (B) generate many, varied questions for possible study; (C) refine several questions into hypotheses; and/or (D) use criteria to select a challenge of genuine interest for further study. If a challenge has already been selected, this stage should be omitted. A list of suggested outcomes and sample activities is provided below. Sample activities and instructional resources appear on the pages that follow.

| Stage 2 Planning - State A Challenge | |
|--------------------------------------|---|
| Student Outcomes | Activities |
| 2A | review sample research questions by reviewing <i>Question Starter Ideas</i> |
| 2B | generate many, varied questions for possible study by developing <i>Exploratory Questions</i> in a variety of categories |
| 2C | refine several questions into hypotheses by applying <i>Hypotheses Guidelines</i> |
| 2D | use criteria to select a challenge of genuine interest for further study * target outcome by rating several interesting challenges (questions and hypotheses) using a <i>Challenge Selection Grid</i> |

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Stage 2 Warm-up: Preview Stage 2 Activities

Previewing Stage 2 activities will help students develop an awareness of the expected student outcomes and of the activities for Stage 2 of independent study. Students are to obtain a Cooperative Review and read the student outcomes in this stage. Next, they are to review the instructional materials that will assist them in completing each of the activities. This "warm-up" serves to familiarize students with Stage 2 before they begin their tasks. Sample instructional materials appear on the following pages.

| | |
|-------|--------------------------|
| Name: | <h2>Stage 2 Warm-up</h2> |
| Date: | |

Familiarize yourself with Stage 2 activities. Read the *outcomes* and *activities* listed on the Cooperative Review while looking over the available materials that are pictured below. Begin thinking about the activities that you will be involved with during this stage.

**ACTIVITIES FOR
STAGE 2:
STATE A CHALLENGE**

2D

Challenge Selection Grid

*target outcome

2C

Hypotheses Guidelines

2B

Exploratory Questions

2A

Question Starter-Ideas

Activity 2A

Question Starter Ideas are provided in order to help students begin considering the types of questions in which they might be interested. The sample questions listed in this activity are related to the Topic Starter Ideas in Activity 1A.

| | | |
|--|---|-----------|
| Name: Date: | Review Sample Questions | 2A |
| <p>Review the sample questions listed below. As you review these samples, you may begin to develop ideas for questions relating to your topic.</p> | | |
| <p>Who?</p> <ul style="list-style-type: none"> • Who are the leaders in our community? • Who is a master of survival? • Who are the best writers of all time? • Who enters different occupations? | <p>What?</p> <ul style="list-style-type: none"> • What is the same about ethnic groups? • What is chaos? • What causes aging? • What patterns exist in nature? | |
| <p>When?</p> <ul style="list-style-type: none"> • When do athletes retire? • When were myths used to educate? • When did our country's topography change? | <p>Where?</p> <ul style="list-style-type: none"> • Where are monsters still thought to live? • Where do disasters occur frequently? • Where do people live longest? • Where have structures survived longest? | |
| <p>Why?</p> <ul style="list-style-type: none"> • Why has bicycling become very popular? • Why does one's personality change? • Why do some occupations pay more? | <p>How?</p> <ul style="list-style-type: none"> • How are toys invented? • How do wolves relate? • How does intelligence develop? • How do human habitats change? | |
| <p>What would happen if?</p> <ul style="list-style-type: none"> • WWHI the aging process changed? • WWHI the oceans were used as the only food source? • WWHI leisure time doubled? | <p>In what ways might I?</p> <ul style="list-style-type: none"> • IWWMI control the aging process? • IWWMI use a structure found in nature? • IWWMI learn to be a better thinker? • IWWMI discover/develop my ethnicity? | |

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Activity 2B

Activity 2B serves to help students develop a variety of exploratory questions that are related to the topic that was selected in Stage 1. Through quantity and variety, students increase the likelihood of discovering a question of genuine interest. Students are to apply the rules of brainstorming (Activity 1B) as they complete this activity.

| | | |
|---|---|-----------|
| Name: Date: | Exploratory Questions | 2B |
| <p>Apply the rules of brainstorming (Activity 1B) as you develop at least several questions in each of the eight following categories. Every question should relate to your selected topic.</p> | | |
| Who? | What? | |
| <ul style="list-style-type: none">•••• | <ul style="list-style-type: none">•••• | |
| When? | Where? | |
| <ul style="list-style-type: none">•••• | <ul style="list-style-type: none">•••• | |
| Why? | How? | |
| <ul style="list-style-type: none">•••• | <ul style="list-style-type: none">•••• | |
| What would happen if? | In what ways might I? | |
| <ul style="list-style-type: none">•••• | <ul style="list-style-type: none">•••• | |

Activity 2C

Once students have developed many varied questions, they may find it helpful to refine selected questions into hypotheses. By doing so, they may increase the exactness of the question, and in turn, narrow their investigation. Guidelines to assist in the development of hypotheses are presented below.

| | | |
|--|------------------------------|-----------|
| Name: Date: | Hypotheses Guidelines | 2C |
| <p>Review the questions that you generated in Activity 2B and select those that are most appealing. List several of them below and adapt them into hypotheses. Several sample questions and hypotheses are listed to help you get started. Use the hypotheses guidelines at the bottom of this page to make sure that each hypothesis is written correctly. Remember, not all questions will work well as hypotheses.</p> <p><u>Questions from Activity 2A:</u></p> <ul style="list-style-type: none"> • Why has bicycling become very popular? • Where do people live longest? • Why do some occupations pay more than others? <p><u>Sample Hypotheses:</u></p> <ol style="list-style-type: none"> 1. Increases in expendable income are related to increases in sporting goods purchases. 2. Low levels of technology are related to long life spans. 3. Increased educational requirements are related to increased levels of income. <p><u>Questions from Activity 2B:</u></p> <ul style="list-style-type: none"> • • • <p><u>Sample Hypotheses:</u></p> <ol style="list-style-type: none"> 1. 2. 3. <p><u>Hypothesis Guidelines:</u></p> <ol style="list-style-type: none"> 1. states an expected relationship or difference between two or more variables, 2. is grounded in theory or previous research, 3. is a concise statement, and 4. is testable. | | |

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Activity 2D Target Outcome

After students have explored various questions and hypotheses, they will select one to pursue. The Challenge Selection Grid will assist students in making informed decisions by allowing them to critique each challenge based on selected criteria. Several suggested criteria appear on the grid; however, students may wish to substitute criteria that address their needs more accurately. The totals are meant to serve as indicators to help students make informed decisions. The highest total does not dictate student choice, as each criterion is open to interpretation and may be unequal in value to other criteria.

| Name: Date: | | Select A Challenge | | | | 2D | |
|---|----|--|--|--|--|-----------|--|
| | | * target outcome | | | | | |
| <p>List the challenges (questions and/or hypotheses) that you are considering for your independent study project in the column on the left of the chart. Review each criterion at the top of the chart and substitute more appropriate criteria as needed. Rate each challenge from 1 - 5 (low - high) working your way down (not across) each column. When you have finished rating, add the totals across. Use the totals and the individual ratings to help you make an informed decision. You do not necessarily have to select the challenge with the highest score, but you should be able to defend your choice.</p> | | | | | | | |
| S E L E C T I O N | | C R I T E R I A | | | | | T O T A L S |
| | | 1. available information | | | | | |
| | | 2. appropriately complex materials | | | | | |
| | | 3. interesting for the learner | | | | | |
| | | 4. potentially useful findings | | | | | |
| C H A L L E N G E S | 1. | | | | | | |
| | 2. | | | | | | |
| | 3. | | | | | | |
| | 4. | | | | | | |

Stage 2 Cooperative Review

At the beginning of each stage of independent study, a student will obtain a Cooperative Review, complete the name and starting date, read the outcomes, and review the support materials. As each activity is completed, the student will attach all work to the Cooperative Review and critique all progress. After the final activity of the stage is completed, the student will offer subjective comments at the bottom of the Cooperative Review and will confer with the teacher before progressing to the next stage. At the end of each stage of independent study, the teacher may find it helpful to designate a grade, point value, or other evaluative feedback. This allows the student to acquire a great deal of credit/feedback prior to the final product.

| Stage 2 Cooperative Review | | | | | | | |
|---|--|----------------|---|-----|---|----|-----|
| student name: | | starting date: | critique | | | | |
| schedule | student outcomes | | na | nsh | g | vg | grt |
| 2A Question Starter-Ideas ___/___/___ | I reviewed sample questions. | | | | | | |
| 2B Exploratory Questions ___/___/___ | I generated many, varied questions for possible investigation. | | | | | | |
| 2C Hypothesis Guidelines ___/___/___ | I refined several questions into hypotheses. | | | | | | |
| 2D Challenge Selection Grid ___/___/___ | I used criteria to select a challenge (question or hypothesis) of genuine interest. *target outcome | | | | | | |
| student comments: | | | teacher comments: | | | | |
| <ul style="list-style-type: none"> • • • | | | <ul style="list-style-type: none"> • • • | | | | |
| student signature: _____ | | | teacher signature: _____ | | | | |
| conference date: ___/___/___ | | | <input checked="" type="checkbox"/> Please attach all work. | | | | |

STUDENT OUTCOMES FOR STAGE 3

DEVELOP A PLAN

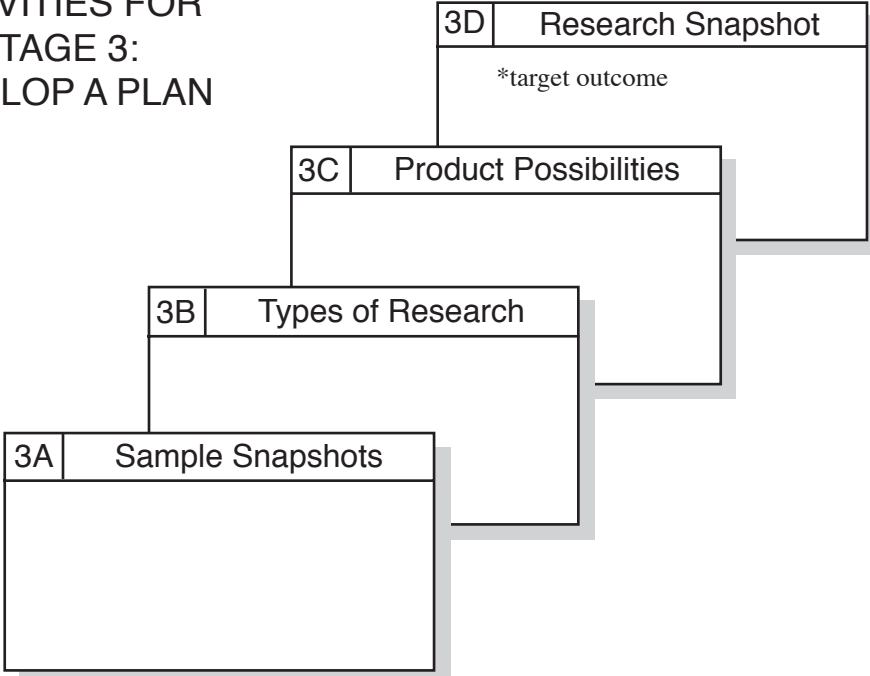
Stage 3 of independent study will help students to: (A) review and consider existing plans before developing their own plans; (B) determine the purpose of the project and possible methods of gathering data; (C) consider possible product options for communicating the results of the study; and/or (D) develop a written plan that will guide the research process. If a plan has already been developed, this stage should be omitted. A list of suggested outcomes and sample activities is provided below. Sample activities and instructional resources appear on the pages that follow.

| Stage 3 Planning - Develop A Plan | | |
|-----------------------------------|---|---|
| Student Outcomes | Activities | |
| 3A | review existing research plans that depict four different methodologies | by reviewing <i>Sample Research Snapshots</i> |
| 3B | determine the purpose of the project and possible methods of gathering data | by completing <i>Types of Research</i> |
| 3C | consider possible product options for communicating the results of the study | by reviewing the <i>Product Possibilities</i> chart and speculating on how various products might be used |
| 3D | develop a written plan that will guide the research process * target outcome | by completing a <i>Research Snapshot</i> |

Independent Study

Stage 3 Warm-up: Preview Stage 3 Activities

Previewing Stage 3 activities will help students develop an awareness of the expected student outcomes and of the activities for Stage 3 of independent study. Students are to obtain a Cooperative Review and read the student outcomes in this stage. Next, they are to review the instructional materials that will assist them in completing each of the activities. This "warm-up" serves to familiarize students with Stage 3 before they begin their tasks. Sample instructional materials appear on the following pages.

| | |
|--|--------------------------|
| Name: | <h3>Stage 3 Warm-up</h3> |
| Date: | |
| <p>Familiarize yourself with Stage 3 activities. Read the <i>outcomes</i> and <i>activities</i> listed on the Cooperative Review while looking over the available materials that are pictured below. Begin thinking about the activities that you will be involved with during this stage.</p> | |
| <p>ACTIVITIES FOR STAGE 3: DEVELOP A PLAN</p> | |
|  | |

Activity 3A

Activity 3A provides students with four sample snapshots to review. Four different types of research (research designs) are depicted: historical, experimental, descriptive, and correlational. Ideally, the teacher will collect sample snapshots from students as the school year progresses. The actual student examples would then supplement or replace the ones listed below.

| | | |
|--|---|---|
| Name: Date: | Sample Snapshots | 3A |
| Name: Date: | Historical Snapshot | 3D |
| 1. The topic that I will investigate is <u>Our Community.</u> | 2. My research question or hypothesis is <u>What was our school like fifty years ago?</u> | 3. The type of research that I will conduct is <u>Historical.</u> |
| 4. The purpose of my study is to <u>describe teachers, students, activities, and the school environment of fifty years ago.</u> | 5. To gather information I will <u>interview several ex-students, due date: / /</u> I will <u>interview an ex-teacher, due date: / /</u> I will <u>look at yearbooks and other, due date: / /</u> I will <u>visit our town museum, due date: / /</u> . | 6. A product that I might use to communicate the results of the study is <u>book teaching lesson.</u> I will use this product to <u>show teaching styles and materials.</u> Another product that I might use is a <u>artifact display and photo exhibit.</u> I will use this product to <u>show the school environment and museum.</u> |
| Name: Date: | Experimental Snapshot | 3D |
| 1. The topic that I will investigate is <u>Biology.</u> | 2. My research question or hypothesis is <u>Increased levels of shade/light/diffusion cause increased leaf size.</u> | 3. The type of research that I will conduct is <u>Experimental.</u> |
| 4. The purpose of my study is to <u>show cause-effect relationship between degree of light/diffusion and resulting leaf size.</u> | 5. To gather information I will <u>plan and conduct an experiment that involves daily observations, due date: / /</u> . | 6. A product that I might use to communicate the results of the study is <u>journal.</u> I will use this product to <u>show daily changes in plants.</u> Another product that I might use is a <u>bar graph.</u> I will use this product to <u>show size comparisons among groups of plants.</u> Another product that I might use is a <u>labeled diagram.</u> I will use this product to <u>show shapes of plant leaves.</u> |
| Name: Date: | Descriptive Snapshot | 3D |
| 1. The topic that I will investigate is <u>Bicycles.</u> | 2. My research question or hypothesis is <u>What types of bicycles are most popular in my neighborhood?</u> | 3. The type of research that I will conduct is <u>Descriptive.</u> |
| 4. The purpose of my study is to <u>describe existing conditions relating to types of bikes in my neighborhood.</u> | 5. To gather information I will <u>conduct door-to-door interviews, due date: / /</u> I will <u>distribute questionnaires here interviews are impractical, due date: / /</u> . | 6. A product that I might use to communicate the results of the study is <u>charts/maps.</u> I will use this product to <u>show kinds of bikes by age and gender.</u> Another product that I might use is a <u>bar graph.</u> I will use this product to <u>show comparisons among age groups and genders.</u> Another product that I might use is a <u>pie chart.</u> I will use this product to <u>show percentages of bike types in my neighborhood.</u> |
| Name: Date: | Correlational Snapshot | 3D |
| 1. The topic that I will investigate is <u>Video Games.</u> | 2. My research question or hypothesis is <u>High video game use is related to high grades?</u> | 3. The type of research that I will conduct is <u>Correlational.</u> |
| 4. The purpose of my study is to <u>describe the type of relationship between video game use and mathematics grades in school.</u> | 5. To gather information I will <u>use questionnaires with all students in my grade level, due date: / /</u> . | 6. A product that I might use to communicate the results of the study is <u>sets of bar charts.</u> I will use this product to <u>show the relationship between lower grades and video game use.</u> Another product that I might use is <u>sets of pie charts.</u> I will use this product to <u>show daily percentages of video game use and also to show percentages of students receiving various grades in mathematics.</u> |

Independent Study

Activity 3B

Activity 3B provides students with starter phrases to help them determine the purpose and methods of data collection for their independent study projects. This activity will help students to refine their investigations by determining which type(s) of research and data collection will best support their progress.

| | | | |
|------------------------|--|--------------------------|-----------|
| Name: Date: | | Types of Research | 3B |
| Research Design | Review the following purpose statements and methods for gathering information. Then complete <i>one</i> set of statements by entering information related to your project. | | |
| Historical | My project will accurately and objectively describe past events such as... _____ _____ _____. The types of resources that I will use to gather information might include primary (photo albums, original documents, etc.) and secondary sources (reference books, videos, etc.) such as... _____ | | |
| Experimental | My project will determine a cause-effect relationship between variables. The variables are... _____. _____ The types of resources that I will use to gather data will include observations of two variables, such as... _____ _____ | | |
| Descriptive | My project will describe the nature of existing conditions in regard to... _____ _____ _____. The types of resources that I will use to gather data will include questionnaires, interviews, observations, such as... _____ | | |
| Correlational | My project will determine the type (positive/negative) of relationship between two variables. The two variables in my project are... _____ _____ _____. The types of resources that I will use to gather data will include existing information (e.g., records), such as... _____ | | |

Activity 3C

Activity 3C helps students to speculate upon the type of product(s) that might best communicate their findings to others. The products are categorized according to "learning styles" so that students may begin to develop an awareness of various modes of learning and presentation. This activity will assist students in making purposeful choices of product types. Ideally, the teacher will have a classroom list of product forms that is much more extensive than space allows within this activity (Please refer to section III of this publication for a more extensive listing of products.).

| | | | |
|--|--|---|-----------|
| Name: Date: | | Product Possibilities | 3C |
| <p>Review the following product choices and speculate upon which one would be most useful in showing your research findings to others. After reviewing the choices in all four categories, complete the bottom section of the page by listing possible product choices and how each product choice might be used. Keep in mind that this list includes only a small number of potential products. You (or your teacher) can suggest other products that will clearly communicate your results to others.</p> | | | |
| Kinesthetic | | Oral | |
| demonstration diorama display dramatization experiment mobile model relief map | | audio tape recording conference presentation documentary lecture mock interview radio/television commentary speech teaching lesson | |
| Visual | | Written | |
| brochure bullet chart cross-section flow chart graph information table poster time line | | booklet dictionary essay journal magazine article newspaper article profile research paper | |
| I might use a _____ in order to show _____ _____ I might use a _____ in order to show _____ _____ I might use a _____ in order to show _____ _____ | | | |

Independent Study

Activity 3D Target Outcome

A Research Snapshot helps students to plan the remainder of their independent study activities. They will enter information generated through previous activities into rows 1 through 4, and then meet with the teacher to discuss a time line for specific activities.

| | | | |
|---|--------------------------|------------------|-----------|
| Name: Date: | Research Snapshot | * target outcome | 3D |
| <p>Complete the following "snapshot" of your investigation. Use the information and decisions from previous activities to complete the statements. Then, meet with your teacher to discuss a time line of specific activities. This activity will help you to clarify where your project is headed.</p> | | | |
| 1. The topic that I will investigate is _____. | | | |
| 2. My research question or hypothesis is _____ _____. | | | |
| 3. The type of research that I will conduct is _____. | | | |
| 4. The purpose of my study is _____ _____. | | | |
| 5. To gather information I will _____, due date: ___/___/___ and I will _____, due date: ___/___/___ and I will _____, due date: ___/___/___ | | | |
| 6. A product that I might use to communicate the results of the study is a _____. I will use this product to show _____. Another product that I might use is a _____. I will use this product to show _____. Another product that I might use is a _____. I will use this product to show _____. | | | |
| (Additional information may be included on the back of this sheet.) | | | |

Stage 3 Cooperative Review

At the beginning of each stage of independent study, a student will obtain a Cooperative Review, complete the name and starting date, read the outcomes, and review the support materials. As each activity is completed, the student will attach all work to the Cooperative Review and critique all progress. After the final activity of the stage is completed, the student will offer subjective comments at the bottom of the Cooperative Review and will confer with the teacher before progressing to the next stage. At the end of each stage of independent study, the teacher may find it helpful to designate a grade, point value, or other evaluative feedback. This allows the student to acquire a great deal of credit/feedback prior to the final product.

| Stage 3 Cooperative Review | | | | | | | |
|---|--|----------------|---|-----|---|----|-----|
| student name: | | starting date: | critique | | | | |
| schedule | student outcomes | | na | nsh | g | vg | grt |
| 3A Sample Research Snapshots ___/___/___ | I reviewed Research Snapshots developed by others. | | | | | | |
| 3B Types of Research ___/___/___ | I determined the purpose of my project and speculated upon how I might gather information. | | | | | | |
| 3C Product Possibilities ___/___/___ | I considered possible product options for communicating the results of my study. | | | | | | |
| 3D Research Snapshot ___/___/___ | I developed a written plan that will guide my investigation. *target outcome | | | | | | |
| student comments: | | | teacher comments: | | | | |
| <ul style="list-style-type: none"> • • • | | | <ul style="list-style-type: none"> • • • | | | | |
| student signature: _____ | | | teacher signature: _____ | | | | |
| conference date: ___/___/___ | | | <input checked="" type="checkbox"/> Please attach all work. | | | | |

STUDENT OUTCOMES FOR STAGE 4

GATHER INFORMATION

Stage 4 of independent study will help students to: (A) review lists of resources organized into four major categories; (B) access written documents in a time efficient manner; (C) develop and conduct interviews, observations, and/or surveys; and/or (D) gather and record pertinent information. A list of suggested outcomes and sample activities is provided below. Sample activities and instructional resources appear on the pages that follow.

| Stage 4 Planning - Gather Information | | |
|---------------------------------------|---|--|
| Student Outcomes | Activities | |
| 4A | review lists of resources organized into four major categories | by reviewing <i>Sources of Information</i> |
| 4B | access written documents in a time efficient manner | by <i>Skimming for Information</i> |
| 4C | develop and conduct interviews, observations, and/or surveys | by modeling <i>Success Guidelines</i> |
| 4D | gather and record pertinent information * target outcome | by completing <i>Note Cards</i> |

Independent Study

Stage 4 Warm-up: Preview Stage 4 Activities

Previewing Stage 4 activities will help students develop an awareness of the expected student outcomes and of the activities for Stage 4 of independent study. Students are to obtain a Cooperative Review and read the student outcomes in this stage. Next, they are to review the instructional materials that will assist them in completing each of the activities. This "warm-up" serves to familiarize students with Stage 4 before they begin their tasks. Sample instructional materials appear on the following pages.

| | |
|-------|--------------------------|
| Name: | <h3>Stage 4 Warm-up</h3> |
| Date: | |

Familiarize yourself with Stage 4 activities. Read the *outcomes* and *activities* listed on the Cooperative Review while looking over the available materials that are pictured below. Begin thinking about the activities that you will be involved with during this stage.

ACTIVITIES FOR
STAGE 4:
GATHER
INFORMATION

| | |
|----|--------------------------|
| 4D | Note Cards |
| | *target outcome |
| 4C | Success Guidelines |
| 4B | Skimming for Information |
| 4A | Sources of Information |

Activity 4A

The quantity and variety of available information sources is increasing rapidly. Developing students' awareness of the uses of these resources is an essential role for educators wishing to foster skills of independent study. Possibly the most noteworthy of these sources of information is the on-line database. Through electronic databases, students at virtually any location can access rich supplies of data using retrieval methods that are much more efficient and effective than manual searches. The listing below will help students to recognize various sources of information and to recognize selected categories of information sources.

| | | | | |
|--|--|-----------|--|--|
| Name: Date: | Sources Of Information | 4A | | |
| <p>Carefully review the following list of sources of information to help you determine which sources you might use for your investigation. Ask for assistance if you are unfamiliar with the uses and location of any of the resources in these four categories.</p> | | | | |
| <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><u>Documents</u></p> <ul style="list-style-type: none"> • almanac • atlas • biography • book of records • dictionary <ul style="list-style-type: none"> - general - bibliographical - geographical • electronic media <ul style="list-style-type: none"> - audio-cassette - compact disk - database - filmstrip - record - video-cassette - videodisk • encyclopedia <ul style="list-style-type: none"> - general - specialized • guides <ul style="list-style-type: none"> - to <u>National Geographic</u> - to periodical literature • historical book • magazine • scientific book </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> • scores • textbook • thesaurus <p><u>Interviews</u></p> <ul style="list-style-type: none"> • within school <ul style="list-style-type: none"> - staff - students • within community <ul style="list-style-type: none"> - agencies - neighbors - parents • outside of community <ul style="list-style-type: none"> - academic - business - government <p><u>Observations</u></p> <ul style="list-style-type: none"> • low inference • high inference <p><u>Surveys/Questionnaires</u></p> <ul style="list-style-type: none"> • attitudes • opinions • perceptions • preferences </td> </tr> </table> | | | <p><u>Documents</u></p> <ul style="list-style-type: none"> • almanac • atlas • biography • book of records • dictionary <ul style="list-style-type: none"> - general - bibliographical - geographical • electronic media <ul style="list-style-type: none"> - audio-cassette - compact disk - database - filmstrip - record - video-cassette - videodisk • encyclopedia <ul style="list-style-type: none"> - general - specialized • guides <ul style="list-style-type: none"> - to <u>National Geographic</u> - to periodical literature • historical book • magazine • scientific book | <ul style="list-style-type: none"> • scores • textbook • thesaurus <p><u>Interviews</u></p> <ul style="list-style-type: none"> • within school <ul style="list-style-type: none"> - staff - students • within community <ul style="list-style-type: none"> - agencies - neighbors - parents • outside of community <ul style="list-style-type: none"> - academic - business - government <p><u>Observations</u></p> <ul style="list-style-type: none"> • low inference • high inference <p><u>Surveys/Questionnaires</u></p> <ul style="list-style-type: none"> • attitudes • opinions • perceptions • preferences |
| <p><u>Documents</u></p> <ul style="list-style-type: none"> • almanac • atlas • biography • book of records • dictionary <ul style="list-style-type: none"> - general - bibliographical - geographical • electronic media <ul style="list-style-type: none"> - audio-cassette - compact disk - database - filmstrip - record - video-cassette - videodisk • encyclopedia <ul style="list-style-type: none"> - general - specialized • guides <ul style="list-style-type: none"> - to <u>National Geographic</u> - to periodical literature • historical book • magazine • scientific book | <ul style="list-style-type: none"> • scores • textbook • thesaurus <p><u>Interviews</u></p> <ul style="list-style-type: none"> • within school <ul style="list-style-type: none"> - staff - students • within community <ul style="list-style-type: none"> - agencies - neighbors - parents • outside of community <ul style="list-style-type: none"> - academic - business - government <p><u>Observations</u></p> <ul style="list-style-type: none"> • low inference • high inference <p><u>Surveys/Questionnaires</u></p> <ul style="list-style-type: none"> • attitudes • opinions • perceptions • preferences | | | |

Independent Study

Activity 4B

Activity 4B is designed to assist students in skimming for information in a time efficient manner. Students practicing this skill area will benefit by direct instruction, guided practice, and by encouragement to return materials that do not promise to be pertinent to the selected topic. Students will become efficient investigators by moving from big ideas to small ideas, in a hierarchical fashion.

| | | |
|---|-----------------------------------|-----------|
| Name: Date: | <h3>Skimming for Information</h3> | 4B |
| <p>When "skimming" written documents for information, begin with "big" ideas and move toward progressively "smaller" ideas. Determine as soon as possible whether or not a selected publication will help you to answer your question or respond to your hypothesis so that you spend time only with useful documents. Quickly return materials that do not show promise. Beginning with the selection of a document, progress to a chapter, major headings, subheadings, topic sentences, sentences within paragraphs, and finally to key phrases, terms, and figures. Note how different publishers use bold face type, underlined type, italics, centering, and labeling to show a hierarchy (small ideas nested under bigger ideas) of ideas.</p> <ol style="list-style-type: none">1. Select a document that might respond to your question or hypothesis.2. Review the table of contents to determine which chapters might contain information about your question or your hypothesis.3. Look over the major headings in the select chapter(s) and choose any major sections of the chapter that may contain answers to your research question or help to explain your hypothesis.4. Determine which subheadings within the selected major heading might contain answers to your research question or which might describe the variables in your hypothesis.5. Read the first sentence in each of the large paragraphs within selected subheadings to determine which paragraphs might pertain to you question of hypothesis.6. Carefully read those selected paragraphs that show promise.7. On separate note-cards, record phrases, key terms, and key figures that answer your research question or that pertain to your hypothesis. | | |

Activity 4C

Success guidelines help students in various information-gathering activities, such as arranging and conducting interviews, telephone calls, observations, and surveys. They contain step-by-step instructions describing each process. They assist teachers in terms of presenting complete guidelines during direct instruction, and they assist students who wish to conduct these information-gathering activities on their own. (See sample below.)

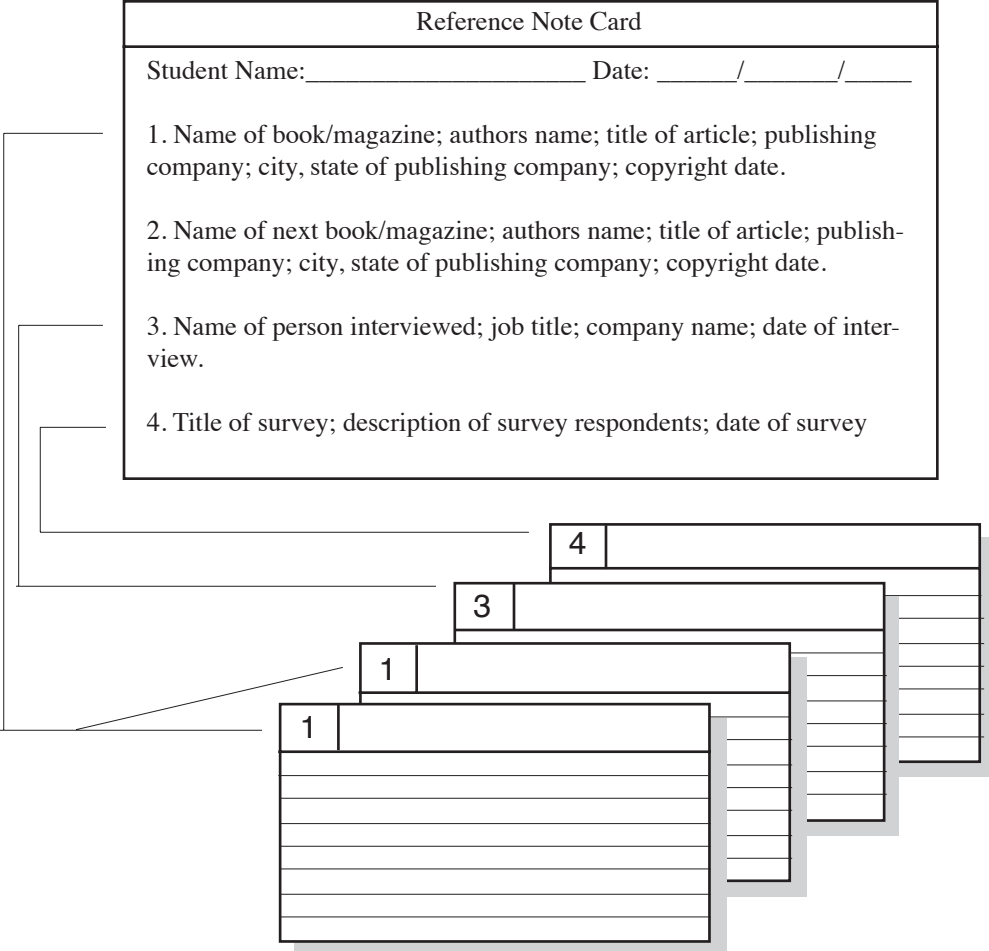
Additional helpful Success Guideline might be developed with students as a classroom activity. This would provide students with opportunities to set standards for their performance.

| | | |
|---|---------------------------------------|-----------|
| Name: Date: | Success Guidelines: Interviews | 4C |
| <p>An interview has three major phases. Read through the guidelines, ask questions as necessary, and keep this guide available during each of the interview phases. With the help of your teacher, develop Success Guidelines for conducting telephone calls, observations, and surveys.</p> <p><u>Before The Interview</u></p> <ol style="list-style-type: none"> 1. Generate several open-ended questions that target the person's unique strengths or knowledge. You will use these questions to facilitate discussion. Generate convergent questions that focus on your research question or hypothesis. Keep your projected time limit in mind. 2. Schedule the interview by stating/discussing the following (a) your name, (b) a concise description of the project, (c) the reason the person was selected, (d) the amount of time you will need, (e) possible meeting times and locations that might be convenient for the person, (f) contact information for both parties, and (g) your appreciation. Write down key points. <p><u>At The Interview</u></p> <ol style="list-style-type: none"> 1. Set the tone of the interview by (a) introducing yourself, (b) shaking hands, (c) thanking the person, (d) explaining the objectives of the session, and (e) promising to keep to the allotted time limit. 2. Ask questions by (a) requesting permission to take notes and/or audio-tape the session, (b) using open-ended questions to facilitate discussion, (c) "fitting" convergent questions into the discussion as appropriate, (d) making frequent eye contact, (e) listening carefully, (f) asking questions as they arise, (g) refocusing the discussion as necessary, (h) writing down key ideas only, and (i) visualizing the concepts being discussed. <p><u>After The Interview</u></p> <ol style="list-style-type: none"> 1. Close the interview by (a) stating that the session time has ended, (b) thanking the person, and (c) restating how the information will be used. 2. Finalize this information-gathering activity by (a) reviewing your notes/tape ASAP, (b) isolating and rewriting key concepts, (c) sending a thank you note to the person, and (d) sending a copy of your product (as appropriate) to the person. | | |

Independent Study

Activity 4D Target Outcome

This activity will help students to collect notes in an efficient manner. On the sample reference note card, students are to list the resources from which they collect information. This way, they can simply list the number of the resource on each information card that they complete. When they have completed the information gathering phase, they will have records listing the origin of each idea. This will simplify their note taking and their development of a list of references.

| | | | | | | | | | | | | | | |
|--|--|-----------|---------------------|--|--|--|--|--|---|--|--|--|---|--|
| Name: Date: | <h2 style="margin: 0;">Note Cards</h2> | 4D | | | | | | | | | | | | |
| * target outcome | | | | | | | | | | | | | | |
| <p>Before beginning to take notes, prepare a large reference note card. This will help you to keep track of where you obtained your information, and it will make completing your final project an easier task. A sample reference note card is presented below. After completing a reference note card, use one small index card per idea as you gather information from documents, interviews, and other sources. Make sure to list the number of the information source (from your reference note card) on every note card that you develop.</p> | | | | | | | | | | | | | | |
| <table border="1" style="margin: auto; border-collapse: collapse;"><tr><td colspan="2" style="text-align: center; padding: 5px;">Reference Note Card</td></tr><tr><td colspan="2" style="padding: 5px;">Student Name: _____ Date: ____/____/____</td></tr><tr><td colspan="2" style="padding: 5px;">1. Name of book/magazine; authors name; title of article; publishing company; city, state of publishing company; copyright date.</td></tr><tr><td colspan="2" style="padding: 5px;">2. Name of next book/magazine; authors name; title of article; publishing company; city, state of publishing company; copyright date.</td></tr><tr><td colspan="2" style="padding: 5px;">3. Name of person interviewed; job title; company name; date of interview.</td></tr><tr><td colspan="2" style="padding: 5px;">4. Title of survey; description of survey respondents; date of survey</td></tr></table> | | | Reference Note Card | | Student Name: _____ Date: ____/____/____ | | 1. Name of book/magazine; authors name; title of article; publishing company; city, state of publishing company; copyright date. | | 2. Name of next book/magazine; authors name; title of article; publishing company; city, state of publishing company; copyright date. | | 3. Name of person interviewed; job title; company name; date of interview. | | 4. Title of survey; description of survey respondents; date of survey | |
| Reference Note Card | | | | | | | | | | | | | | |
| Student Name: _____ Date: ____/____/____ | | | | | | | | | | | | | | |
| 1. Name of book/magazine; authors name; title of article; publishing company; city, state of publishing company; copyright date. | | | | | | | | | | | | | | |
| 2. Name of next book/magazine; authors name; title of article; publishing company; city, state of publishing company; copyright date. | | | | | | | | | | | | | | |
| 3. Name of person interviewed; job title; company name; date of interview. | | | | | | | | | | | | | | |
| 4. Title of survey; description of survey respondents; date of survey | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |

Stage 4 Cooperative Review

At the beginning of each stage of independent study, a student will obtain a Cooperative Review, complete the name and starting date, read the outcomes, and review the support materials. As each activity is completed, the student will attach all work to the Cooperative Review and critique all progress. After the final activity of the stage is completed, the student will offer subjective comments at the bottom of the Cooperative Review and will confer with the teacher before progressing to the next stage. At the end of each stage of independent study, the teacher may find it helpful to designate a grade, point value, or other evaluative feedback. This allows the student to acquire a great deal of credit/feedback prior to the final product.

| Stage 4 Cooperative Review | | | | | | | | |
|---|--|---|--|---|-----|---|----|-----|
| student name: | | starting date: | | critique | | | | |
| schedule | | student outcomes | | na | nsh | g | vg | grt |
| 4A | Information Sources ____/____/____ | I reviewed lists of information sources to help select sources for my investigation. | | | | | | |
| 4B | Skimming for Information ____/____/____ | I accessed written information that pertained to my research question or hypothesis. | | | | | | |
| 4C | Success Guidelines ____/____/____ | I developed and conducted an interview, observation, survey, or another type of student-initiated medium. | | | | | | |
| 4D | Note Cards ____/____/____ | I gathered and recorded on note cards information that pertains to my challenge. *target outcome | | | | | | |
| student comments: | | | | teacher comments: | | | | |
| <ul style="list-style-type: none"> • • • | | | | <ul style="list-style-type: none"> • • • | | | | |
| student signature: _____ | | | | teacher signature: _____ | | | | |
| conference date: ____/____/____ | | | | <input checked="" type="checkbox"/> Please attach all work. | | | | |

STUDENT OUTCOMES FOR STAGE 5 ORGANIZE AND PRESENT FINDINGS

Stage 5 of independent study will help students to: (A) organize notes into a logical format; (B) select products based on sound criteria; (C) develop high quality products to communicate findings to others; and/or (D) effectively present findings to others. A list of suggested outcomes and sample activities is provided below. Sample activities and instructional resources appear on the pages that follow.

| Stage 5 Planning - Organize and Present Findings | |
|--|--|
| Student Outcomes | Activities |
| 5A | organize notes into a logical format by creating <i>Graphic Note Stacks</i> |
| 5B | select products based on sound criteria by utilizing criteria for <i>Product Selection</i> |
| 5C | develop high quality products to communicate findings to others by applying standards depicted in <i>Product Guides</i> |
| 5D | effectively present findings to others * target outcome by practicing and applying guidelines delineated in <i>Effective Presentations</i> |

Independent Study

Stage 5 Warm-up: Preview Stage 5 Activities

Previewing Stage 5 activities will help students develop an awareness of the expected student outcomes and of the activities for Stage 5 of independent study. Students are to obtain a Cooperative Review and read the student outcomes in this stage. Next, they are to review the instructional materials that will assist them in completing each of the activities. This "warm-up" serves to familiarize students with Stage 5 before they begin their tasks. Sample instructional materials appear on the following pages.

| | |
|-------|--------------------------|
| Name: | <h1>Stage 5 Warm-up</h1> |
| Date: | |

Familiarize yourself with Stage 5 activities. Read the *outcomes* and *activities* listed on the Cooperative Review while looking over the available materials that are pictured below. Begin thinking about the activities that you will be involved with during this stage.

**ACTIVITIES FOR
STAGE 5:
ORGANIZE AND
PRESENT FINDINGS**

| | |
|----|-------------------------|
| 5D | Effective Presentations |
| | *target outcome |

| | |
|----|----------------|
| 5C | Product Guides |
|----|----------------|

| | |
|----|-------------------|
| 5B | Product Selection |
|----|-------------------|

| | |
|----|---------------------|
| 5A | Graphic Note Stacks |
|----|---------------------|

Activity 5A

This activity will help students to organize their notes into a logical format. Students should be encouraged to put aside the note cards that are not pertinent to their study and to gather additional information as necessary.

| | | |
|---|----------------------------------|-----------|
| Name: Date: | Graphic Note Stacks | 5A |
| <p>This activity will help you to organize your notes and to determine which notes may be put aside. Begin by establishing "stacks" of note cards, keeping similar topics and ideas together. Next, break down each stack into main topics (MT), subtopics (ST), and supporting details (D) by grouping and arranging note cards using an outline format, a concept web format, a chronological format, or another format that supports the type of information that you collected. Develop new note cards as needed to serve as major topics or subtopics. You may also wish to gather more information to add detail where necessary.</p> | | |
| | | |
| <p>Outline Format</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">TITLE</div> <div style="border: 1px solid black; padding: 5px; margin-left: 20px; margin-bottom: 5px;">MT</div> <div style="border: 1px solid black; padding: 5px; margin-left: 40px; margin-bottom: 5px;">ST</div> <div style="border: 1px solid black; padding: 5px; margin-left: 60px; margin-bottom: 5px;">D</div> <div style="border: 1px solid black; padding: 5px; margin-left: 60px; margin-bottom: 5px;">D</div> <div style="border: 1px solid black; padding: 5px; margin-left: 40px; margin-bottom: 5px;">ST</div> <div style="border: 1px solid black; padding: 5px; margin-left: 60px; margin-bottom: 5px;">D</div> <div style="border: 1px solid black; padding: 5px; margin-left: 60px; margin-bottom: 5px;">D</div> <div style="border: 1px solid black; padding: 5px; margin-left: 60px; margin-bottom: 5px;">D</div> <div style="border: 1px solid black; padding: 5px; margin-left: 20px; margin-bottom: 5px;">MT</div> <div style="border: 1px solid black; padding: 5px; margin-left: 40px; margin-bottom: 5px;">ST</div> <div style="border: 1px solid black; padding: 5px; margin-left: 60px; margin-bottom: 5px;">D</div> <div style="border: 1px solid black; padding: 5px; margin-left: 60px; margin-bottom: 5px;">D</div> | <p>Concept Web Format</p> | |

Independent Study

Activity 5B

This activity will help students to select one or more products based on sound criteria. Students are encouraged to select one or more products that will help them to communicate their findings to others, while at the same time serve as meaningful options for that student. Teachers implementing this program may wish to have one or more products that are non-negotiable (e.g., research paper, oral presentation, etc.) and may also require students to develop one or more self-selected products.

| | | |
|---|--------------------------|-----------|
| Name: Date: | Product Selection | 5B |
| <p>Review a list of product possibilities and consider the following criteria as you select a product to communicate the results of your investigation.</p> <p><u>Interesting for the Learner</u></p> <ul style="list-style-type: none">• Are you enthusiastic about developing this type of product?• Do you have something to gain by developing this type of product? <p><u>Challenging for the Learner</u></p> <ul style="list-style-type: none">• Is this product form relatively new to you?• If you have produced in this format before, will this version be more complex than before? <p><u>Matched to the Content</u></p> <ul style="list-style-type: none">• Does this product form support the organizational structure (e.g., linear, hierarchical, chronological) of your findings?• Does this product form have the capacity to present the quantity of information regarding your topic?• Does this product form have the potential to convey emotional factors related to your topic? <p><u>Matched to the Audience</u></p> <ul style="list-style-type: none">• Will the audience be able to interpret or understand this type of product?• Will the audience be curious about, attracted to, or enjoy this type of product?• Will the audience be able to see, hear, or otherwise interact with the product? <p><u>Realistic</u></p> <ul style="list-style-type: none">• Do you have sufficient work-time to develop this type of product?• Can you obtain the materials necessary for developing this type of product?• Will you be able to acquire the necessary assistance for developing this type of product?• Can you obtain the necessary reference materials for developing this type of product?• Do you have the requisite skills or background experience to develop this type of product? | | |

Activity 5C

Product guides help students to communicate ideas effectively via various formats. Product guides show the essential parts of the product, and they describe standards of excellence for each part. Below is a sample product guide for a research report. This is not to imply that a research paper is an essential component of every independent study project. It is simply offered as a sample guide. Several additional product guides are included in Section III of this Guide.

| | | |
|--|--|-----------|
| Name: Date: | Product Guides | 5C |
| <p>Product guides will help you develop high quality products that clearly communicate what you learned through your investigation. They break products down into their parts and they also describe attributes that can lead to excellent products. After you select a product to communicate your findings, obtain or develop a product guide before you begin creating your product. In this way, you can develop an "image" of the completed product in your mind so that you have a model to work toward.</p> | | |
| Research Report: Written | | |
| Parts | Attributes | |
| cover | contains a clear, prominent, informative title; includes the student's name, course, and date; uses appropriate graphic design (optional) | |
| introduction | presents a rationale for the choice of topic; outlines the major points/objectives | |
| research question or hypothesis | states clearly the specific area of inquiry or states an expected relationship or differences between two or more variables; is testable and/or measurable | |
| research methodology | delineates the project outline; includes the steps or actions followed; specifies the data collection method(s) | |
| presentation of findings | relevant to the question or hypothesis; logically organized; includes well-structured paragraphs; uses graphics effectively (optional) | |
| summary/conclusion | restates the major premise; reviews the key findings concisely; explains the application(s) of findings; may request action | |
| references | accurate; complete; presented according to teacher specifications | |
| mechanics | proper grammar usage; legible; correct punctuation; correct spelling | |

Independent Study

Activity 5D Target Outcome

Activity 5D will help students to share their findings with others through an oral presentation. Students should be encouraged to practice their presentations at home and/or with peers prior to presenting to larger groups. Videotaping students is recommended so that students may critique their own presentations. Peer critique is also recommended.

| | | | | | |
|--|--------------------------------|---|---|---|-----------|
| Name: | Effective Presentations | | | | 5D |
| Date: | | | | | |
| <p>The skills on the presentation rating sheet below should be reviewed and practiced before you present your ideas to your audience. Practicing with friends or family members will prove to be very helpful. After each practice session, rate yourself from 1 to 5 (needs work - excellent) in each suggested area.</p> | | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| introduction of speaker, project, and major concepts | | | | | |
| key points well-sequenced | | | | | |
| key points supported with facts and details | | | | | |
| intermittent summarizations and transition statements | | | | | |
| inclusion of audience | | | | | |
| use of product(s)/visual aids | | | | | |
| natural, supportive movements and gestures | | | | | |
| sustained eye contact, including periphery of room | | | | | |
| clear, loud, well-paced voice | | | | | |
| summary of major concepts | | | | | |

Stage 5 Cooperative Review

At the beginning of each stage of independent study, a student will obtain a Cooperative Review, complete the name and starting date, read the outcomes, and review the support materials. As each activity is completed, the student will attach all work to the Cooperative Review and critique all progress. After the final activity of the stage is completed, the student will offer subjective comments at the bottom of the Cooperative Review and will confer with the teacher before progressing to the next stage. At the end of each stage of independent study, the teacher may find it helpful to designate a grade, point value, or other evaluative feedback. This allows the student to acquire a great deal of credit/feedback prior to the final product.

| Stage 5 Cooperative Review | | | | | | | | |
|---|------------------------|---|--|---|-----|---|----|-----|
| student name: | | starting date: | | critique | | | | |
| schedule | | student outcomes | | na | nsh | g | vg | grt |
| 5A | Graphic Note Stacks | I organized my notes into a logical format. | | | | | | |
| | ___/___/___ | | | | | | | |
| 5B | Product Selection | I selected products based on sound criteria. | | | | | | |
| | ___/___/___ | | | | | | | |
| 5C | Product Guides | I developed high quality products to communicate my findings to others. | | | | | | |
| | ___/___/___ | | | | | | | |
| 5D | Effective Presentation | I effectively presented my findings to others. | | | | | | |
| | ___/___/___ | *target outcome | | | | | | |
| student comments: | | | | teacher comments: | | | | |
| <ul style="list-style-type: none"> • • • | | | | <ul style="list-style-type: none"> • • • | | | | |
| student signature: _____ | | | | teacher signature: _____ | | | | |
| conference date: ___/___/___ | | | | <input checked="" type="checkbox"/> Please attach all work. | | | | |

