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Computer Center Pak

Computer Center Paks are for use within a single classroom or computer center only.

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Computer Center Pak

For multiple student use in a single classroom or computer center. This special Computer Center Pak has been designed to solve the needs of those teachers who have more than one computer in their classroom.

Computer Center Paks are presently available for many other outstanding programs from Hartley Courseware.

Language Arts Adjectives Adverbs Analogies Advanced Analogies-College Bound **Analogies Tutorial** Antonyms/Synonyms **Building Comprehension I** (Kittens, Kids and a Frog) **Building Comprehension II** (Chariots, Cougars and Kings) Capitalization **Cause and Effect** Colors and Shapes Compound Words and Contractions Consonants Fact or Opinion **Figurative Language** Homonyms Letter Recognition Memory Match **Multiple Skilis** Nouns/Pronouns Opposites

Patterns and Sequence

Reading for Meaning with **Mother Goose Roots/Affixes** Size and Logic Verbs Verb Usage 1 Verb Usage 2 Verb Usage 3 Vocabulary-Controlled Vocabulary-Dolch Vocabulary-Elementary Vowels **Vowels Tutorial** Who, What, Where, When, Why Word Families Word-A-Tach Word Ladders Wordplay Mathematics **Binary Math Calendar Skills** Clock **Expanded** Notation Integers/Equations I&II Math Concepts I&II Metric Skills I&II

Money! Money! Number Words-Level 1 Number Words-Level 2 Prescriptive Math Drill Using a Calendar **Create/Special Use** Create Your Own-Fill-in-the **Blanks** Create Your Own-Intermediate **Create Your Own-Lessons** Create Your Own-Medalists Create Your Own-Spell It Create Your Own-Vocabulary Parent Reporting Student Word Study Language **Create Your Own-Vocabulary French Create Your Own-Vocabulary Spanish** Match-Français Match-Español Science **Temperature** Experiments

Hartley Courseware, Inc. Dimondale, MI 48821 Phone 1-517-646-6458 Toll Free: 1-800-247-1380

ANALOGIES TUTORIAL

Directions: For each question choose the answer that best completes the analogy. Circle the letter of the best answer. If none of the answers completes the analogy correctly, choose answer "e".

Don't be surprised if you discover that this test is hard. Remember, most people who take this test have never had any practice solving analogy problems before.

If you do very well on this pre-test, your teacher may decide that you don't need any practice solving analogies. If you don't do so well, the rest of the lessons will help you learn to do better.

Write answers here.

1.	SCHOOL:SCHOOLS::CHILD: a. STUDENT b. PARENT c. CHILDREN d. CHILD'S e. none of these	2.	SLOPPY:MESSY::NEAT: a. NEATLY b. TIDY c. FEET d. DIRTY e. none of these	1 2
3.	DEAD:ALIVE::ASLEEP: a. DREAM b. SNORING c. NIGHT	4.	COLLAR:SHIRT::HEEL: a. TOE b. BUTTON c. PANTS d. NECK	3
5	d. AWAKE e. none of these PENCII :WRITE::SCISSORS:	6.	e. none of these FOOTBALL:SPORT::CHESS:	5
	a. CUT b. PAPER c. PASTE d. PEN e. none of these		 a. CHECKERS b. GAME c. FIELD d. PLAYER e. none of these 	6
7.	BOX:SQUARE::BALL: a. BOUNCE b. PLAY c. GAME d. ROUND c. pape of these	8.	GARDENER:HOE::MECHANIC: a. SHOVEL b. GARAGE c. WRENCH d. CARS e. none of these	7 8
		10	SHEED FLOCK FISH.	9
9.	a. SPEAKER b. LISTEN c. SHOUT d. TALKING e. none of these	10.	a. FISHES b. SCHOOL c. OCEAN d. HERD e. none of these	10

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Analogies Tutorial Pre-Test			answers here.			
11.	PEACH	HFRUIT::CINNAMON:	12.	ANGE	R:FROWN::HAPPINESS:	11. <u></u>
	a. b	PEPPER		a. b	10Y	
	D.	SPICE		0.	TEARS	12.
	d.	TOAST		d	SADNESS	12.
	u. e	none of these		Q.	none of these	
		hone of these		l taven		
13.	SNOW:	DRIFT::RAIN:	14.	FARM	ER:TRACTOR::PILOT:	13
	a.	SHOWER		a.	TRUCK	
	b.	WET		b.	FIELD	Marris .
	с.	SUN		с.	FLY	14
	d.	PUDDLE		d.	CAPTAIN	
	е.	none of these		e.	none of these	
15.	TRY:T	RIED::BUY:	16.	LEAP:	JUMP::PUSH:	15
	a.	BUYING	RUT A ALCO	a.	SHOVE	SURGOUNCE
	b.	SELL		b.	PULL	
	с.	BOUGHT		с.	FALL	16.
	d.	BYE		d.	PUSHY	IH.)
	e.	none of these		e.	none of these	
17.	TALL:	SHORT::FAT:	18.	WORD	:SENTENCE::CHAPTER:	_ 17
	a.	HAT		a.	PARAGRAPH	
	b.	CHUBBY		b.	INDEX	
	с.	FAST		C.	PERIOD	18
	d.	THIN		d.	BOOK	
	e.	none of these		e.	none of these	
19.	BALL:	ROUND::EGG:	20.	CLOC	K:TIME::THERMOMETER:	19
	a.	YOLK	GOTBALL	a.	COLD	ISW HOMAG 2
	b.	SOUARE		b.	WATCH	
	C.	BOUNCE		с.	TEMPERATURE	20.
	d.	FRY		d.	DEGREE	20
	e.	none of these		e.	none of these	
21.	CLAW	CRAB::HAND:	22.	LIGH	T:HEAVY::WRINKLED:	21
	a.	FISH		a.	SMOOTH	
	b.	PERSON		b.	PRUNE	
	С.	FOOT		с.	OLD	22
	d.	WAVE		d.	ROUGH	
	e.	none of these		e.	none of these	
23.	BRUSH	I:PAINTER::NEEDLE:	24	. BAG	CARRY::ROPE:	23
	a.	THREAD		a.	STRING	2).
	b.	SEW		b.	TIE	
	C.	ARTIST		C.	SACK	24
	d.	SEAMSTRESS		d.	KNOTS	24.
	e.	none of these		e.	none of these	
25.	WHISP	ER:QUIET::SHOUT:				25
	a.	SECRET				
	b.	SILENT				
	с.	LOUD				

d. YELL

e. none of these

ANALOGIES TUTORIAL

POST-TEST

NAME

Directions: You have learned to solve different kinds of analogy problems. Now it is time to find out how good you are at solving them!

Remember to figure out how the words in the first pair go together before you try to choose the answer. Make the words in the second pair go together in the same way as the first pair.

For each problem, choose the answer that best completes the analogy. Circle the letter of the answer. If none of the answer choices completes the problem correctly, choose answer "e".

answers here.

1.	DUCK:DUCKS::GOOSE:2 a. GOOSES b. GANDER c. GEESE d. CHICKEN e. none of these		FAST:QUICK::LITTLE: 1. a. BIG b. SMALL c. BIT 2. d. SPEEDY e. none of these
3.	HEALTHY:SICK::HEAVY:4 a. BRICK b. ILL c. WEIGHT d. MEDICINE e. none of these	И	PAGE:BOOK::DAY:3 a. NIGHT b. YEAR c. MINUTE d. AUTHOR e. none of these
5.	RINK:SKATE::POOL:6 a. TABLE b. SWIM c. BOWLING d. WATER e. none of these		CRICKET:INSECT::SNAKE:5 a. FISH b. LIZARD c. MOTH d. REPTILE e. none of these
7.	GLUE:STICKY::FEATHER:8 a. LIGHT b. BED c. BIRD d. FUR e. none of these	19	GERM:DISEASE::RAINSTORM: 7 a. FLOOD b. ILLNESS c. CLOUDS d. RAINY e. none of these
9.	PAINTER:BRUSH::FARMER:10 a. TOMATO b. PAINT c. RAIN d. CROPS e. none of these		BRING:BROUGHT::SING: 9 a. SONG b. MUSIC c. SINGING d. SANG e. none of these

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Ana Pos	logies Tut t-Test	orial				Write answers here
11.	PLAYER: a. b.	TEAM::STUDENT: BOOKS CLASS	12.	FLOU a. b.	R:BREAD::SUGAR: ROLLS SWEET	II. <u>II</u> A
	d. e.	GAME none of these		d. e.	CANE none of these	12
13.	PEACH:FI a. b.	RUIT::CABBAGE: GREEN DESSERT	14.	FURN a. b.	IACE:HEAT::LAMP: LANTERN ELECTRICITY	13
	c. d.	SPINACH GARDEN		c. d.	WARMTH LIGHT	14
	e.	none of these		e.	none of these	
15.	SNAIL:SH	IELL::KNIGHT: ARMOR	16.	SNOW a.	/:SNOWY::GOLD: JEWELRY	15
	b. c. d.	LANCE EVENING FIGHT		b. c. d.	YELLOW SILVER GOLDEN	16 .
	с.	none of these		e.	none of these	
17.	BOX:CAR	RTON::PAIL: SICK	18.	NIGH	T:DAY::SPRING: SUMMER	17
	c. d.	BUCKET HANDLE		c. d.	BOUNCE BROOK	18
	e.	none of these		e.	none of these	
19.	WING:BIR a.	RD::FIN: LEG	20.	APPL a.	E:RED::LEMON: ORANGE	19
	b. c. d.	FUR SCALES SWIM		b. c.	PIE YELLOW FRUIT	20
	e.	none of these		e.	none of these	
21.	PAN:COC a.	DK::NEEDLE: POT PIN	22.	FLOW a.	ERS:VASE::CLOTHES:	21
	c. d. e.	SEW THREAD none of these		c. d. e.	DRESSES WEAR none of these	22
					ShoFAR MER:	. PAINTERBRU
23.	WEAK:ST a. b.	RONG::POOR: HUNGRY MONEY	24.	CAR:I a. b.	SADDLE RIDER	23
	c. d. e.	POWERFUL RICH none of these		c. d. e.	HALTER RACE none of these	24
25	BOOK DE					
2).	a. b.	MUSIC INSTRUMENT				25

- c. PLAY
- d. MUSICIAN
- e. none of these







PURPOSE

This program helps the student develop a systematic approach to the solution of analogies. It introduces the student to analogies in a sequential manner that assumes no prior knowledge. The student will encounter analogies on some standardized tests and should know how to solve them. Learning about analogies also helps the student learn to approach a problem logically and to build vocabulary.

> This Hartley program requires a 48K *Apple II, II+, Ile or IIc, or Franklin ACE 1000 and one disk drive.

When using the Apple IIe, the CAPS LOCK key must be down. On the Franklin, the LOCK key must be depressed.

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TEACHER'S GUIDE

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Pre/post tests are included with this documentation. The answer keys are included in the back of this booklet.

Field test site schools available upon request.

This disk uses a high-speed operating system, **Diversi-DOS**, which is licensed for use with this program only. To legally use **Diversi-DOS**, send \$30.00 directly to DSR, Inc., 5848 Crampton Ct., Rockford, IL 61111. You will receive a **Diversi-DOS** utility disk with documentation.

RUNNING THE PROGRAM (FOR THE STUDENT)

This disk will boot on a 3.3 Disk Operating System.

When running this program on the Apple IIe, you must keep the CAPS LOCK key down. On the Franklin ACE 1000, the LOCK key must be depressed.

Put the disk in Drive #1; close the door. Turn on your computer. If you are using an Apple II <u>Plus</u>, or Apple <u>IIe</u>, the disk will boot automatically when you turn on the computer.

If you have an Apple II - type **PR#6** and press **RETURN**. The program will load into your computer and run automatically - <u>don't type CATALOG</u>!

The credits will vanish and this screen will appear:



To run a lesson, type in your name and press RETURN.

The next frame to appear is:



If your teacher has not assigned you a lesson, you may wish to check with him/her before going further. If you are using the disk independently and you don't know which lessons are available on the disk, simply type

? (press RETURN)

to see a list of the lessons.

This will take you to the 'catalog' which will show you the list of lessons available on the disk. After all lessons on the catalog have been shown, the computer will return to the "Type the name of the lesson you will be working on." frame. At that time you would type in the lesson you have selected. If you are just starting to work with the disk and there is no lesson assignment, start with the first lesson on Disk I, AN1.

The first screen in the lesson to appear will be the Instructions. The instructions frame may be accessed at any time by pressing 'H' and RETURN when a response is called for.

When asked a question you must type only the letter of the answer. Example:

HOT is to COLD as DRY is to .

- a. STRONG
- b. WET
- c. WARM
- d. FLUFFY

answer: b

You can stop the program any time a response (answer) is called for by pressing the **ESC** key. Results of what you had attempted to that point will be kept by the computer.

The lessons on this two-disk Analogies Tutorial program are:

DISK I			DISK II	
ANI	AN5		AN7	AN10
AN2	AN5A		AN7A	AN10A
AN3	AN6	and the second second	AN8	
AN3A	AN6A		AN8A	
AN4			AN9	
AN4A	the second second		AN9A	

HOW THE PROGRAM IS PRESENTED

After the lesson name (AN1, AN6, etc.) has been entered, the first screen to appear will be the Instructions for that lesson.



Remember-The instruction frame may be accessed at any time by the student by pressing 'H' (RETURN) when a response is called for. The program will automatically return to the appropriate question frame.

The frames in the lesson will be presented. A typical question frame looks like this.

LOV	/E:HATE::JOY: a. ANGER b. SADNESS c. HAPPY d. EXCITED e. none of these	
ans	wer:	
-		

If answered correctly, the computer will present the next question frame. If incorrect, either a hint frame or an explanation frame may be shown. A hint frame is used to guide the student toward the correct answer.

LOVE:HATE::JOY:_ a. ANGER b. SADNESS c. HAPPY d. EXCITED e, none of these answer: -Sorry, Press RETURN for hint.

Question Frame



Hint Frame

The computer then returns the student to the frame just missed, for another try. The number of chances a student is given may be set by the teacher in the Design Options. This is accessed via the Teacher's MENU - see page 12.



Explanation Frame

Each question may be followed by either a 'Hint' or an 'Explanation' frame. Which is used depends on the content and preference of the author. These feedback frames may be changed if desired.

A hint frame is generally used in tutorials to guide the student to the correct answer.

An explanation frame is generally used in a testing sequence or when more than just the answer is needed.

Unless the lesson is stopped by pressing the ESC key when a response is called for, all items in the lesson will be presented. All items missed are stored in Student Planning for later review by the teacher.

At the end of the lesson, the student will be shown the following screen indicating the number correct out of the number attempted. A little graphic, "GORB", tells the student how well he/she did on the lesson just completed.

Introducing GORB!

20 possible 12 correct Tim, you tried 20 problems and had 12 correct / on the first try. Good, Tim. You're beginning to understand. Press (RETURN).

The computer will then return you to the "Type your name" frame ready for another student or another lesson.

If the teacher has set the computer to terminate a lesson after a student gets 10* questions correct in a row, the graph above will change slightly when the student achieves this criterion. Example:

*This can be any number.

FOR THE TEACHER ONLY

Introduction to Analogies

Analogies are word problems that can be fun for students when done for their own sake. However, students encounter analogies on many standardized tests and should know how to solve them. Working with analogies will also help students learn to approach a problem logically, and will help them to build vocabulary.

Through the use of the lessons in this program, students are taught about analogies in a sequential manner that assumes no prior knowledge. The basic information that is presented to the students is reproduced here for the teacher.

An analogy is a word problem that uses two pairs of words. The words in the first pair are related to each other in a certain way. The second pair of words must be completed so that they relate to each other in the same way as the first pair.

Analogies are written in a structured manner.

Example:

PEAR:FRUIT::SPINACH:VEGETABLE

When reading an analogy, the colon (:) is read 'is to', and the double colon (::) is read 'as'.

Example:

PEAR is to FRUIT as SPINACH is to VEGETABLE This means that a pear is an object that belongs to the group "fruit" just as spinach belongs to the group "vegetable".

After students become familiar with the form of analogies, they begin to learn to solve them. The student must choose a word to complete the analogy so that both pairs of words relate to each other in the same way. Example:

HOT:COLD::DRY:

- a. STRONG
- b. WET
- c. WARM
- d. FLUFFY
- e. none of these

In order to solve the analogy, the student must determine that HOT and COLD are opposites, and must then choose a word that is the opposite of DRY.

The analogies used in the lessons have five responses. Only one response completes the analogy correctly. Response "e" is always "none of these". The three remaining responses are called distractors. A response is a distractor when it appears at first glance to be correct. Students must learn to recognize distractors. A distractor may take several forms:

It may rhyme with the last word in the analogy.

It may be a word that is exactly opposite the correct answer.

It may relate to the first pair of words instead of to the second pair.

The types of analogies (with examples) taught in these lessons are:

Synonyms - SHUT:SLAM::TWIST:TURN (AN3,AN3A)

Antonyms - UP:DOWN::IN:OUT (AN4, AN4A)

Object:Group - TRUMPET:HORNS::VIOLIN:STRINGS (AN5,AN5A)

Group:Object - HORNS:TRUMPET::STRINGS:VIOLIN

Part:Whole - WING:BIRD::ARM:PERSON (AN6,AN6A) **Whole:Part** - BIRD:WING::PERSON:ARM

Object:Description - APPLE:RED::ELEPHANT:GRAY (AN7,AN7A) **Object:Use** - HAMMER:POUND::KNIFE:CUT (AN8,AN8A)

Object:User - TRACTOR:FARMER::HAMMER: CARPENTER

Cause:Effect - RAIN:PUDDLE::SNOW:DRIFT (AN9,AN9A)

Grammar - FAT:FATTER::BIG:BIGGER (AN10,AN10A)

Not all sources on analogies agree on how many types there are, nor do they all call them by the same names. Only eight types of analogies are presented in this program. Regardless of the disagreement, the basic characteristic of analogies is that both pairs of words must relate to each other in the same way.

Although analogies can be taught as a separate skill, they are more effective when incorporated into the language arts program.

As the level of the students' interest and proficiency in solving analogies progresses, they can be challenged to make up their own.

Teaching Strategies

If it is indicated by the pre-test or judged by the teacher that the entire class has had very little experience with analogies, it is best to instruct the class in the language and mechanics of analogies.

The teacher may choose to use the traditional method of instruction, explaining the concept of analogies and how to solve them. Another way is to use your computer screen as a blackboard and work through lessons AN1 and AN2 as a group.

When instructing the whole class, use a television set or large monitor so all students have a clear view of the material. Students may respond orally or they may each write their responses. Either strategy allows students to interact with the teacher and to ask questions. As a check of the students' readiness, they may start working individually on the two introductory lessons, or they may begin with AN3 if the teacher believes that they are well-grounded in the basic information.

If the level of the students is such that they will be challenged by learning about analogies on their own, they can start with AN1 (Introduction, Part 1) and work through the program.

Student Problems

After a student has begun work on a lesson, use the Student Planning to help you diagnose problem areas. The Student Planning keeps track of specific frames a student misses. If a student consistently misses certain items, you may want to add Hint frames or more practice frames. Use the **Change a Lesson** file to modify any of the frames, add Hint or Explanation frames, or simply add more practice frames. How to use these will all be explained on the following pages.

Branching

This program has not been designed to automatically branch to an easier or more difficult lesson. It is the philosophy of the teachers who designed it that the teacher is better qualified to prescribe the next lesson based on his/her knowledge of the student's needs and the planned classroom activity.

By using the Design Options, the teacher can define the criteria under which the program will branch and alert the teacher that a new prescription is needed.

Pre- and post-tests

A pre- and post-test has been included in your materials. They may be duplicated and used to suit your teaching style and the level of the students with whom you are working. Some suggestions on the use of these tests follow.

Both tests, given in the usual manner (one before instruction and one at its conclusion), provide a way to measure progress.

In cases where most students will be starting with practically no knowledge of analogies, administering the pre-test might cause them unnecessary anxiety and prejudice them against the subject.

The pre-test may be used as an alternative form of post-test in cases where students did not score well on the first post-test and were given additional instruction.

The pre-test was not designed for placement in the program, but rather as a gauge of how much students know about analogies. A score of below 80% suggests that the student go through the entire program. A score of 80% or better indicates that the student is ready to work on more advanced analogies.

Teacher's MENU

The lessons on this disk are for the student. There are also programs for the teacher. These programs allow the teacher to "do things" to the student lessons on the disk.

The teacher's programs are accessed by using the name MENU when the following screen is shown:



The following MENU will be shown:



The following pages will describe exactly how to use each of these programs on the Teacher's MENU.

1 - CHANGE A LESSON

If you wish to change a lesson already on the disk, select 1 - Change a Lesson.

First, you will need to identify the lesson you wish to change or add to.



The lesson will be loaded into the computer. You can either add more frames or change existing ones.

LESSON: AN1

YOU HAVE 21 FRAMES IN THIS LESSON.

WANT TO ADD MORE FRAMES?

Adding Frames

If you want to increase the number of items, type Y. You are limited to **30 items per lesson.** You will then be asked:

ADD HOW MANY FRAMES?

After indicating the number of frames you wish to add to the lesson, the 'Instructions' frame will be shown with the option of changing it by indicating **Y** or **N**. If you answer **Y**, the cursor will move to the first line of the instructions. An instruction frame may look like this:

INSTRUCTIONS SYNONYM ANALOGIES

Before we begin learning about SYNONYM ANALOGIES, let's see how well you remember what you have already studied. REMEMBER - Read carefully and think before you answer!

Enter instructions.

This frame may be accessed any time by pressing **H** when a response is called for.

You may then type new instructions. If you don't wish to change a line, just press **RETURN** to move the cursor to the next line.

If you are adding frames, you will be shown the frame you wish to add. (If the lesson already had 19 items, Frame #20 will appear blank; the cursor on the first line, ready for you to type in the item.)

To capitalize a letter, press the '^' just <u>before</u> the letter to be capitalized. To make a '_' in a question, use the '**(**d' sign. Frames may be either question frames or information frames. Here is what a blank frame looks like before any words are typed into it.

Question Frame

This may take any format you would like.



You may enter 6 lines here.

You may enter 4 responses here; any one of these will be considered correct.

Instead of a Question frame, you can enter an 'Information' frame. When an information frame precedes a question, the student can (by use of the \leftarrow key), go back to the Information frame for help in answering the question.

Information Frame This frame requires no response.

The % in the answer's place will indicate to the computer that there will be no answer. When you solve an analogy, look at the first pair of words carefully. If the first two words are synonyms, then you know you are trying to solve a SYNONYM ANALOGY.

% (press return)

Adding frames (or changing frames)

After entering a new frame, or changing an existing frame, you will then branch to the 'Secondary' MENU.

DO YOU WANT TO:
 1 - ENTER HINT FRAME 2 - ENTER EXPLANATION FRAME 3 - GO ON TO NEXT FRAME 4 - RE-ENTER PREVIOUS FRAME 5 - END THIS LESSON WHICH?

This allows you to enter a 'Hint' frame or an 'Explanation' Frame. The hint frame will be shown to the student after he misses the question. If you wish to enter a Hint frame for the first question, select 1 - Enter hint frame and this will appear:

You may enter 6 lines of text.



See pages 30-32 for some short-cuts for entering clues. Many commonly used clues, such as "This is an antonym analogy. You need to fina a word that means the opposite of ______ have been coded for you. To type this clue, you need only type ***e** (the code) and the last word from the question. Pages 30-32 list all the codes and the 'hints' they produce.

After entering the hint frame and pressing **RETURN**, the computer will automatically place you at the next frame (assuming you were entering more than one additional frame), ready for the next question or more information.

Select 2 - Enter explanation frame. This would be used when a hint might not be appropriate, but you want to give the student feedback other than just the answer. The Explanation frame will be shown to the student after he has missed the question on his last try. (The number of tries is set by the teacher at the end of the lesson by using the Design Options).

Answer is shown.	Sorry, the answer is:
You may enter 6 lines of text.	
	Enter EXPLANATION for frame #1.

3 - Go on to next frame. This simply allows you to go to the next consecutive frame without entering a hint or explanation frame for the previous frame.

You may **4** - **Re-enter previous frame** if you have given a hint frame and want to look at the question frame you just entered.

Selecting 5 - End this lesson, will take you to the DESIGN OPTIONS for the lesson you have just entered. The first frame will ask you to enter the concept being taught, i.e.,

CONCEPT:SYNONYM ANALOGIES

Unless you are completely re-writing the lesson, you may want to leave the concept which is already listed. This will be used in the Student Planning section.

Design Options

The first of the Design Options will be given:

DESIGN OPTIONS DO YOU WANT THE FRAMES OF THIS LESSON PRESENTED TO THE STUDENT IN RANDOM ORDER OR THE SAME ORDER IN WHICH YOU ENTERED THEM? ENTER 'R' OR 'S' = = $\sum_{n=1}^{\infty}$

For instructional lessons that are carefully sequenced, you would want them presented in the same order. For drill or tests, you may want random order.

If you are using the hint option, you will need at least 2 tries.



The following 'Student Safeguards' allow you to set the criteria upon which the computer will branch to the end of the lesson. It is the philosophy of the teachers who designed this disk that if a lesson is too easy or too difficult, the computer should terminate the lesson. The TEACHER should make the new prescription.

STUDENT SAFEGUARDS

IF THE STUDENT IS DOING POORLY, THE LESSON WILL TERMINATE IF HE/SHE HAS LESS THAN 40% CORRECT ON THE FIRST TRY.

(ENTER A NUMBER FROM 1 TO 49)

The next question relates to the above decision.



EVEN IF THE STUDENT IS DOING POORLY, AT LEAST 4 FRAMES WILL BE PRESENTED BEFORE THE LESSON IS TERMINATED.

(ENTER A NUMBER FROM 1 TO 25)

You will need to skip at least some frames. If you don't, the lesson will terminate on the first frame if there is an error (0% will be below any % that you set in the previous step).



If there is a variety of skills taught or reviewed in one lesson, you may want the student to complete all the work no matter how well he/she does on the first 10. If so, change to 25 or the number of problems in a lesson.

Note: By using the random order option and the Design Options, this disk was designed to allow you to create a modifiable item pool. Rather than drawing a specific number of items, the items will be used until the student meets the criteria you specified (in terms of the number of items in a row correct).

This type of criteria was considered preferable to a % because it takes into account the fact that the child may do poorly in the beginning but learn the concept during the lesson and begin to answer all items correctly.

The student safeguards do not apply to these questions. The authors assumed the teacher would want all missed items reviewed.

DESIGN OPTIONS

AFTER THE STUDENT HAS GONE THROUGH ALL THE FRAMES IN A LESSON, DO YOU WANT THE QUESTIONS HE/SHE MISSED TO BE PRESENTED AGAIN?

ENTER ''Y' OR 'N' = => Y

DESIGN OPTIONS

WHEN THE QUESTIONS ARE PRESENTED AGAIN, HOW MANY TRIES WOULD YOU LIKE TO GIVE THE STUDENT BEFORE THE CORRECT ANSWER IS DISPLAYED?

ENTER A NUMBER FROM 1 TO 9 = = >

1

After all the Design Options have been set, you will be asked if you want to:

SAVE THIS LESSON?(Y/N)

If **Y**, the new frames added, or changes made in the lesson, will be saved. If **N**, the new frames added or changes made will be ignored and the lesson will remain as it was.

Changing Frames

If you want to change existing frames, select the 1-Change a lesson option from the menu.

If you just wish to change some of the frames and not add new items, answer **N** to the question:

ADD MORE FRAMES? (Y/N)

You will be shown all the frames as they exist. If you wish to change a line, type in the new line. If no change is desired, press **RETURN** to go on to the next line. Use the \leftarrow key to back-up to the preceding line or frame. Use the \rightarrow key as a short-cut to go from frame to frame.

Review pages 16-18 for adding hint or explanation frames. If you do not want to page through all the frames, type **END** at the beginning of the first line of a question or information frame. This will branch you to the Design Options. The changes made up to (but not including) this frame will be saved ALONG WITH THE REMAINING UNCHANGED FRAMES.

2 - CHECK STUDENT PLANNING

As a student works through a lesson, the errors that he/she makes are recorded into the Student Planning file. To see this file, bring up the Main MENU:



and select 2 - Check Student Planning. The first frame to appear is:

STUDENT PLANNING

WANT TO DELETE ALL STUDENTS AND CLEAR THE FILE? (Y/N)

Type **N** if you want to see the file; **Y** if you want to completely erase all student results. Press **RETURN**.

If you typed **N**, indicating you would like to see the file and not erase it, this frame will appear:

YOU HAVE 4 STUDENTS IN FILE.
THERE IS ROOM FOR 46 MORE.
DO YOU WANT TO:
1 – SEE ALL STUDENTS
2 – SEE SOME STUDENTS
3 - PRINT STUDENT SUMMARY
4 - DELETE ALL STUDENTS
5 - DELETE INDIVIDUAL STUDENTS
6 - GO BACK TO MENU
WHICH?

If you choose 1 - SEE ALL STUDENTS, the computer asks:

ARE YOU USING A PRINTER? (Y/N)

If **Y**, it will ask for the slot. It will usually be 1 or **2.** If you're not sure, take off the cover and check. Your printer card should be located in slot 1 or 2. Then all the records will be printed.

If you are not using a printer, results will be displayed on the screen. Scrolling of results is under control of the teacher.

If you want to see only some of the students, select

2 - SEE SOME STUDENTS and press RETURN.

This frame appears:



NOTE THE NUMBER TO THE LEFT OF THE STUDENT(S) YOU WISH TO PRINT OR DISPLAY.

PRESS RETURN

As you select the students whose records you want to view, you will be typing just the number.

ENTER STUDENT NUMBERS	
1 -< AN5> Tim	
2 - < AN3> Jane	
3 -etc.	The computer keeps
: 🔲 . Ø TO PRINT 🔫	- a running tally on
TYPE 'END' TO QUIT ENTERING STUDENTS	the number of students you have selected.

Type the <u>number</u> of a student you want to see and press **RETURN.** For example: If you type 2, the lesson name and student name will appear at the bottom of the frame This is a check. Press **RETURN** if that is the student you wish to see. This gives you a chance to change your mind and enter **N** if you don't want to see that particular student.

k	2 - < AN5>	Tim	Y	TO PRINT

Continue selecting students whose records you want to see. When you have entered all of the students you wish to see, type **END** (in place of another number). The following frame will appear:

ARE YOU USING A PRINTER? (Y/N)

If you type N, the records will come up on your monitor. If you type Y, you will be asked:



It will usually be 1 or 2. If you are not sure, take off the cover and check. The printout will be in the following format:

	STUDENT: TIM LESSON: AN5 CONCEPT:OBJECT:GROUP ANALOGIES THERE ARE 23 FRAMES IN THE LESSON INCLUDING 13 QUESTIONS.
	STUDENT HAD 9 CORRECT ON 1ST TRY.
-	FRAMES MISSED ON 1ST TRY: 5,6,11,17
	3 RIGHT ON SUBSEQUENT TRIES.
	CONSISTENTLY INCORRECT FRAMES: 17
	PRESS RETURN

After all information is displayed, you will be asked:



Respond as desired.

The ESC key may be pressed at any time to terminate display or printout of student results. A maximum of 50 records can be stored in this Student Planning file before it must be emptied. To empty the file, answer Y to the question at the end of the display/printout, or use option 4 from the Student Planning Menu - Delete all students.

3 - **PRINT STUDENT SUMMARY** from the Student Planning MENU allows you to see or print out a summary of records for the entire class. The summary is in the following format:

STUDENT NAME	LESSON	1ST TRY
SMITH, J.	AN2	100%
HARTLEY, T.	AN5	68%
CORTEZ, J.	AN4A	85%
HARTLEY, J.	AN3	61%
PRESS RETURN		

The printout of the Student Summary will include <u>more</u> information than you can see on the screen. The printout includes: the skill statement and the number correct/number of questions.

			NUMBER	
STUDENT_NAME	LESSON	1ST TRY	CORRECT	SKILL
SMITH, J.	AN2	100%	20/20	PART:WHOLE
				ANALOGIES

4 - DELETE ALL STUDENTS

If you want to clear all of your records, use this option.

5 - DELETE INDIVIDUAL STUDENTS

A number of teachers have asked for this option. This is most valuable when several teachers are using the same disk. This allows you to print the records of just a few of your students and then erase only those selected records from the file. The procedure is the same as "See some students."

3 - RUN LESSONS

See pages 3-6 for an explanation of how to Run Lessons.

4 - CATALOG DISK

This file holds the list of all lessons on the disk. This can also be accessed by typing a ? when the "Type the name of the lesson you will be working on" appears.

5 - TURN SOUND ON/OFF

1. Second and the	
	SOUND IS (OFF)
	DO YOU WANT:
	1 - SOUND ON
	2 - SOUND OFF
	WHICH?

After making your selection, you will be returned to the Main MENU.

CODES FOR ENTERING HINTS/EXPLANATIONS

Type this code	to produce this clue:
*a	The second pair of words must be related to each other in the same way as the first pair of words.
*b	When you read an analogy, ':' stands for 'is to" and '::' stands for 'as'.
*с	To be synonyms, the words must mean the same thing.
*d	This is a synonym analogy. You need to find a word that means about the same as
*e	This is an antonym analogy. You need to find a word that means the opposite of
*f	This is an object:group analogy. You must find a word that names the group
*g	This is an object:group analogy. You must find a word that belongs to the group
*h	This is a part:whole analogy. You need a word to tell what
*j	This is an object:description analogy. You must find a word to describe
*k	This is an object:use analogy. You must find a word to tell

Type this code	to produce this clue:
*1	This is an object:user analogy. You must find a word that names
*m	This is a cause:effect analogy. You must find a word to tell the effect caused by
*n	This is a grammar analogy. You need a word that
*o	To be a synonym analogy, the first two words must mean about the same thing.
*р	To be antonyms, the words must be opposite in meaning.
*q	To be an antonym analogy, the first two words must be opposite in meaning.
*r	To be an object:group analogy, the first two words must name an object and the group to which that object belongs.
*s	In an object:description analogy, one word in the first pair names an object, and the other word describes that object.
*t	In an object:use analogy, one word in the first pair names an object, and the other word tells the use of that object.
*u	In an object:user analogy, one word in the first pair names an object, and the other names a person who uses that object.

×ν

to produce this clue:

In a part:whole analogy, one of the words in the first pair is a part of the other word.

In a cause:effect analogy, the first word in the pair causes the second to happen.

In a grammar analogy, the first two words are related because of some rule of English language usage.

*w

*х

INSTRUCTIONAL SKILL STATEMENTS

After the first two introductory lessons, each lesson begins with a brief review. A new type of analogy is then introduced. Practice is provided on the new analogy and analogies previously learned.

- AN1 Introduction of the concept of an analogy including what an analogy is and how to read it.
- AN2 Introduction to analogies continued. The student learns to define an analogy in terms of word problems which show relationships.
- **AN3** The student learns to identify word pairs that are synonyms and identify and solve synonym analogies.
- **AN4** The student will learn to identify antonym word pairs and identify and solve antonym analogies.
- **AN4A** Additional practice in solving synonym and antonym analogies.
- **AN5** The student will learn to identify object/group word pairs and identify and solve object/group analogies.
- AN5A Additional practice in the solution of object/ group analogies and analogies previously presented.
- **AN6** The student will learn to identify and solve part/whole analogies.
- AN6A Additional practice on part/whole analogies and all analogies previously presented.

DISK II

AN7 The student will learn to identify and solve object/description analogies.

- **AN7A** The student will learn to identify and solve object/description analogies.
- **AN8** The student will learn to identify and solve object/use; object/user analogies.
- **AN8A** Additional practice on object/use and object/user analogies and all analogies previously presented.
- AN9 The student will learn to identify and solve cause/effect analogies.
- **AN9A** Additional practice on cause/effect analogies and all analogies previously presented.
- ANIO The student will learn to identify and solve grammar analogies.
- ANIOA Additional practice on grammar analogies and all analogies previously presented.

ANSWER KEYS TO PRE/POST TESTS ANALOGIES TUTORIAL

Pre-	Test	Post-	Test
1.	С	1.	С
2.	b	2.	b
3.	d	3.	е
4.	е	4.	b
5.	а	5.	b
6.	b	6.	d
7.	d	7.	а
8.	С	8.	а
9.	е	9.	е
10.	b	10.	d
11.	С	11.	b
12.	а	12.	С
13.	d	13.	е
14.	е	14.	d
15.	С	15.	а
16.	а	16.	d
17.	d	17.	С
18.	d	18.	b
19.	е	19.	е
20.	С	20.	С
21.	b	21.	С
22.	а	22.	а
23.	d	23.	d
24.	b	24.	b
25.	С	25.	С



Grades 5-8

UQ

This two-disk program provides the student with a method of attack for solving analogies.

Practice in identifying and solving analogies is provided. HINTS or EXPLANATIONS are given for incorrect responses.

Type of analogies include—synonym:antonym, object:group, part:whole, object:use, object: user, cause:effect, object:description, and grammatical usage.

Lesson content may be modified to provide a continuous challenge for the student. Individual and class records are kept by the computer.



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