
NEW DIRECTIONS IN CREATIVITY **MARK 2**

The *NEW DIRECTIONS IN CREATIVITY* program,
under the direction of Joseph S. Renzulli,
includes the following manuals:

MARK A
MARK B
MARK 1
MARK 2
MARK 3

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NEW DIRECTIONS IN CREATIVITY

MARK 2

JOSEPH S. RENZULLI

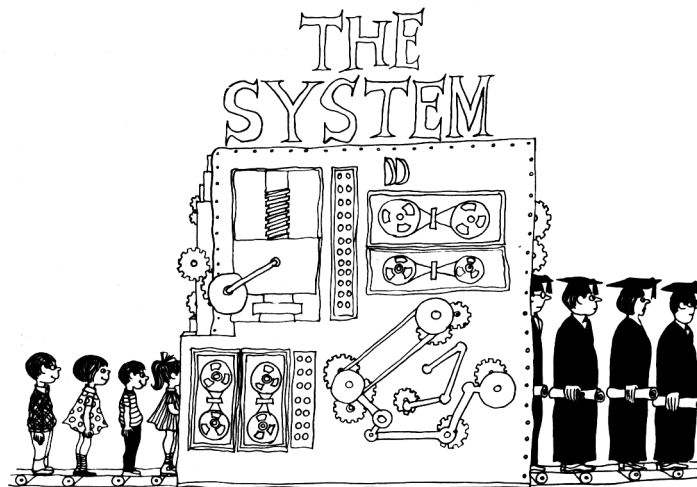
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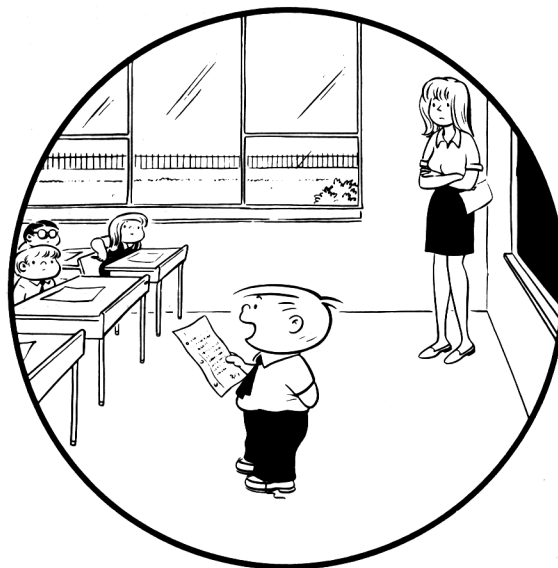
In children creativity is a universal. Among adults it is almost nonexistent. The great question is: What has happened to this enormous and universal human resource? This is the question of the age and the quest of our research.

—from Harold H. Anderson, ed., *Creativity and Its Cultivation* (New York: Harper & Brothers, 1959), p. xii.



"The main thing is not to take it personal."

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"What I liked best about school this year was the teachers' strike."

The Family Circus by Bil Keane. Copyright © 1971 by The Register and Tribune Syndicate, Inc., Des Moines, Iowa. Reprinted by permission.

A PERSONAL NOTE TO TEACHERS

Whenever teachers ask me how I became interested in creativity and why I developed a creativity training program for children, I often answer by referring to the quotation and the two cartoons on page vi. The quotation from Harold Anderson's book points out the great loss in human potential for creative development that takes place between childhood and adulthood. Although this loss no doubt takes its toll by limiting the number of people who make creative contributions to our society, a much more serious and far-reaching consequence is that many adults never have the opportunity to experience the satisfaction and enjoyment that results from the act of creating. Somehow the joys that were associated with childhood fantasy and imaginary excursions into the world of the improbable seem to disappear as we engage in the business of growing up. Although growing up is indeed a serious business, I often wonder if the emphasis that our culture places on the practical and the utilitarian causes most people to arrive at adulthood without the creative ability that they possessed as children.

The first cartoon illustrates the emphasis that our educational system places on the process of conformity. Most learning experiences are designed in a way that causes all youngsters to arrive at the same solutions to problems; thus it is not surprising to see a very homogenized group emerging from "the system." A quick glance at most workbooks or exercises in textbooks reveals that only rarely do these materials purposefully encourage youngsters to be as original as possible in their answers to given problems and questions.

The second cartoon presents a sad but essentially valid picture of most children's perception of school. Our preoccupation with order, control, routine, and conformity has made schools into dreary and often oppressive places for many children. The supposedly exciting act of learning has frequently been a coercive and sometimes even punitive process.

Many writers have summarized problems that have made schools such unfriendly places and have pointed out some of the ways that these problems can be overcome. One suggestion common to many writers is that classrooms need to be more engaging, creative, and interactive places and that youngsters need to be given greater opportunities to imagine, create, and express themselves.

The creativity training program described in this manual represents one attempt to provide both teachers and students with a set of materials that will help them learn a variety of ways for expressing their creative potential. Creativity is a dynamic process that involves "a way of looking at things"; therefore the activities included in this program are designed to broaden the way that youngsters look at their world. The program is not an end in itself, but rather a series of first steps that will provide teachers and students with the basic skills involved in creative production. Over the past few years, I have worked with hundreds of teachers in courses and workshops dealing with creativity. These experiences have shown me that a minimum amount of instruction and a maximum amount of actual involvement with the materials have effected the biggest changes in teachers' understanding and application of creativity training activities. The old saying "The best way to learn how to do it is to do it" is a guiding principle in my approach to teaching teachers the skills of creative production. Once these skills have been assimilated, they can be applied to all areas of the curriculum and to most of the learning experiences that take place in the classroom.

Joseph S. Renzulli
Storrs, Connecticut

PART I

*I hear, and I forget;
I see, and I remember;
I do, and I understand.*

Chinese Proverb

PURPOSE AND DESCRIPTION OF THE PROGRAM

The *New Directions in Creativity* program consists of five volumes: *Mark A*, *Mark B*, *Mark 1*, *Mark 2*, and *Mark 3*. The program is designed to help teachers develop the creative thinking abilities of primary and middle-grade youngsters. Research has shown that almost all children have the potential to think creatively and that creative production can be improved by providing systematic learning experiences that foster use of imagination.

Purpose of the Program

The general purpose of this creativity training program can best be explained by contrasting the creative or *divergent* production abilities with the *convergent* production abilities emphasized in most elementary school classrooms. In most traditional teaching-learning situations, major emphasis is placed on locating or converging upon correct answers. Teachers raise questions and present problems with a predetermined response in mind, and student performance is usually evaluated in terms of the correctness of a particular answer and the speed and accuracy with which youngsters respond to verbal or written exercises. Thus the types of problems raised by the teacher or textbook and the system of rewards used to evaluate student progress cause most youngsters to develop a learning style that is oriented toward zeroing in on the “right” answer as quickly and as efficiently as possible. Although this ability has its place in the overall development of the learner, most teachers would agree that impressionable young minds also need opportunities to develop their rare and precious creative thinking abilities.

Divergent production is a kind of thinking that is characterized by breaking away from conventional restrictions on thinking and letting one’s mind flow across a broad range of ideas and possible solutions to a problem. The real problems humanity confronts do not have the kinds of predetermined or “pat” answers that a great deal of instruction focuses on in the convergent-oriented classrooms. Yet we give our

children very few opportunities to practice letting their minds range far and wide over a broad spectrum of solutions. The philosopher Alan Watts (1964) has talked about these two kinds of thinking in terms of what he calls the “spotlight mind” and the “floodlight mind.” The spotlight mind focuses on a clearly defined area and cannot see the many alternative possibilities or solutions to a problem that may exist outside that area. Floodlight thinking, on the other hand, reaches upward and outward without clearly defined borders or limitations. The floodlight thinker is free to let his or her imagination wander without the confinements or limitations that usually lead to conformity. Both types of thinking are valuable, and to pursue one at the expense of the other is clearly a disservice to the children for whose development we are responsible.

This description of divergent thinking should not lead teachers to believe it is undisciplined or disorderly. Mary Nicol Meeker (1969) has pointed out that “divergent generation does not proceed willy-nilly; the divergent thinker is not a scatterbrain; the worthwhile generation of information requires discipline and guidance.” Following Meeker’s suggestion, the *New Directions in Creativity* program has attempted to provide youngsters with an opportunity to break away from conventional restrictions on their thinking. Yet an effort has been made to generate responses that are relevant to particular kinds of problems and that fall within reasonable bounds.

Specific Abilities Developed by the Program

The *New Directions in Creativity* program is designed to develop each of the following creative thinking abilities:

1. *Fluency*—the ability to generate a ready flow of ideas, possibilities, consequences, and objects
2. *Flexibility*—the ability to use many different approaches or strategies in solving a problem; the

willingness to change direction and modify given information

3. *Originality*—the ability to produce clever, unique, and unusual responses

4. *Elaboration*—the ability to expand, develop, particularize, and embellish one’s ideas, stories, and illustrations

Each activity in the program is designed to promote one or more of these four general abilities. The activities are also classified according to (1) the types of information involved in each exercise (semantic, symbolic, figural) and (2) the ways that information is organized in each exercise (units, classes, relations, systems, transformations, implications, elaborations). These two dimensions are described in detail in Part III of this manual. The activity-by-activity lesson guides presented in Part IV include the specific objectives for each activity and suggestions for follow-up activities designed to develop further the specific abilities toward which the respective exercises are directed. Although many of the objectives and suggestions for follow-up activity are directed toward the development of traditional skills in language arts, these skills are always “piggybacked” on the four major creative thinking skills. Field testing has shown that students are more motivated to pursue traditional language arts skills when such skills are based upon activities that make use of their own creative products.

Although the purpose of each manual in this program is to provide teachers with a systematic set of activities aimed at promoting creativity in children, a second and equally important objective is to help teachers unlock their own potential for more creative teaching. In almost every school where these activities were field tested, participating teachers began to develop their own materials and activities for creativity training. In many cases, the teacher-made activities were highly original and skillfully integrated with various aspects of the regular curriculum. Once teachers understood the general nature of the creative process, they were quickly able to apply the same basic strategies to other areas of the curriculum. Therefore, teachers should view this creativity training program as a starting point that will eventually lead to the development of a “creativity orientation” on the part of teachers. This orientation will assist teachers in finding numerous opportunities for creativity training in a wide variety of learning situations.

Description of the Program

Each manual in the *New Directions in Creativity* program consists of twenty-four types of creativity training activities. Two activity sheets, both containing one or more exercises, are provided for each type of activity, and each type is classified according to the kinds of information involved in the exercises and the ways that information is organized. Each activity is further classified according to the level of response required. This classification scheme is based on Guilford’s model of the structure of human abilities. Teachers who wish to know more about this model should refer to Part III of this manual. (An overview of the activities in this manual, listing the types of activities according to Guilford’s classification scheme appears on page 22.)

Mark A and Mark B: Most of the activities in the primary volumes have been designed so that children can respond with either words or pictures. This approach allows children who cannot yet express themselves in writing to communicate their creative ideas through pictures. Suggestions for alternative modes of expression, such as dictating responses to a teacher’s aid or to a tape recorder are also included. The primary volumes are also designed to develop the psychomotor abilities of younger children through manipulative and dramatic activities, and the teaching suggestions present ideas for using primary teaching aids such as flannel boards, chart paper, scissors, and paste.

The format of the primary activities attempts to take account of the developmental level of the young child. Illustrations on the exercise sheets are generally larger and less complicated than the drawings in the middle-grade books, and fewer responses are required to allow for the gross motor coordination of the primary-aged youngster. Page directions are simpler, and greater reliance is placed on illustrations than on written directions. The lesson guides for the primary volumes contain more detailed suggestions for introducing activities and emphasize using concrete examples to get children started on exercises that are more easily demonstrated than described.

Mark 1, Mark 2, and Mark 3: Most of the activities in the middle-grade volumes deal with semantic information. Some symbolic activities that involve the use of words have been included, and a few figural activities have also been included to help students understand that creativity skills can be applied to both verbal and nonverbal information.

Activities dealing with information that is organized into units, classes, or relations generally require

students to (1) fill in blanks with unspecified words, (2) manipulate given words and figures, or (3) complete short statements. These activities are considered warm-ups for higher level activities, and they are generally directed toward giving students practice in the basic creativity skill of brainstorming. Brainstorming activities help students free their thinking processes from the restraints that usually hinder creativity and provide an effective means for promoting a free and open classroom atmosphere.

The higher level activities deal with information that is organized into systems, transformations, implications, or elaborations. The major difference between the two levels of activities is that fewer specifications are given for the kinds of responses required in the higher level activities. These responses are generally more open-ended, and fewer restrictions are placed on the nature of the products developed by students. Although all activities provide youngsters with opportunities to express themselves in a relatively free and unrestricted manner, the program will be most effective if students pursue a balanced combination of the various types of activities. Each type is designed to develop and give practice in the use of certain creativity skills, and the skills developed by the warm-up activities are necessary for maximum development of the more advanced kinds of creative thinking necessary for the higher level activities. Suggestions for the most effective sequencing of activities are included in Part II of this manual.

Grade and Ability Levels

Although no specific grade level has been assigned to the respective volumes, field tests have shown that *Mark A* is most successful with children in kindergarten and first grade and that *Mark B* works best with second- and third-grade youngsters. An attempt was made to separate activities in the primary volumes so that the first book would contain exercises for children who have not yet developed reading and writing abilities or who are in the beginning stages of development in these areas. The exercises in *Mark B* were designed in accordance with the level of communication skills that typically are taught in second and third grades.

Field tests have shown that *Mark 1*, *Mark 2*, and *Mark 3* are most successful with students in grades four through eight. The open-ended nature of creativity training activities has provided an opportunity to develop a truly nongraded program, and many of the exercises have been used successfully with students at several grade levels. When there are no “right” or “wrong” answers, each student sets his or her own level of

response. The responses of bright youngsters are often characterized by higher degrees of fluency, flexibility, originality, and elaboration, but even the slowest child is able to respond in a way that is appropriate to his or her own developmental level. It may be necessary for teachers to read some of the directions to students and to supervise their work more closely until they catch on to the nature of the various tasks. To help both younger and slower students grasp the main idea, most of the introductory exercises include illustrative examples. These examples are useful in helping students who have some trouble reading the directions or getting started on some of the more difficult exercises. Most of the exercises are not too difficult for younger or slower students, but because of the open-ended nature of the exercises, teachers must carefully explain directions, and they may have to provide a few examples of their own in order to start students off on the right track.

An important feature of this creativity training program is that a youngster can respond to each activity in terms of his or her own background and experience. Because the program is not based on the student’s ability to recall factual information, each student can express his or her creativity by drawing on his or her own knowledge and experiences. Many writers have pointed out that the child’s own experiences and activities are the principal agents of his or her development and that no matter how “primitive” a child’s level of development, he or she can extend his or her mental abilities by probing, manipulating, and applying his or her own experiences to new kinds of materials and situations. This idea is one of the fundamental principles on which the constructivist learning is based, and field tests with the *New Directions in Creativity* program have shown that students from so-called disadvantaged backgrounds are able to use their own experiences to complete most of the activities in the program.

Insofar as individualized programming is concerned, it is important for teachers to carefully consider each child’s preferences. Some students may show a preference for semantic activities, whereas others may prefer to respond figurally or symbolically. Similarly, certain children may like exercises with a less complicated response format (units, classes, relations), whereas others may show a preference for more complicated modes of expression such as poetry or story writing. The classification system which underlies the *New Direction in Creativity* program provides a unique opportunity for teachers to study children’s learning style preferences and to adapt accordingly. The program will be most successful if teachers respect children’s preferences and avoid forcing every child to complete every activity.

PART II

“Imagination grows by exercise.”

W. Somerset Maugham

GENERAL STRATEGIES FOR USING THE PROGRAM

Although a great deal has been written about fostering creativity in the classroom, relatively few basic teaching strategies have been effective in encouraging creative development. This section of the manual will describe the basic strategies that teachers have found most helpful in using the *New Directions in Creativity* program. Although the materials have been designed to require minimum preparation time, the importance of the teacher’s role cannot be overemphasized. In describing the role of teachers in this regard, Starko (1995) emphasized the distinction between teaching for the development of creativity versus creative teaching. She concluded that effective teachers who develop students’ creative thinking know how to teach techniques that “facilitate creative thinking across disciplines and provide a classroom atmosphere that is supportive of creativity” (p. 17). Other studies, including a meta-analysis study by Rose & Lin (1984) and a research synthesis by Torrance (1987), indicate that creativity training is associated with increased creativity, involvement in creative activities, and positive feelings toward school.

Brainstorming and the Fluency Principle

In most cases, the first thought that comes to mind in seeking the solution to a difficult problem is seldom the most original idea. Therefore, *fluency*, defined as the ability to produce several ideas or possible solutions to a problem situation, is an important condition for creative production. The fluency principle, which underlies the development of this creativity training program, maintains that fluency is a necessary, though not sufficient, condition for originality. Although there are some cases on record of highly creative products that have resulted from sudden inspirations, research on creativity in both children and adults strongly supports the fluency principle. Studies by Archambault (1970), Paulus (1970), and Baer (1993) have shown that initial responses to a given problem tend to be the more common ones and that the greater the number

of answers generated, the higher the probability of producing an original response (*original* in the sense that fewer students come up with that response). Therefore, a hypothetical curve of creativity for a given task or activity (see Figure 1) would show a gently sloping gradient with an increase in originality being related to an increase in the number of responses. For example, if we asked a group of students to list all of the utensils that people *might* use to eat with, their initial responses would no doubt include common utensils such as forks, spoons, and knives. But if we encouraged them to increase their lists by using their imaginations (“Suppose you didn’t have any forks or spoons. What *could* you use?”), students would begin to explore some possible alternatives. They might suggest such items as sharpened sticks, shells, and bottle caps. If we compared the lists of several youngsters, we would find that most of the initial answers are quite common—that most of the students have given the same responses. As the lists grow longer, we would find more divergence occurring, and the probability of a youngster’s producing an original response increases. In other words, quantity

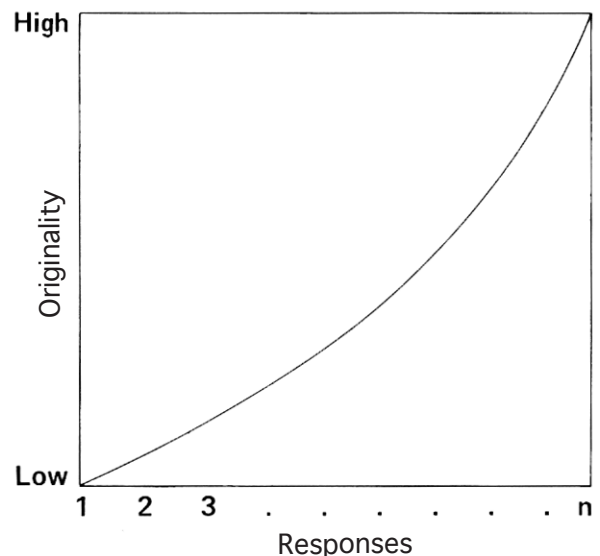


Figure 1. Hypothetical curve of creativity.

breeds quality, and research has shown that individuals who produce a large number of ideas are more likely to produce ideas that are more original.

Each manual in this program attempts to capitalize on the fluency principle by including a number of exercises that generate a large number of responses. In opposition to the techniques of convergent production discussed earlier, these exercises have no right answers. Rather, they are designed to encourage the student to produce a large quantity of responses, and, hopefully, practice in this mode of thinking will help free the learner from previously acquired habits which predispose him or her to rely mainly upon recall and convergent thinking.

The basic technique for increasing fluency of expression is called *brainstorming*. The first step in this process is to provide students with a problem that has many possible alternative solutions. Brainstorming can be carried out individually or in group sessions. During the early stages of a brainstorming activity, students should write or verbalize *all* thoughts and ideas that come to mind, no matter how silly, way-out, or wild the ideas may be. The best way to promote free-wheeling and offbeat thinking is to value quantity and withhold criticism and evaluation until students have exhausted their total supply of ideas related to a given problem. This principle, known as the principle of unevaluated practice, is further discussed in the section dealing with evaluation (pp. 10-12).

The following is a list of general questions (adapted from Arnold (1962)) that can be used to spur students' thinking during brainstorming sessions:

Other Uses

- Can it be put to other uses as is?
- Can it be put to other uses if it is modified?

Adaptation

- What else is like it?
- What other ideas does it suggest?
- What could you copy?
- Whom could you imitate?

Modification

- What new twist can you make?
- Can you change the color, size, shape, motion, sound, form, odor?

Magnification

- What could you add?
- Can you add more time, strength, height, length, thickness, value?
- Can you duplicate or exaggerate it?

Minification

- Can you make it smaller, shorter, lighter, lower?
- Can you divide it up or omit certain parts?

Substitution

- Who else can do it?
- What can be used instead?
- Can you use other ingredients or materials?
- Can you use another source of power, another place, another process?
- Can you use another tone of voice?

Rearrangement

- Can you interchange parts?
- Can you use a different plan, pattern, or sequence?
- Can you change the schedule or rearrange cause and effect?

Reversibility

- Can you turn it backward or upside down?
- Can you reverse roles or do the opposite?

Combination

- Can you combine parts or ideas?
- Can you blend things together?
- Can you combine purposes?

These are only some of the questions that teachers and students can use to stimulate creative thinking during the brainstorming activities included in the program. Once students have learned the basic brainstorming technique, you should encourage students to approach each activity with an idea-finding frame of reference. The section "Introducing the Primary Activities" (pages 12-14) is especially designed to teach the brainstorming process through active involvement in both group and individual brainstorming activities. As a general rule, you should always encourage students to go as far as

they can in completing the exercises on the activity sheets and the follow-up activities. Students may need to go beyond the spaces provided or you may need to extend time limits when youngsters are engaged in a highly productive activity. Keep in mind that brainstorming is a skill that grows through practice, and students will develop this skill if they know you place major value on the quantity rather than the quality of their responses.

The Principle of Mild Competition

Although a great deal has been written about the dangers of high-pressure competition in the classroom, research with various curricular materials has shown that *mild* competition is a positive nutrient in motivating students to become involved in learning activities. The use of simulation and learning games to promote learning is based on the finding that gamelike activity is one of the child's preferred ways of learning. Several researchers have investigated the relationship between children's play and creativity. For example, Li (1985) found significant gains in preschool children's creativity after being exposed to play training. Mellou (1995) examined the literature on the relationship between dramatic play and creativity and concluded that most of the research supports a positive relationship between them, noting the alternative symbolic constructions and flexibility common to both. In a research synthesis on creativity processes in children that are predictive of adult creativity, Russ (1996) also concluded that the relationship between children's play and creativity is strong.

We have made an attempt to capitalize on the motivational benefits of gamelike activity by suggesting that certain exercises be carried out under mildly competitive conditions. This approach will introduce an element of excitement into the program and give youngsters an opportunity to pursue classroom activities in their preferred manner of learning.

To avoid the dangers associated with high-pressure competition, you should use caution when employing the mildly competitive mode. You should observe the following general rules whenever you introduce competition into creativity training activities.

1. Group competition should be used rather than individual competition.
2. Grades or other material rewards should never be associated with competitive activities. Students will derive satisfaction from the competitiveness itself and the excitement of winning or trying to win.

3. Teams should continually be rearranged in a way that allows all youngsters an opportunity to be on a winning team.

There are several ways of arranging teams for competitive classroom activities—row against row, boys against girls, or everybody wearing a certain color on one team, to name a few. If some youngsters find it difficult to perform under competitive conditions or if some put undue pressure on others who slow the team down, it may be wise to ask these students to serve as moderators or scorekeepers because “you need their help.” A good way to help build up enthusiasm is to get involved in competitive activities on an equal basis with students. When you join a given team, the students will no doubt look to you for leadership, but you should try to be just another member of the team and avoid contributing more than a proportionate share of the responses. You will, of course, have to experiment to determine the best ways for operating in the mildly competitive mode. A good deal of the art of teaching is involved in knowing your students and in using classroom management procedures that are especially applicable to a given group.

A general strategy that you can use in follow-up discussions of the exercises is intergroup competition. Prior to assigning a particular exercise or after an exercise has been completed, divide the class into several small groups which can then compete with each other on the basis of (1) the greatest number of team responses and (2) the most original responses (i.e., responses that other teams did not think of). A team's score would consist of one point for the total number of responses generated by all team members (including duplications) minus a given number of points for each response that appears on another team's list. Slowly increasing the number of points deducted for responses that are common among teams will encourage the students to strive for originality, as well as quantity, of responses. Students might like to keep a score card on the bulletin board to record team progress. Competitive follow-up activity of this type is probably most appropriate for exercises that emphasize the quantity of responses rather than the production of a story or single product.

The Principle of Cooperation

Researchers have found that activities involving team collaboration help youngsters increase their creative productivity. You should allow students to work on some activities in pairs or in small groups,

and students should direct their efforts toward the production of group responses, as well as individual responses. Group activities provide an opportunity for youngsters to learn cooperation and the benefits of bringing several minds to bear on a particular problem. They also provide opportunities for you to develop leadership skills and help less creative youngsters experience success by working cooperatively with more highly creative individuals. Since you can use many of the activities for both individual and group work, it is important for you to review each activity sheet before using it with students. Field tests have shown that the classroom teacher is the best judge of the conditions under which the class works best, and therefore the activities have not been classified as individual or group activities.

The best way to maximize the effectiveness of the *New Directions in Creativity* program is to vary continually the strategies for using the activities in the classroom. You should use competitive and cooperative modes as alternatives to the individual mode and use students as a guide in selecting the approach for a given activity. Part IV of this manual includes activity-by-activity lesson guides and suggestions for alternative ways of using the activities and follow-up activities. You should, of course, employ your own creative teaching strategies and develop new strategies by combining, modifying, and adapting suggested approaches.

Evaluation: The All-Important Classroom Atmosphere

The success of any creativity training program depends on the amount of freedom and flexibility that exists in the classroom. The very nature of creativity requires that students be allowed to express their thoughts and ideas in a warm and open atmosphere. Teachers should encourage their students to play with ideas, laugh, and have fun without worrying about being graded and evaluated when they are engaged in creativity training activities. Rogers (1969) emphasized the importance of freedom from the threat of evaluation and asserted that creativity can be fostered by establishing psychological safety through the unconditional acceptance of each individual's worth. When you encourage youngsters to express themselves in an uninhibited manner, it is extremely important that you also provide them with a climate that is free from external evaluation and the critical judgments so often associated with schoolwork. The importance of providing this free climate is supported by the research of Amabile (1996) and Lepper, Greene, and Nisbet

(1973) who found that extrinsic motivation undermines students' creativity, and Amabile identified factors of intrinsic motivation that impact students' performance on creative tasks. Since no right answers are prescribed for this creativity training program, students have the opportunity to work in an open atmosphere without the constant threat of failure hanging over their heads.

The most effective way to open up the classroom atmosphere is to minimize formal evaluation and lead students in the direction of self-evaluation. In the real world, people often judge things in terms of self-satisfaction and the degree to which they, as individuals, like or dislike the things they do or the products they produce. The only way that we can teach students to become self-evaluators is to give them numerous opportunities to judge their own work and to modify their work when they are not satisfied with it. Thus, this program does not include a formal grading system, and the suggestions that follow are designed to help develop strategies for (1) valuing students' original products and (2) teaching youngsters the techniques of self-assessment.

The principle of unevaluated practice simply means that judgment is deferred until the individual has had an opportunity to explore several possible answers or solutions to a given problem. The principle of deferred adjustment, first espoused by Osborn (1963), has consistently been shown to be an essential ingredient for creative thinking. Several researchers, such as Amabile (1985) and Baer (1993), have found evidence to support this claim. The main purpose of unevaluated practice is to free children from the fear of making mistakes.

Creating such an atmosphere in the classroom is far easier said than done, but there are some specific strategies that teachers can use to help promote an environment that is more supportive of creativity. The most important strategy is to be tolerant and respectful of children's ideas, questions, and products. You should show interest, acceptance, and excitement toward student responses and avoid expressions of shock, surprise, annoyance, or disinterest. Above all, never laugh at or make light of a youngster's responses and try to discourage teasing and laughter from other students. Healthy amusement and friendly competition will help promote a supportive atmosphere, but ridicule and scowls will have a negative effect. Each student must come to believe that his or her ideas are as valuable as the ideas of others.

One of the hardest things to control in the classroom is the spontaneous laughter that may arise when a student says something that is somewhat unusual. A good way to overcome this problem is to legitimize

laughter by showing students that you also have some way-out ideas and that you do not mind if the students laugh when you express them. You will note that in the section “Introducing the Primary Activities” the teacher is asked to demonstrate use of a pogo stick. This activity has been found to be an extremely effective way to legitimize laughter and show students that you are not afraid to express unusual ideas or actions. Whenever possible, participate in written and oral activities and set the pace by contributing your own unusual responses. Your contributions will help students realize that you are a human being and that you are not afraid to express yourself freely. Remember, you set the limits on student behavior. If you actually participate in creative activities, students will learn that you value creative behavior, and they will quickly begin to display their own creative thoughts.

Another strategy aimed at promoting an environment that encourages students to be creative involves the principle of rewarding desired types of responses. If you show generous praise for quantity and unusualness of responses, students will quickly recognize the types of behavior that you value and they will strive to achieve these types of behaviors.

You can increase creative production by combining the fluency principle with the reward principle and the principle of unevaluated practice. In follow-up discussions to the activities, you should praise individual responses and give generous praise to the sheer quantity of response. Remember that an increase in fluency will almost always result in a corresponding increase in originality. Consequently, you should develop a repertoire of fluency-producing, enthusiastic comments, such as “That’s really good. Can you think of a few more?” and “Let’s see who can come up with five more possible titles for Bill’s picture.” Don’t be afraid to make up a few new words (for example, “fantabulous,” “super-great”) to show your enthusiasm. Gently probing youngsters for more and more responses will help them develop a fluency set; and, hopefully, practice in this mode of thinking will carry over to other areas of learning and experience.

You should make every effort to avoid using phrases or expressions that are natural killers of creativity. Examples of such phrases include:

Don’t be silly.
Let’s be serious.
That’s ridiculous.
Quiet down.
The principal won’t like it.
Let’s be practical.

You should know better.
What’s the matter with you?
That’s not our problem.
We’ve tried that before.
That’s not part of your assignment.
That’s childish.
A good idea but . . .
It won’t work.
Don’t be so sloppy.

One of the underlying purposes of the *New Directions in Creativity* program is to help youngsters learn how to evaluate their own creative products. One of the great tragedies of traditional school instruction is that students almost always look to the teacher for evaluation and approval. By so doing, they fail to develop a system of internal self-evaluation. And yet, psychological studies have revealed that each person has a need to be his or her own primary evaluator. The nature of creativity is such that the individual produces something that is new, unique, or novel for him or her at a particular time. To break away from social pressure toward ordinary and common production, a person must place his or her own opinions and feelings above those of others. He or she must be satisfied with his or her products and feel that they express a part of his or her feeling, thoughts, and ideas.

One of the primary tasks for teachers using this program is to help youngsters learn how to make judgments about their own work. This task is undoubtedly one of the most difficult of teaching, but there are a few simple guides that you can use to help students evaluate their own work. When students look to you for judgment, you might ask:

What do *you* think about it?
Do you feel good about it?
Would you like to work on it some more?
Why do you like (or dislike) it?
What things (criteria) are important to you?
How would you compare it to the work you did last time?

Encourage students to compare their own products by ranking them and selecting the ones they like best. Students should learn that you respect their judgment and will not overrule that judgment by placing your evaluation above their own. This behavior does not mean that you should not comment and make suggestions, but students should understand that you are stating your opinion and there is no reason to assume that it is more important than theirs. Since there are no right answers to creativity

exercises, and since students will not be graded on their creativity or creative products, the program provides a real opportunity for students to develop self-evaluation techniques. The key word in this process is *trust*. If students think that you will consider their creative activities in their final grades, they will constantly look to you as the ultimate source of judgment.

Peer evaluation can also provide students with a source of feedback. This feedback should always be informal, and it should be related to the type of product involved. For example, in writing a humorous ending for an unfinished story activity, if a student elicits laughter from the class, he or she will know that his or her efforts have been effective. You should encourage students to add their own praise to other children's responses, and their spontaneous reactions should be a regular part of all follow-up discussions.

A final consideration in the creation of a free and open classroom atmosphere is the acceptance of humor and playfulness. When you purposefully ask youngsters to strive for clever and unusual responses, a good deal of healthy noise and whimsical behavior is likely to result. The creative adult has the same uninhibited expressiveness and spontaneity found in happy and secure children. Creativity time should be a fun time, and playfulness, impulsiveness, humor, and spontaneity are all part of having fun.

How to Use the Primary Activities

Although many of the primary activities are most effective when used with groups, they can also serve as independent studies or as supplementary classroom activities. Field tests have shown that the program can be used continuously for a given period of time or on a one- or two-day-a-week basis throughout the school year. The suggested follow-up activities are an important part of the program. Together with the activity sheets, they provide a year-long supply of creativity training exercises. As indicated in Part I, the program is not intended to be an end in itself. Rather, it is designed to assist teachers in learning the nature of creative problem solving and in developing their own creativity activities. The program will yield maximum benefits if you follow a plan that uses a balanced combination of activity sheets and suggested follow-up activities.

Because of variations in the needs of various age and ability groups and because of differences in individual and group preferences, the "Suggested Sequence for *Mark A Activities*" (p. 21) should not be considered a rigid lesson-by-lesson sequence. It is intended to serve as a broad guide, and you should feel free to modify the

sequence to serve the individual interests and learning preferences of particular groups.

After students have become familiar with the various types of activities, you should give them opportunities to decide which activities they would like to pursue. Student interests should also guide you in determining which type of follow-up activities to use in future training sessions.

As students progress, you should encourage them to use the skills they have developed in previous activities. For example, you might introduce an unfinished story activity by suggesting the first sentence of a possible ending to the story and asking students to suggest synonyms for specific words that would make the sentence more precise, colorful, and imaginative. When students are working on advertising or promotion activities, you should make them aware of the use of homonyms and rhyming words in slogans and jingles and remind them of the rhyming exercises they completed earlier.

The general plan for sequencing primary activities takes account of (1) a balance between semantic, symbolic, and figural material, (2) a balance between units, classes, relations, systems, transformations, and implications and elaborations, and (3) the level of difficulty and logical relationships between certain activities. Since there are two activity sheets for each type of activity, you can work through the suggested sequence twice. In each set of exercises, comprehensive directions and sample responses (when applicable) are always included on the first activity sheet. Therefore, for any given exercise, you should always use the activity sheet lettered "a" before the activity sheet lettered "b." By the time students get to the second activity sheet, they will have caught on to the nature of the exercise, and you can refresh their memory by referring to the first activity sheet. Occasionally, examples have been included on the second activity sheet to help provoke new ideas.

Each exercise should take approximately one class period, although some of the exercises that involve creative writing may require more time. You may want to assign for homework exercises that cannot be completed in class. However, it is necessary to have group discussions of all material that is completed outside of class as an important part of the creative process involves sharing creative products with others.

You can use the suggested follow-up activities included in the lesson guides any time after the students have completed the first activity sheet for each activity. Whenever students show a preference for a particular type of activity, capitalize on their enthusiasm by developing similar activities of the type suggested in the follow-up sections of the lesson guides.

Introducing the Primary Activities

The basic strategy for introducing primary activities consists of freeing the classroom atmosphere from the usual constraints often associated with convergent production. Allow approximately one class period for the introductory session. It is extremely important for students to learn to appreciate questions and activities for which there are no right answers. You can introduce this concept by contrasting a convergent type of question with a divergent one. Before distributing the first activity sheet, you might say something like the following (but do not read it verbatim or sound too rehearsed):

Today we are going to begin practicing a new kind of thinking. This kind of thinking will help us learn how to explore many different kinds of solutions to a given problem. Some problems and questions have only one right answer, but there are also many problems and questions that have hundreds of possible answers.

Suppose I asked you, "In what year did Columbus discover America?" (Wait for an answer and write it on the chalkboard.)

Are there any other possible answers to this question? (General conclusion should be negative.)

Now suppose I were to ask you, "What are *all* of the possible ways that you *might* have come to school this morning?" (Call on youngsters and list responses on the chalkboard.)

Students will probably give some fairly common responses ("walk," "bus," "car," "bicycle"). At this point, you might say:

Remember, I said all of the possible ways that you might have come. Use your imagination. Let your mind wander, even if you think the method for coming to school is silly or way-out. How about by donkey or pogo stick? (Add these to the list on the chalkboard.)

This point is extremely crucial to introducing the creativity training program. By suggesting the donkey and the pogo stick, you have accomplished three very important objectives. First, you have conveyed the idea that answers need not be feasible, practical, or realistic. Second, you have let youngsters know that you will

accept these kinds of answers. Third and perhaps most important, you have let the youngsters know that you are capable of some way-out ideas. You can emphasize this point by grabbing a yardstick (conveniently placed nearby beforehand) and improvising with a few hops to demonstrate a pogo stick. Students will no doubt become a little noisy, but it is very important to tolerate this reaction. If you hush them, the whole atmosphere of freedom will be lost, and they will subjectively think that this new kind of thinking is the same old game—the teacher questions and students answer.

After your examples, students may give a wide variety of answers. Let them call out their answers (rather than raising hands) as you write them on the chalkboard. Prompt students if necessary:

Any other animals that you might come to school on? How about an airplane or a rocket? Or being dropped from a plane with a parachute?

A second crucial factor at this point is the generous use of praise on your part. Enthusiastic comments such as "good," "great," and "fantastic" will help youngsters open up. Do not call on students who are not taking part. It takes some youngsters longer than others to trust the teacher and his or her classmates in this type of situation. The main idea is to let students know that you like what is going on and that you are having fun. When the flow of responses begins to slow down, say:

Let's go one step farther. Suppose you could change your size or shape. Can you think of some other ways that you might possibly come to school?

If no one responds, say:

Could you make yourself very tiny and come in your brother's lunch box? Or, could you change to a drop of water and come in through the drinking fountain?

Continue to fill the chalkboard as long as the youngsters are generating responses. When you finally call a halt, say:

I guess there really are many questions and problems that have several possible answers. Do you think this kind of thinking is fun?

From time to time, we are going to be working on some activities like the one we just did. The main purpose of these activities will be to practice

answering questions and solving problems that have many possible answers. We will be using our imaginations to come up with some clever new ideas.

At this point, distribute the first activity sheet for “Thinking about Things” and read the directions in the manual to the students. If you have any doubts about youngsters’ understanding the directions, ask if there are any questions. Then ask the students to complete the first exercise.

After they have finished, allow some students to discuss their responses. Ask, “How many had that idea?” and after a few students have shared their entire lists, ask if anyone has any responses that have not yet been mentioned. Praise unusual responses from individuals, and praise the entire group for catching on.

Follow the same procedure for the second exercise. It is especially important to be tolerant of unusual responses, increased noise levels, and occasional bursts of laughter. A comment such as “Let’s be serious” could destroy the entire atmosphere of freedom to express oneself. If time permits, you may wish to pursue one of the follow-up activities suggested in the lesson guide.

RATIONALE UNDERLYING THE PROGRAM**The Need for Creativity Training Programs**

Although interest in the identification and development of creativity has become one of the vital concerns of teachers, curriculum developers, and leaders in education, the actual effectiveness of schools in helping children realize their creative potential can be judged, at very best, as questionable. More than forty years of intensive research into the nature of creativity has yielded enough understanding about this dynamic process to enable educators to begin translating some of the research findings into classroom practice. The sad fact remains that in spite of dozens of books about creativity, hundreds of research studies, and thousands of training programs and workshops, the development of creative potential is still a largely ignored aspect of a child's total repertoire of acquired behaviors. At least three major problems seem to account for the failure to translate existing knowledge and understanding about the creative process into meaningful classroom practice.

The first problem is a lack of agreement among educators about the definition of creativity and its distinctiveness from other cognitive behaviors. A great deal of research devoted to this issue has led to conflicting conceptions of creativity, such that Davis (1999) concluded, "There are about as many definitions, theories, and ideas about creativity as there are people who have set their opinions on paper" (p. 40). Despite different views, however, most theorists agree with at least two generalizations about creativity. First, several research studies have supported the threshold concept of creativity, namely, a low to moderate relationship between creativity and intelligence (Getzels & Jackson, 1962; Simonton, 1988; Walberg & Zeiser, 1997; Wallach & Kogan, 1965). Highly creative individuals have generally been found to be above average in intelligence, but high intelligence does not necessarily insure high creativity. In addition, a number of studies (Jaben (1980), for example) have found that children of *all* ability levels, including students with special

needs, are capable of creative thinking. In summarizing this issue, Davis (1999) said, "It is absolutely true that despite genetic differences in our cognitive and affective gifts, everyone can become a more flexible, imaginative, and productive thinker" (p. ix). Thus, we can conclude that *all* children can benefit from systematic programming in this area.

The second generalization relating to defining creativity is that, rather than being an independent process, creativity consists of multidimensional processes involving interactions between the individual and his or her environment. These processes may differ from one another to such a degree that we must consider verbal creativity, creativity in problem solving, and creativity in the nonverbal arts as essentially different psychological phenomena. In other words, scientific creativity and creative problem solving may require different explanations than creativity in areas such as painting, music, and writing. And because of differences between individuals and their respective environments, what is a routine task for one person may very well be a creative experience for another. Since one of the basic assumptions underlying the development of the *New Directions in Creativity* program is that all people possess the ability to think creatively in varying degrees, the main purpose of the program is to assist youngsters in generating responses that are creative for the individual student at his or her present level of mental functioning. It is of course hoped that such experiences in creative thinking will help students develop a characteristic way of looking at things that will ultimately result in the creation of ideas and products that are truly original and useful for the culture at large. A good deal of research evidence that shows that people who have engaged in systematic creativity training exercises can increase their capacity for creative thinking in a variety of fields (Baer, 1996; Rose & Lin, 1984; Torrance, 1987).

Although this approach to the definition of creativity is relativistic rather than absolute, it is in

keeping with Guilford's (1967) conception of divergent thinking (discussed on pages 16-19) and Torrance's (1965) analytic description of the process which places creativity in the realm of daily living experiences rather than reserving it for the rarely achieved heights of creation:

I have tried to describe creative thinking as taking place in the process of sensing difficulties, problems, gaps in information, missing elements; making guesses or formulating hypotheses about these deficiencies; testing these guesses and possibly revising and retesting them; and finally in communicating the results. I like this definition because it describes such a natural process. Strong human needs appear to be at the basis of each of its stages. If we sense any incompleteness, something missing or out of place, tension is aroused. We are uncomfortable and want to do something to relieve the tension. As a result, we begin investigating, asking questions, manipulating things, making guesses, and the like. Until the guesses or hypotheses have been tested, modified, and retested, we are still uncomfortable. Then, even when this has been accomplished, the tension is usually unrelieved until we tell somebody what we have discovered. Throughout the process there is an element of responding constructively to existing or new situations, rather than merely adapting to them. (Torrance, 1965)

For the purposes of this program, creativity is defined as follows

Creativity is the production of an idea or product that is new, original, and satisfying to the creator or to someone else at a particular point in time, even if the idea or product has been previously discovered by someone else or if the idea or product will not be considered new, original, and satisfying at a later time or under different circumstances.

The second problem that has hampered efforts to promote creative thinking in the classroom has been the shortage of validated curriculum materials in this area. This shortage was the basis for one of the research challenges that emerged from the Sixth Utah Creativity Research Conference (Taylor and Williams, 1966), and was reemphasized in a study by Feldhusen, Bahlke, and Treffinger (1969). Among the many suggestions offered by theorists and researchers who have devoted attention to this problem has been a call for instructional materials

that give youngsters practice in opening up their minds and using modes of thought that are not characteristically developed in traditional curricular materials. An overwhelming proportion of existing curricular material places major emphasis on the acquisition of factual information and a kind of thinking that focuses on locating the one right solution to a problem. Although these activities are valuable in the total development of the learner, they often dominate the curriculum and are usually pursued at the expense of other aspects of development. Thus the development of higher level thought processes such as creativity simply does not take place or is an accidental by-product of instruction.

The third major inhibitor to the development of creativity in children has been a lack of understanding about the nature of creativity on the part of many classroom teachers (Williams, 1964; Eberle, 1966; Guilford, 1967). In some cases, this lack of understanding has resulted in the severe inhibition of creative thinking in the classroom and even discrimination against students who display creative behavior.

Although the development of an effective program of teacher training is beyond the scope of this manual, Part II presents a number of practical suggestions for teaching strategies. These suggestions are not intended to serve as a substitute for a course or workshop in creativity, nor will they provide the teacher with the breadth of information that they could gain through intensive reading in this area. Rather, the main purpose is to call attention to the characteristics of creative teachers and to point out a number of widely accepted principles for rewarding creative behavior.

Each manual in the *New Directions in Creativity* program provides a set of experiences that are systematically and purposefully directed toward developing certain creative thinking abilities. The program is not offered as the only approach to this problem, nor is it maintained that the program will develop all of the many dimensions of creativity that seem to exist. Rather, it is one possible approach to creativity training that has been developed within a specified framework. This framework is described in the following section.

The Structure of the Intellect Model

The *New Directions in Creativity* program represents an attempt to translate one aspect of Guilford's Structure of the Intellect Model (1967) of human abilities into classroom practice. This model, developed through factor-analytic methods at the University of Southern California Psychological Laboratory, has been viewed by

many educators as a potentially powerful tool for bringing about needed changes in the curriculum. Although the program focuses on only one dimension of the model, a brief overview of the entire system will provide teachers with the necessary frame of reference for understanding the approach used in this curriculum package.

The Structure of the Intellect Model (see Figure 2) is a three-dimensional classification system that is designed to encompass and organize 120 possible abilities according to (1) the types of mental *operations* employed in the act of thinking, (2) the types of *contents* involved in the thinking process, and (3) the types of *products* that result from the act of thinking.

(1) *Operations*

The operation dimension of Guilford's model consists of five major types of intellectual activities or processes of mind—the things that the organism does with the raw materials of information. These five categories represent the mental operations that we as human beings can learn to use in processing the

information with which we come into contact as we go about living and learning.

Cognition is the mental process involving immediate discovery, awareness, rediscovery, or recognition of information in various forms. *Understanding* and *comprehension* are terms that are commonly used to describe the act of cognition.

Memory is the process that deals with the retention or storage of information. It is accompanied by an ability to bring the information out of storage in response to cues or stimuli that bear some relationship to the stimuli presented when the information was originally stored.

Convergent production is the process of generating information from given information, where the emphasis is on achieving the conventionally accepted outcome. It is quite likely that the given information (cue) fully determines the response. Convergent production involves finding the correct solution to a problem by manipulating given information rather than

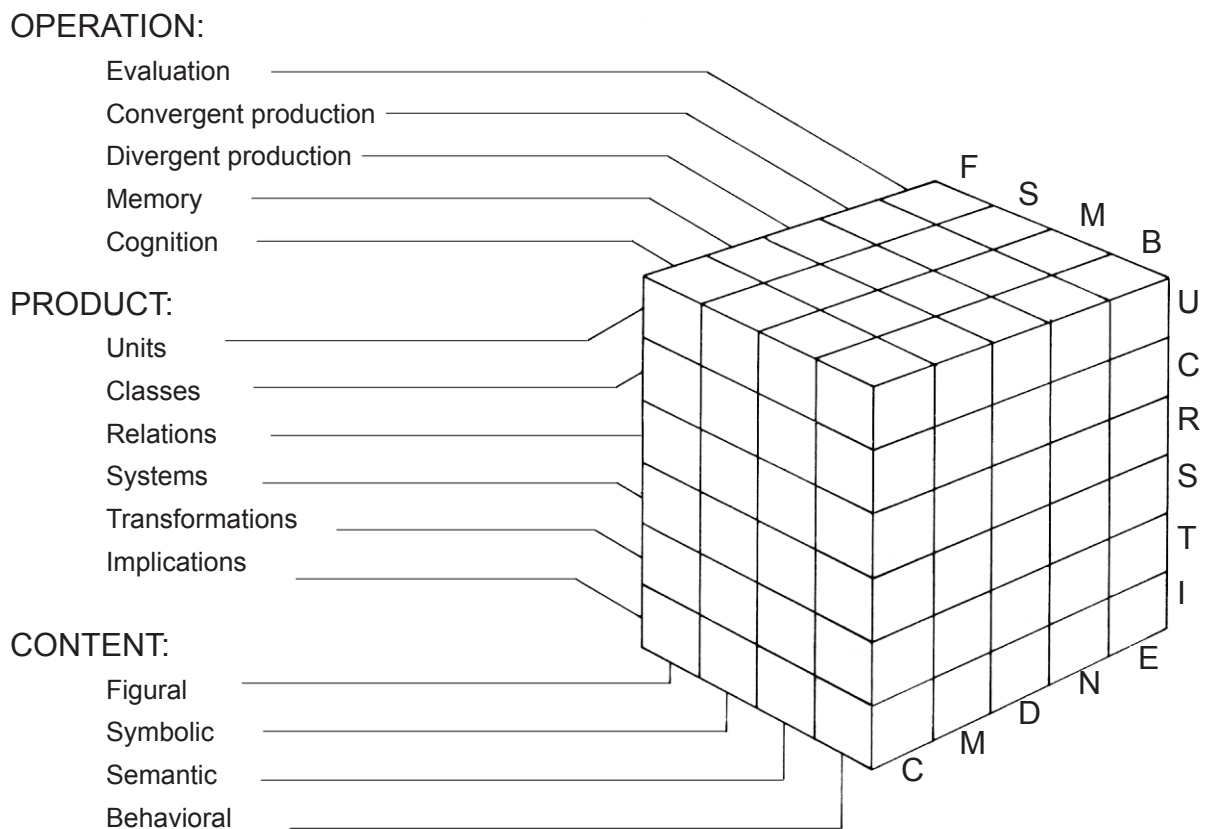


Figure 2. Guilford's Structure of the Intellect Model.

From *The Nature of Human Intelligence* by J. P. Guilford. Copyright ©1967 by McGraw Hill, Inc., New York. Reprinted by permission of McGraw-Hill Book Company.

merely retrieving information from memory; however, both memory and cognition are involved in convergent production.

Evaluation is the mental operation that refers to reaching decisions or making judgments concerning the criterion satisfaction (correctness, suitability, adequacy, desirability, etc.) of information. This operation implies a sensitivity to error and a judgment of the relative nearness of things to points on a continuum or set of standards.

Divergent production, the operation upon which this creativity training program focuses, involves the generation of information from given information, but here the emphasis is on variety and quantity of output from the same source. This operation is most clearly involved in aptitudes of creative potential and will be discussed in greater detail later in this section.

(2) Contents

The content dimension consists of the following four broad classes of information that are discriminable by the organism:

Figural content consists of information in concrete form, as perceived or recalled in the form of images. The term *figural* implies some degree of organization or structuring. Different sense modalities may be involved, such as seeing, touching, hearing, and smelling. Content information does not represent anything but itself—that which is sensed and discriminated.

Symbolic content involves information in the form of signs that have no significance in and of themselves. Letters, numbers, musical notations, and other code elements are examples of symbolic content. Objects, figures, and shapes are also examples of this type of content.

Semantic content is information in the form of meanings to which words commonly become attached. Semantic material is the major element in verbal thinking and in verbal communication (writing and speaking).

Behavioral content consists of essentially nonverbal information that is involved in human interactions, such as the awareness of attitudes, needs, desires, moods, intentions, perceptions, and thoughts of other persons and of ourselves. The identification of abilities involving this type of content has not been as precisely

defined as those abilities involved in figural, symbolic, and semantic content.

(3) Products

The product dimension of the Structure of the Intellect Model consists of the organization or form that information takes when it is processed by the human mind. The following six products, as defined by Guilford, are the result of interaction between our senses and the world around us:

Units are relatively segregated or circumscribed items of information that have singular character. For example, one chair would constitute a unit.

Classes are recognized sets of items of information grouped together by virtue of their common properties. Thus several chairs would form a class.

Relations are recognized connections between units of information based on variables or points of contact that apply to them. For example, a chair and a desk would constitute a relation.

Systems are organized or structured aggregates of items of information that are grouped together because of the interrelatedness or interaction of their respective parts. Systems are combinations of units, classes, and relations that have some total function. An example of this category is a “school system.”

Transformations are changes of various kinds of existing or known information. Transformations involve the redefinition or modification of existing ideas, products, or materials.

Implications and *elaborations* consist of extrapolations of information in the form of expectancies, predictions, known or suspected antecedents, commitments, or consequences. Asking questions, the answers to which should help people see a particular problem more clearly, suggests implications from known information.

The *New Directions in Creativity* program deals primarily with the divergent production operation of the Structure of the Intellect Model. Within this “slab” of the model, eight of the twenty-four factors have not yet been completely identified by Guilford (see Figure 3); thus only a few experimental activities have been developed in these areas. The program does, however, include activities that sample all of the divergent

production factors that involve semantics, as well as some selected activities that use symbolic and figural information. None of the exercises in the program are offered as “pure” exercises in the development of a given factor. For example, Guilford (1967) has stated that “memory storage” underlies all problem solving and creative production, and other researchers (Pollert et al., 1969) have found that memory abilities play an important role in divergent production. Guilford’s factor-analytic data also have shown that certain activities are related in varying degrees to more than one factor. Thus abilities from other areas such as cognition and memory are brought to bear on the operation of divergent production; and within the area of divergent production, certain abilities seem to act as contributory factors to the development of other abilities. For this reason, the classification of activities according to the Guilford structure is intended to point out the major focus of the respective activities in the program, but these classifications should not be interpreted to mean that other abilities are not involved in a given exercise.

The main purpose of this brief overview of Guilford’s Structure of the Intellect Model is to underscore the relationship between the focus on divergent production presented by the *New Directions in Creativity* program and the overall dimensions of the Guilford model. Teachers who are interested in delving further into the various dimensions of the model should refer to Guilford’s major work in this area, *The Nature of Human Intelligence* (1967). Another excellent interpretation of the model is presented in Meeker’s book entitled *The Structure of Intellect: Its Interpretation and Uses* (1969).

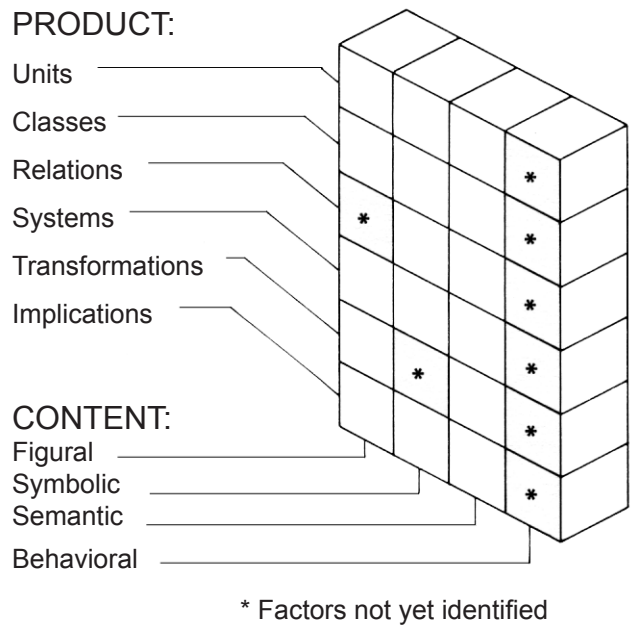


Figure 3. Factors in divergent production.

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PART IV

*No printed word nor spoken plea
Can teach young minds what men should be,
Nor all the books on all the shelves
But what the teachers are themselves.*
Anonymous

LESSON GUIDES FOR MARK 2

The activities in this book are presented in the order indicated below. As noted earlier, this sequence is offered only as a suggestion, and you should feel free to alter this sequence to serve the interests and preferences of a particular class. The activity number has been printed in the upper left-hand margin of each activity sheet to help you keep the sheets in order after each use.

A schematic overview of these activities, based on Guilford's classification system, is presented in Figure 4. For a description of this system, see pages 16-19.

As you use these activities in your class, you may find it helpful to keep a record to which you can refer when you use the activities with other classes. For your convenience, a chart for this purpose is provided on the first four duplicating masters at the back of this manual. This chart contains spaces for you to record the date a particular activity sheet was used and to make notes on the class reaction and on how you used the follow-up activities.

Suggested Sequence for *Mark 2* Activities

Activity	Type of Activity	Activity	Type of Activity
1 Thinking about Things	Semantic Units	13 Wandering Words	Symbolic Transformations
2 Fun with Words	Symbolic Units	14 Alternate Uses	Semantic Units
3 What's in a Name?	Semantic Transformations	15 Comparisons	Semantic Relations
4 Fun with Figures	Figural Units	16 Cartoon Captions	Figural Implications
5 Sentence Skeletons	Semantic Systems	17 Words with Feeling	Semantic Classes
6 What Would You Call It?	Semantic Implications	18 Consequences	Semantic Transformations
7 Way-out Words	Symbolic Relations	19 Word Boxes	Symbolic Relations
8 The Headline Cutter	Semantic Units	20 Make-a-Sentence	Semantic Systems
9 Saying It Nicely	Semantic Transformations	21 Let's Write a News Story	Semantic Implications
10 Say It with Symbols	Figural Relations	22 Figure Families	Figural Classes
11 Word Trees	Semantic Relations	23 Creative Story Generator	Semantic Elaborations
12 A Message from Planet X	Semantic Elaborations	24 Hidden Figures	Figural Transformations

Figure 4. Mark 2 Activities

	SEMANTIC	SYMBOLIC	FIGURAL
UNITS	Thinking about Things The Headline Cutter Alternate Uses	Fun with Words	Fun with Figures
CLASSES	Words with Feeling		Figure Families
RELATIONS	Word Trees Comparisons	Way-out Words Word Boxes	Say It with Symbols
SYSTEMS	Sentence Skeletons Make-a-Sentence		
TRANSFORMATIONS	What's in a Name? Saying It Nicely Consequences	Wandering Words	Hidden Figures
IMPLICATIONS AND ELABORATIONS	What Would You Call It? A Message from Planet X Let's Write a News Story Creative Story Generator		Cartoon Captions

1 Thinking about Things

Type of Activity

Semantic Units

Objectives

To develop ideational fluency.

To develop the ability to group things according to a common attribute (disjunctive classes).

To be able to distinguish between conjunctive and disjunctive classes.

Teaching Suggestions

This activity works well when carried out under mildly competitive conditions. Once students have acquired a knack for listing things (usually after one or two exercises), increase competition by setting a time limit for each exercise and giving additional points for responses that are only on one list. Time limits should vary according to the age and ability levels of the group.

Be sure to allow students to read some of their responses aloud in class. If they are scoring their responses under competitive conditions, a good deal of excitement and debate will probably ensue. Some of the more creative youngsters will no doubt produce debatable responses (for example, when listing things that come in pairs, students might include “a pair of pants,” or half of a “quartet”). Encourage the children to explain why they think their responses are legitimate, as it will help them develop logical organization and give you an opportunity to call attention to idiomatic language (e.g., “eating humble pie” or “eating your words”).

Follow-up Activities

- Most of the exercises in the “Thinking about Things” activities are based on disjunctive classes—that is, only one attribute or common characteristic has been specified. In one exercise, students are asked to list things that are long and thin. Since this exercise requires responses that possess a combination of attributes, it is based on a conjunctive class. After students have completed all of the “Thinking about Things” exercises, you might ask if they can tell how one exercise differs from all of the others. Lead them to see the difference between single- and multiple-attribute classes.
- Conjunctive classes can be based on two or more attributes (students may be asked to list things that

are long *and* thin *and* made of metal), and you can easily raise the level of challenge by increasing the number of common attributes required. You can develop many exercises using the “Thinking about Things” format, including forming classes around people (famous generals in American history or in world history) or places (cities that are located on rivers, cities or countries that begin with the letter C). Consider letting students specify attributes to try out on their classmates.

2 Fun with Words

Type of Activity

Symbolic Units

Objective

To develop verbal fluency by producing words that conform to simple specifications.

Teaching Suggestions

This activity is designed to give students practice with brainstorming. The exercises begin with simple specifications (only the first letter is specified) and proceed to more complicated versions (first and last letters are specified). You can use the activity with or without time limits, and children can work individually or in pairs. The activity works well under conditions of mild competition, and you may wish to use a scoreboard to record team scores. If students have a tendency to use only one-syllable words, encourage them to think of bigger words. Also encourage them to think of words that no one else will have on his or her list. You can give extra points for words that do not appear on the lists of opposing teams or for words that consist of three or four syllables.

Students should look up the spellings and meanings of words on their lists that they may not be certain about. When you find an unusual word on a student’s list, you might ask the class, “How many know the meaning of that word?” or “Can someone use that word in a sentence?” Students seem to take greater interest in vocabulary when they or their peers generate the words.

The “Fun with Words” activity provides good practice for higher level creative activities. Because it can be pursued for very short periods of time and under competitive circumstances, it can help create a free classroom atmosphere for other activities.

Follow-up Activities

- In addition to specifying beginning and ending letters of words, you can apply other restrictions to the activity, such as using only nouns, verbs, or adjectives. The activity can be carried out as a relay race at the chalkboard or on individually prepared activity sheets.

3 What's in a Name?

Type of Activity

Semantic Transformations

Objectives

To develop the ability to produce unusual or clever names that involve a reinterpretation of given information.

To develop the ability to produce symbolic relationships based on given information.

Teaching Suggestions

Introduce this activity by asking students if they know the meaning or significance of their last names. Try to lead youngsters to the conclusion that many surnames are derived from the type of work that a person's ancestors did. Discuss some of the more obvious name-occupation relations, such as Cook, Baker, Farmer, and Carpenter. Then call attention to some less direct relationships by asking what occupation the following names might imply: Walker, Merriman, Blade, Clay, Underwood. Since the meanings of these names are open to interpretation, students will begin to speculate about occupations from which the names may be derived. Encourage students to suggest several possible occupations for each name.

An interesting way to discuss the first activity sheet with the class is to have youngsters read at random the names they wrote and see if the rest of the class can guess which occupations the names represent. Since their first responses are likely to be common or obvious names, it is important to encourage students to list two or more names for each occupation.

Introduce the second activity sheet by showing students some comic-strip characters with symbolic or catchy names (e.g., Broom Hilda, the Wizard of Id, Fred Flintstone, Casper the Ghost, Beetle Bailey). Invite students to speculate about how the cartoonists selected their names. Students might want to suggest other names for these characters. This activity provides a good opportunity for you to point out the use of alliteration in creating catchy names, as well as the

use of symbolism in naming characters that play a prescribed role. Encourage youngsters to let their minds wander in thinking up names for their characters and do not show disapproval if they tend to get a little silly. You can stimulate a good deal of playful imagination by adding your own imaginative names.

Follow-up Activities

- Students can develop their own lists of occupations for additional "What's in a Name" exercises. You can also pursue this activity in reverse by developing lists of surnames and asking students to speculate about the origins of the names. The telephone directory is, of course, a good source of interesting names, and you should allow students to select names for follow-up activities.
- Ask students to elaborate on the names they list in activity "b" by developing comic-strip sequences for one or more of the characters. They can also write comic-strip sequences to dramatize for their classmates. Students with a particular interest in this activity may want to prepare a daily or weekly comic strip for a classroom bulletin board display or the class or school newspaper. This activity also provides a good opportunity for students with writing ability to team up with students with drawing ability. If a cartoonist lives in your community, you may want to invite him or her to speak to your class about how he or she creates characters and selects names for them.

Resources

- Occupational Outlook Handbook 1998-99* by the U.S. Bureau of Labor Statistics. 1998. Published by VGM Career Horizons: Chicago, IL.
- The Creative Cartoonist* by Dick Gautier. 1989. Published by Perigree Books: New York.
- The Complete Book of Caricature* by Bob Staake. 1991. North Light Books: Cincinnati, OH.
- Getting Started Drawing & Selling Cartoons* by Randy Glasbergen. 1993. Northlight Books: Cincinnati, OH.
- The Usborne Young Cartoonist* by Judy Tatchell. 1987. Usborne Publishing Limited: London, Great Britain.

4 Fun with Figures

Type of Activity

Figural Units

Objectives

To develop nonverbal flexibility and originality.
To construct a variety of nonmeaningful figures based on the manipulation of given elements.
To demonstrate nonverbal applications of creativity skills.

Teaching Suggestions

This activity will help students understand that creative thinking skills can be applied to nonverbal, as well as verbal, information. The examples have been purposefully constructed to show students the various possibilities that exist in combining the given elements. You should point out the nonmeaningful nature of these examples—that is, the figures do not convey a meaning such as that which might be conveyed in a drawing of a face or house. Before students begin working on these activity sheets, call their attention to the way the figures have been rotated in the examples on the first activity sheet. Encourage students to try to combine the figures in ways that no one else will combine them.

After students have completed the exercise, ask some of them to put their most original figure on the chalkboard. Ask the class, “How many had that one?” and praise responses that are unique. Suggest that students rotate their papers in different directions to see if they can come up with any more ideas for combining the two figures.

Follow-up Activities

- Ask students to select some figures of their own creation to use in activities of this kind. For variation, you might ask students to use shading or color in completing their figures or to cut geometric figures out of paper and combine them in various ways. Students can make attractive bulletin board displays by cutting out the given shapes in various colors and pasting them on sheets of paper to form geometric collages. They can make other interesting collages by cutting out objects in a given category from magazines (faces, automobiles, airplanes, and so on) and combining them in interesting and unusual ways.

5 Sentence Skeletons

Type of Activity

Semantic Systems

Objective

To develop expressional fluency and flexibility.

Teaching Suggestions

The “Sentence Skeletons” exercise begins with simple specifications and proceeds to more complicated versions. Students might tend to develop a fixed pattern of responding to each set of items (for example, beginning each sentence in the first set with “Shopping is always . . .”). Therefore you should encourage students to strive for originality in each sentence. Some sentences will no doubt be humorous and somewhat illogical, but you should accept these responses, especially in the early stages of this activity. By asking students to read some of their sentences aloud in class and by heavily praising those sentences that flow smoothly, you will help channel future responses in the desired direction. You should encourage, but not pressure, hesitant students to reveal responses.

This activity is very popular among middle-grade youngsters, and you might use it to develop language skills among learners who are not especially motivated by traditional approaches. Sentences in our language are modeled on relatively few distinctive patterns; thus lessons relating to the basic structures of sentences (such as adjective-noun-verb-noun, noun-verb-adverb) can be built around “Sentence Skeletons” activities. You can use these activities as a basis for lessons dealing with noun determiners (*a, an, the, each, some, one, etc.*), verb helpers (*shall, will, should have, etc.*), phrase and clause markers (*to, in, by, which, etc.*), question markers (*who, what, when, etc.*), and connectors (*and, but, or, etc.*).

Follow-up Activities

- In addition to varying the number of blanks and letter specifications, you can do any of the following: insert various punctuation marks in the skeletons, make certain letters within the skeleton upper case (thereby requiring a proper noun), and allow youngsters one or two free words that can be inserted anywhere (especially helpful for getting slower students started on the activity).

- To make a much more challenging variation of this activity, specify one or more ending letters as well as beginning letters.
- Students can prepare their own sentence skeletons and exchange them with their classmates.

6 What Would You Call It?

Type of Activity

Semantic Implications

Objectives

To develop the ability to produce new words that are appropriate in meaning to given information.
To develop verbal imagination.

Teaching Suggestions

A good way to introduce this activity is to put the word *laundromat* on the chalkboard and ask students if they know its meaning. They will probably recognize that the word is a combination of laundry and automatic. Point out that this word was created from existing words to describe commercial laundries where coin-operated automatic washing machines and dryers are located for people to use. When it was introduced in the 1950s, the laundromat was a new concept in laundering; therefore a new word was created to help people communicate this idea more effectively. Computer technology and the internet has forced people to come up with a wealth of new words and new definitions for old words, including website, e-mail, download, hit, e-commerce, and spam. Ask students if they can think of other words that have been created to describe new things or ideas. Encourage students to add their own suggestions to the list. Point out that well-known roots such as *-phonic*, *-graph*, *-matic*, *aqua-*, and *aero-* can combine with other words to format new words.

It is important in this activity to encourage students to generate at least two responses for each item. First thoughts are likely to be relatively common or obvious responses. You should, of course, reward first responses, but imaginative words are more likely to emerge if students create more than one word or phrase for each item.

After students have completed the activity sheets, ask them to read their responses aloud. Allow them to judge which words they like best and to explain why they like those words.

Follow-up Activities

- Ask students to generate lists of imaginary things. They may want to draw sketches of some of the imaginary things, or they may also want to build creative stories around some of their ideas. Putting the two activities together provides a good opportunity for students with writing ability to team up with youngsters with artistic talent.
- You might want to introduce students who show a great interest in this type of activity to etymology—the study of the origin, formation, and development of words. You may want to provide students with a copy of *The Oxford Dictionary of English Etymology* (edited by C. T. Onions, Oxford University Press, New York, 1966).

7 Way-out Words

Type of Activity

Symbolic Relations

Objective

To develop the ability to produce a symbolic relationship between the meanings of words and the way they are written.

Teaching Suggestions

Write the word *look* on the chalkboard and ask, “How can I make the word *look* look like *look*?” If students do not get the idea, fill in the two o’s so that they look like eyes and draw eyebrows above them. Before distributing the activity sheets, ask students if they can think of any other words that look like their meanings and invite them to write words on the chalkboard. When students are working on these exercises, allow them to use colored pencils or crayons.

After students have completed their activity sheets, ask them to reproduce their responses on the chalkboard. As you review the responses with the class, ask, “Did anyone write this word differently from the way it is written on the board?” Allow all major variations of each word to be reproduced on the chalkboard, and let the class decide which variation they like best. You may want to reserve a section of the bulletin board for students to display their original versions of “Way-out Words.”

Follow-up Activities

- Ask students to compile lists of words that they could use for additional “Way-out Words” activities.
- Students who show an interest in this type of activity, may want to refer to “Wacky Wordles,” a section in *Arrow Book of Brain Teasers* by Martin Gardner (TAB Books, Inc., 1959). It shows how well-known sayings can be expressed in a symbolic fashion. Students may want make their own “Wacky Wordles.”

8 The Headline Cutter

Type of Activity

Semantic Units

Objectives

To produce written communications that arouse curiosity and interest in specified material.

To develop ideational fluency based on a specified written communication.

Teaching Suggestions

Introduce this activity by showing several provocative headlines clipped from newspapers and asking the class to speculate about the articles that appear below the headlines. Emphasize the function that headlines perform in arousing the reader’s curiosity and invite students to think of alternative headlines for those that you have cut out of the newspaper. After they have speculated about a few articles, read a brief newspaper article and ask students to suggest some possible headlines. Record these on the chalkboard and allow students to judge which headlines they think would create the most interest in the article.

Follow-up Activities

- The daily newspaper can supply you with an unlimited number of headlines and articles to use in this type of activity. You can mount brief articles on poster paper and place it a bulletin board so that students can read the articles and record their suggested headlines above them.
- This activity provides an opportunity for you to call students’ attention to two additional functions of newspaper headlines. Some headlines are intended to summarize the information in the article so that

readers can discern the main message of the article at a glance (“Red Sox Sweep Doubleheader from the Yankees”). Another function of a headline is to raise a question that will be answered in the article (“Will Mayor Seek Re-election to Third Term?”). Ask students to collect headlines that fall into each category. Then have them scramble the headlines and exchange them with their classmates for reclassification. Whenever differences in opinion occur, allow students to give reasons in support of their classification and make the final judgments.

- If your local newspaper has a person who is responsible for cutting headlines, you may want to invite him or her to speak to the class about how he or she decides on a headline.

9 Saying It Nicely

Type of Activity

Semantic Transformations

Objectives

To develop the technique of listing attributes.

To develop the ability to reinterpret given information to produce a desired effect.

Teaching Suggestions

You can use the first exercise activity sheet “a” to help youngsters learn the basic technique of listing attributes. Ask the class what qualities people would look for in a vacation cottage (near the water, quiet, peaceful, good fishing and swimming, pleasant view, and so on) and list these attributes on the chalkboard. Suggest that students approach the other two exercises on this page by first listing the attributes that people would look for if they were purchasing a pet dog or an antique clock. After students have listed attributes for each item, they should attempt to write a description that hints at these attributes and, at the same time, disguises the negative features of each item. Ask students to read their completed advertisements aloud and allow the group to judge which ones make the items sound the most attractive.

Introduce the second activity sheet by asking students to look at the drawing and think of other possible ways of saying “Bill is a liar.” Point out that people frequently substitute roundabout expressions for harsh words or statements that make them feel uneasy. If they have difficulty getting the idea, write the following statements on the chalkboard and ask students if they can tell which harsh words the statements are trying to disguise.

John sometimes borrows things from others without asking. (steals)

John often relies on the work of others when he is taking a test. (cheats)

Follow-up Activities

- Ask students to develop their own lists of not-so-attractive items and invite them to write advertisements similar to those activity sheet “a.” You may also introduce the concept of a “white elephant” and suggest that each student write an advertisement for one useless item. You can place these advertisements on the bulletin board under the title “White Elephant Sale.”
- The class can also do “Saying It Nicely” activities in reverse. Students can study the classified ads in the newspaper and then write descriptions or draw pictures of items in a way that makes the items sound or look useless or unattractive. Humor is an important part of creativity, and you should encourage some silliness when students work on this activity.
- You can also use activity sheet “b” as the basis for follow-up exercises on euphemistic words and expressions that are popular in our language. Ask students to generate lists of harsh words and expressions (*committed suicide, vomited, stink*) and then see if they can substitute words or phrases that are somewhat less offensive (*took his own life, got sick, unpleasant aroma*). You may want to reserve a small section of the bulletin board where students can record euphemisms whenever they encounter them in their reading or elsewhere.

10 Say It with Symbols

Type of Activity

Figural Relations

Objectives

To develop the ability to produce relations between figures and given ideas.

To show symbolism in figural information that is based on given requirements.

Teaching Suggestions

Introduce this activity by asking students to look at the illustrations on the activity sheets and to speculate about the types of products or services that the symbols represent. Point out the essential characteristics of a good symbol (instant and unambiguous recognition of what is represented by the figure). Ask students if they can think of other common symbols that are encountered in our society (highway signs; commercial symbols, such as the NBC peacock and airline logos; safety symbols, such as the skull and crossbones on poisonous substances; political symbols, such as the donkey, elephant, American eagle, British Lion; and so on). The key to creative productivity in this activity is in helping students understand that they can make their drawings symbolic as well as realistic. Unless you emphasize this concept, many of the responses will be rather obvious. Symbolism can be emphasized by pointing out the indirect connotations of the example illustrations on the activity sheets. The mortar and pestle, for example, are symbols of the pharmacist’s profession, and the pony express rider is a symbol of the early beginnings of the postal service. If students dwell on the obvious in their drawings, suggest that they make a second drawing for each product or service that is completely different from their first.

Allow students to use crayons or colored pencils to complete their drawings and display their symbols on a bulletin board. When discussing the content of students’ drawings, ask them to explain the meaning of any symbol or part of a symbol that is not immediately obvious. Let the students decide which drawings they like best and encourage them to re-create their symbols if they have picked up any good ideas from their classmates.

Follow-up Activities

- In addition to creating symbols for a wide variety of businesses and occupations, students may want to develop their own set of highway symbols or sets of symbols for sending secret messages. Students can obtain a listing of international highway symbols from travel agencies or automobile clubs, and several books on the origin of language have sections that deal with early forms of symbol writing.
- If this type of activity is especially interesting to some of the youngsters in your class, you may want to consult the *Symbol Sourcebook* by Henry Dreyfuss (John Wiley & Sons, 1984). It contains

more than eight thousand categorized symbols that have been used by man since the beginning of recorded history and can serve as the basis for many creative activities.

11 Word Trees

Type of Activity

Semantic Relations Objectives

Objectives

To develop verbal flexibility.

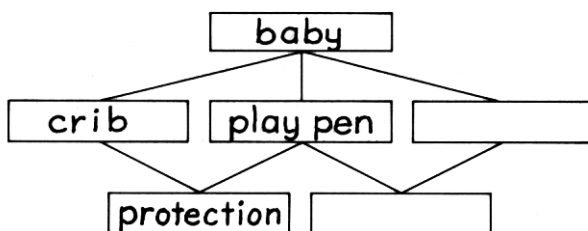
To develop the ability to construct relationships between groups of words.

To point out the distinction between direct and indirect relationships.

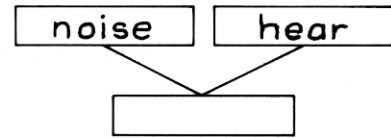
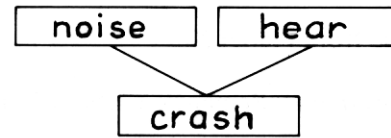
Teaching Suggestions

The object of Word Trees is to fill each empty box with a word that is related to the box or boxes above it. Introduce the concept behind Word Trees by going through the following exercise at the chalkboard. Start by drawing the diagram below on the chalkboard. Explain to the class:

The word *baby* in the following Word Tree might make you think of words such as *crib* and *play pen*. Think of another word that is related to *baby* and write it in the empty box next to *play pen*. The words *crib* and *playpen* might make you think of the word *protection*. Can you think of a word that is related to *playpen* and the word you wrote in the empty box? Write the word in the other empty box.



A Word Tree can also begin with two words. For example, what word comes to mind when you think of the words *noise* and *hear*? One word might be *crash*. Can you think of another word related to *noise* and *hear*? Write the word in the empty box.



Once students have caught on to the principle underlying Word Trees, encourage them to think of words that no one else will use. If the activity is carried out under competitive conditions, you may want to give more points for words that are unique in the group. This activity provides a good opportunity to call attention to the types and degrees of relationships between words. If most students attempt to complete the Word Trees by using direct or concrete relations, point out the possibility of using some less direct relations. For example, in the first sample Word Tree, the words *crib* and *play pen* illustrate direct relations. You might also suggest some words that are indirectly related to *baby*, such as *helpless* and *kitten*. Explain how these words are related, and encourage students to think of words that express direct and indirect relationships. You might suggest that they fill in each box with two words—one showing a direct relationship and the other showing an indirect relationship.

Follow-up Activities

- Using a variety of stimulus words and Word Tree formats, you can construct an unlimited number of Word Trees. In addition, you should give students an opportunity to construct their own Word Trees and share them with their classmates.
- You can help students develop their language skills by specifying that the Word Trees be completed with particular parts of speech or with synonyms or antonyms. More complex variations of this activity might include specifications involving part-whole relationships, action-agent relationships, or verb-object relationships.

12 A Message from Planet X

Type of Activity

Semantic Elaborations

Objectives

To develop the ability to elaborate on given information.
To develop the ability to produce an original or unusual communication.

Teaching Suggestions

To introduce this activity, ask students if they have read science-fiction stories or watched science-fiction shows on television. Invite them to recall some of the strange people, animals, and other things they have experienced in science fiction and lead them to the conclusion that these things are the products of highly imaginative thinking. Point out that a science-fiction writer must let his or her mind run wild and tell students that you would like them to do the same in this activity.

The success of this activity depends on getting students to elaborate on their responses instead of writing one- or two-word statements. When students are working on the activity sheets, observe their responses and give positive reinforcement to short statements, but also encourage them to extend themselves by saying, “That’s a good idea—can you tell more about it?” If, as you wander around the room, you observe a particularly creative response, ask the class to pause for a moment and have the student read the response aloud. The response may help give the group a feeling for the extent to which each unfinished statement can be expanded. Encourage students to stretch their imaginations by saying, “Let’s see who can think of the most way-out description of people.” Since communicating ideas is an important part of the creative process, be sure to allow students to read their statements aloud to the group.

Follow-up Activities

- Encourage students who show an interest in this activity to use their responses as a springboard for writing a science-fiction story. You might suggest that they write stories in the form of a daily log or radio messages to Earth.
- An interesting nonverbal follow-up activity invites students to draw pictures of the people, buildings, and monsters that they described on their activity

sheets. Allow students to display their pictures on a bulletin board.

- You can create additional activities of this type by developing unfinished statements that relate to the basic ingredients of a culture, including clothing, occupations, forms of government, transportation, recreation, and education.

13 Wandering Words

Type of Activity

Symbolic Transformations

Objectives

To develop the ability to generate new words from given words, using a given specification.
To develop word fluency.

Teaching Suggestions

Point out the numerous possibilities for completing the exercises in this activity by asking students to see how many other words they can derive from *beat* by changing only one letter (see the example on activity sheet “a”). Although most students will quickly learn the rules for completing this activity, it may be necessary for you to emphasize that the letters may not be interchanged; each letter except the one being changed must keep its own place in the word being formed.

You can also carry out this activity under mildly competitive conditions by encouraging students to make their lists as long as possible and giving extra points for words that are not included on any other student’s list. You can heighten competition by setting a time limit. Whenever questions arise regarding the legitimacy of a word, students should consult their dictionaries.

Follow-up Activities

- Ask students to generate lists of words of varying length and prepare some blank duplicating masters for additional activities of this type.
- Turn the activity into a relay race. Give each team the same word and have each team member add a word to the list and pass the activity sheet on to his teammates.
- If students show an interest in this type of activity, you may want to introduce them to the game of

Doublets, which was devised by Lewis Carroll in 1879. The game is similar to “Wandering Words” except that both the beginning and ending words are specified. The object of the game is to convert the beginning word to the ending word with as few changes as possible. In the Doublets developed by Carroll, the beginning word was often related in meaning to the ending word. For example:

Beginning word: *HEAD*
 HEAL
 TEAL
 TELL
 TALL
Ending word: *TAIL*

Encourage students to develop their own Doublets and try them out on their classmates. Carroll’s Doublets can be found in *Lewis Carroll’s Games and Puzzles* (Dover Publishers, 1992).

14 Alternate Uses

Type of Activity

Semantic Units

Objectives

To develop ideational flexibility and originality.
To develop the abilities to modify, adapt, redefine, and improvise.

Teaching Suggestions

This activity allows students to develop both practical and creative products. After students have read the directions and examples in the first exercise, invite them to point out the difference between the two examples. Using familiar stories as examples of fanciful writing (e.g., *Alice in Wonderland*, *The Wizard of Oz*, television cartoons), point out that children and adults both receive endless hours of enjoyment from fanciful material such as fairy tales, science fiction, tall tales, and cartoons. In other words, help youngsters see that all writing need not be realistic or serious. Also point out that many useful devices can be made from objects that were meant to serve some other purpose (e.g., bird feeders can be made from milk cartons; bracelets can be made from paper clips). Ask students if they or their parents have ever used an object in ways other than the way it was meant to be used. As they work through the exercise, encourage them to develop both practical and

fanciful ideas and allow them a good deal of freedom in modifying the objects to suit their purposes.

If students are slow to catch on to the activity, you might suggest some of the following strategies for modifying objects: taking them apart or breaking them up into smaller parts; putting several of them together or combining them with other types of objects; turning them upside down or inside out; stretching them and adding color, motion, sound, or odor. Suggest a few examples of how objects can be modified to form different products. For example, a story and music can be combined to make an opera, and apples can be used in a variety of recipes. Ask students if they can think of other ingredients that they can modify to form different products.

This activity will no doubt produce some laughter and some way-out suggestions, but you should make every effort to value even the most ridiculous response. This type of activity allows students to practice freeing their minds from the usual constraints that limit creativity.

Follow-up Activities

- Ask students to make a list of all the things that they and their families discard from their homes and use these lists as the bases for additional “Alternate Uses” exercises. Follow-up exercises can be restricted to practical or fanciful uses, and you might have an occasional contest to see who can come up with the best response within a particular specification. Whenever possible, let the youngsters judge which is the best idea.

15 Comparisons

Type of Activity

Semantic Relations

Objectives

To develop verbal originality.
To develop the use of imagery.
To express ideational relationships and colorful comparisons.

Teaching Suggestions

Before students begin this activity, ask them for some of the common comparisons with which they are familiar (“as old as the hills,” “as quiet as a mouse,” “as sly as a fox,” “as stubborn as a mule,” “as light as a feather”). Write the stems of these well-known

comparisons on the chalkboard and invite students to give several possible analogies for each stem. Encourage them to be as original and as colorful as possible in completing the sentences on the activity sheets.

Explain to students that comparisons can be direct and realistic or they can be fanciful and unrealistic. For example, a realistic comparison might be “Fred is as strong as his father,” but a more fanciful and less realistic comparison might be “Fred is as strong as steel.” Sometimes people use extreme or even ridiculous comparisons to emphasize a relationship or lack of relationship between two persons, objects, or situations. Thus someone might call attention to a person’s lack of strength by saying, “He is about as strong as wet spaghetti” or “He is as strong as a mouse.”

Remind students that there are no right answers to these exercises. Encourage them to write any comparison they think of, regardless of how silly or ridiculous it may seem. Point out that truly great writers often gain fame by thinking of comparisons that no one else has ever used.

After students have completed the exercises, have some read their responses aloud and ask the class to comment on those they feel are particularly colorful. Call attention to varying degrees of relationship (direct and realistic, magnified and fanciful) and ask students to explain comparisons that are not readily apparent to their classmates.

Follow-up Activities

- Invite students who are interested in writing to watch for comparisons in their reading and to record them in a notebook. After they have accumulated several examples, ask students to group them into various categories such as comparisons of physical characteristics (“as big as . . .,” “as pretty as . . .,” “as blue as . . .”), emotional characteristics (“as happy as . . .,” “as angry as . . .”), and temporal characteristics (“as old as . . .,” “as recent as . . .”). Encourage them to add their own comparisons to the list whenever they think of them.

16 Cartoon Captions

Type of Activity

Figural Implications

Objectives

To develop the ability to produce varied implications based on given figural material.

To show relationships between figural and semantic material.

Teaching Suggestions

A good way to introduce this activity is to show students a cartoon that conveys a humorous situation without a caption. Then show them a captioned cartoon with the caption removed or covered and ask if the cartoon brings out the humor in the situation. Ask the class what words might be written below the cartoon to make it humorous. Try to elicit several responses from students and allow them to decide which caption they like the best. It is important to emphasize that there are many possible captions. After several students have had an opportunity to suggest captions, you might reveal the caption that was written by the cartoonist.

After students have completed each activity sheet, ask them to read their captions aloud or display their activity sheets on the bulletin board. Exposure to each other’s responses may provoke additional ideas; therefore give students an opportunity to add new responses.

This activity provides an opportunity for helping students appreciate peer evaluation. The class will exhibit varying amounts of laughter in relation to the degree of humor that a caption brings out. Students may choose to submit their best cartoons to the school newspaper for possible publication.

Follow-up Activities

- Ask students to cut out and bring to class cartoons that they think will be good for this activity. They can mount cartoons on poster paper and display them on a bulletin board with space for students to add their own captions.
- This activity can be used to introduce youngsters to political cartoons and the special types of messages that they attempt to convey. Be sure to point out the symbolic nature of political cartoon characters (Uncle Sam, donkey, elephant, and so on). Famous political cartoons such as those by Thomas Nast allow students to see the way that editorial opinions of historical events may be communicated. Invite students to draw political or editorial cartoons of past or current events.
- One game-type activity might involve matching cartoons with appropriate captions. Break the class into workable groups, giving half of each group some cartoons and the other half the corresponding

captions, and have students try to find the right caption for each cartoon.

- An exciting variation of the “Cartoon Captions” activity is to ask youngsters to draw their own cartoons and exchange them with their classmates so that the classmate can add the caption. Or, you might give students a caption and ask them to produce a sketch that brings out the humor implicit in the caption. As a final exercise, you can synthesize figural and semantic activity by asking children to draw cartoons and then write captions for their own cartoons.

17 Words with Feeling

Type of Activity

Semantic Classes

Objectives

To develop the ability to produce many categories of words and phrases appropriate in meaning to a given situation.

To develop verbal fluency and word association skills.

Teaching Suggestions

To introduce this activity, select a short paragraph that creates a certain mood and read it to the class. Ask students which words the author has used to help create a particular mood. You can also ask students what words come to mind when they think of a certain mood.

After students have completed each activity sheet, invite them to read individual words or phrases at random and ask the class to guess which category the word or phrase is associated with. The beginning words in each list are likely to be obvious associates of the situation in question. Therefore it is important to encourage youngsters to generate at least five words or phrases for each situation. Ask students to explain words or phrases that are less obvious and generously praise responses that show clever or remote associations. Ask students if any of the responses could be used for more than one of the six situations in the exercise. Some debate is likely to ensue, and it is important to let the students themselves resolve their differences.

Follow-up Activities

- A natural follow-up to the “Words with Feeling” exercises is to ask students to write short paragraphs about each situation. This activity will help them synthesize their words and phrases and use them in

a creative writing task. Encourage youngsters who show an interest in this type of follow-up activity to write a short story based on one of the moods.

- Responses to this activity often deal with the visual and auditory senses. You can help students expand their perception of mood-associated words by asking them to classify words according to one of the five senses with which they are associated. This exercise will help students realize that moods can also be created by words associated with smell, taste, and touch. An interesting variation of this activity is to ask youngsters to describe the sound effects they would use if they were developing a radio program designed to convey a given mood. Some students may actually want to create a sound-effects tape for one or more of the situations listed on the activity sheets or other situations of their choice.

18 Consequences

Type of Activity

Semantic Transformations

Objectives

To develop ideational fluency and originality.

To develop the ability to speculate and to imagine.

Teaching Suggestions

Since most of the situations in this activity are improbable, it allows students to exercise a playful imagination. You can encourage this playfulness by adding your own unusual suggestions to the discussion. Humor is a very important part of creativity, and students will make an extra effort to be clever and humorous if they feel that the teacher values these traits. Humor also has its own built-in feedback mechanism. If students’ ideas result in spontaneous laughter or comments, they will be getting an immediate peer evaluation of their work.

Follow-up Activities

- Encourage students to think up their own improbable situations and allow them to ask their classmates to think of possible consequences. Newspapers and magazines occasionally print articles and pictures that record unusual happenings. You might post some on a bulletin board and suggest that students write a possible consequence beneath a picture or article whenever they have a good idea.

- Pose hypothetical questions based on history. Allow students to speculate what would happen if the South had won the Civil War or the Louisiana Purchase had never taken place. Additional speculative activities might involve descriptions of what certain aspects of our culture might be like one hundred years from now (clothing, transportation, national boundaries, and so on). You can also discuss some of the recurrent issues the world faces. Youngsters might speculate about what the world would be like if there were no such things as war, discrimination, disease, or pollution. You may want to ask students to speculate about possible solutions to problems in which they have a particular interest.

19 Word Boxes

Type of Activity

Symbolic Relations

Objectives

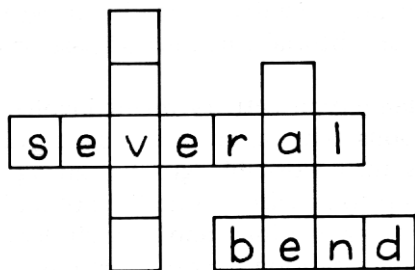
To develop verbal fluency and flexibility.

To produce connections between words that are based on symbolic (letter) relationships rather than semantic (meaning) relationships.

To learn how to distinguish between symbolic and semantic relationships.

Teaching Suggestions

Before students begin this activity, put the following example on the chalkboard:



Ask students if they can think of a five-letter word that has a *v* for the third letter (for example, *saved*, *rover*). Encourage them to give several possible responses so that they will understand that many different words can be used to complete the Word Boxes. Now ask if they can think of a four-letter word that has an *a* for the second letter and an *e* for the last letter (*made*, *pale*, *lake*, and so on). Again, allow all students to contribute their suggestions and re-emphasize that there are many words that can be used in these exercises.

This activity is very exciting when carried out under mildly competitive conditions. Ask students to see how quickly they can complete the Word Boxes and encourage them to think of words that no one else will use. After they have completed the boxes, suggest that each student develop a set of clues for each of his or her words (as in a crossword puzzle), exchange lists of clues with a partner, and see if they can solve each other's puzzles.

Follow-up Activities

- You can use this activity to develop skills involved in creating crossword puzzles. Have students study some crossword puzzles and draw their attention to the types of relationships that are used to specify words (synonyms, antonyms, abbreviations, rhymes, colloquialisms, and so on). Ask students to use as many of these relationships as possible in creating their own crossword puzzles. Be sure to provide students with graph paper so they can draw out their puzzles.

20 Make-a-Sentence

Type of Activity

Semantic Systems

Objectives

To develop expressional fluency and flexibility.

To develop the ability to organize words into meaningful, complex ideas.

Teaching Suggestions

Words for the "Make-a-Sentence" activities have been purposefully selected because of their limited logical relationship to each other. This limited relationship is essential in achieving the creativity objectives listed above. Since students sometimes have difficulty starting this activity, encourage them to persevere by being very receptive to their early responses. These early responses may be somewhat awkward and often humorous, but the students will quickly realize that by using clauses and compound sentences, they can construct meaningful thoughts. After students have caught on to the activity, you can increase the level of difficulty by asking them to construct sentences with a minimal number of words. This slight modification, perhaps carried out under mildly competitive conditions, will require a reorientation in their thinking.

Follow-up Activities

- Many variations can be introduced into the “Make-a-Sentence” activity: the number of specified words can be increased; the number of connecting words (that is, nonspecified words) can be limited; and the specified words can be “loaded” with various parts of speech, words from spelling lists, or words from social studies units. When selecting words, choose ones that do not logically go together. Students will write very ordinary sentences if you select words such as *little*, *lost*, *dog*, and *boy*.
- Students can develop dictionary and vocabulary skills by working in teams to prepare sets of words for a “Make-a-Sentence” competition. They will undoubtedly seek out unusual words, thus inspiring their classmates to look up words in the dictionary.
- You can also use this activity to develop vocabulary and syntax skills in a foreign language if students have already begun study in this area.

21 Let’s Write a News Story

Type of Activity

Semantic Implications

Objectives

To develop imagination and verbal originality.
To produce an original communication that is extended beyond the limits of the given information.

Teaching Suggestions

This activity provides youngsters with a good opportunity to use their imaginations. They will, in effect, have to create the lost city and the talking dog. Encourage them to be original in creating their city and dog and suggest that they illustrate their story with a picture that might appear with the newspaper article. Before students begin this activity, review the five *W*’s of a news story (*Who*, *What*, *When*, *Where*, and *Why*). Emphasize that a good news story attempts to answer these questions for the reader.

When students are done, ask them to read their articles to the class and display their drawings on a bulletin board. A good deal of humor and perhaps some silliness is likely to result from this activity, but it is important to be supportive of students’ responses. Creativity will flourish when students feel that you value

some of their highly imaginative and not-too-serious ideas.

Follow-up Activities

- Ask students to invent headlines that might provoke imaginative stories and suggest that they watch the newspapers and magazines for actual headlines that are open to a wide variety of interpretations. Use these two sources of headlines for developing additional exercises.

22 Figure Families

Type of Activity

Figural Classes

Objectives

To develop the ability to classify figural information in a variety of ways.
To develop flexibility in viewing figural information.

Teaching Suggestions

Introduce this activity by writing the letters *R*, *D*, *L*, *F*, *O*, and *C* on the chalkboard. Ask students if they can form subgroups of these letters, each of which makes a class according to similar figural characteristics. They will probably recognize such groups as *RDO* (enclosed space), *LF* (horizontal lines), and *RDOC* (curved lines). Be sure to point out that each letter can belong to more than one group. After several groups have been listed at the chalkboard, you might ask what other letters could be added to each of the categories.

Although there are a limited number of categories that you can create with any given set of figural information, “Figure Families” will allow students to explore various ways in which information can be categorized. Youngsters will quickly recognize some of the more obvious categories, but you should encourage them to look for the subtle characteristics that the figures have in common. Any common feature that a student can justify should be accepted.

This activity might provoke some interesting discussions in class. For example, some students may want to include Figure G on the first activity sheet in the first sample category (figures that contain only one circle), using the rationale that two half circles make a whole circle. On activity “b,” some youngsters may group the clock with the bed and table in a furniture category. Whether or not a clock is furniture

is debatable, but the important thing is to let students resolve their own differences. Help them along with questions such as “Are clocks sold in furniture stores? Does this mean they are furniture?” Some of the more able students will be challenged by these questions, and you should encourage them to do some research on the meanings of the words that they use as categories.

Follow-up Activities

- Objects and figural material can be grouped according to a variety of physical properties, such as size, shape, color, texture, flexibility, and type of material (wood, plastic, glass, etc.). A good way to help students practice their classification skills using nonverbal material is to fill a box with all sorts of odds and ends (straws, bottle caps, rubber bands, chalk, etc.) and allow each student to spend some time studying the materials and creating categories. After all students have examined the box of materials, ask them to compare lists to see who developed the most categories. Students can also prepare their own boxes of materials and exchange them with their classmates.

23 Creative Story Generator

Type of Activity

Semantic Elaborations

Objectives

To develop verbal fluency.

To develop the ability to produce an original story based on given information.

Teaching Suggestions

This activity will help youngsters develop creative stories by forcing relationships among three ingredients (people, places, and actions) that do not ordinarily go together. The directions to students are somewhat complicated and may need some additional explanation. Be sure they know what a die is since they may not be familiar with the singular form of the word *dice*. When each Creative Story Generator is completed, students will have the basic material for 216 different stories. Although you should encourage them to use their Generators two or three times, the activity will lose some of its excitement if they overuse it.

To introduce this activity, ask students if they ever wondered where writers get ideas for their stories.

Allow youngsters to speculate about the origins of ideas for stories and present the concept of a Creative Story Generator by distributing the first activity sheet.

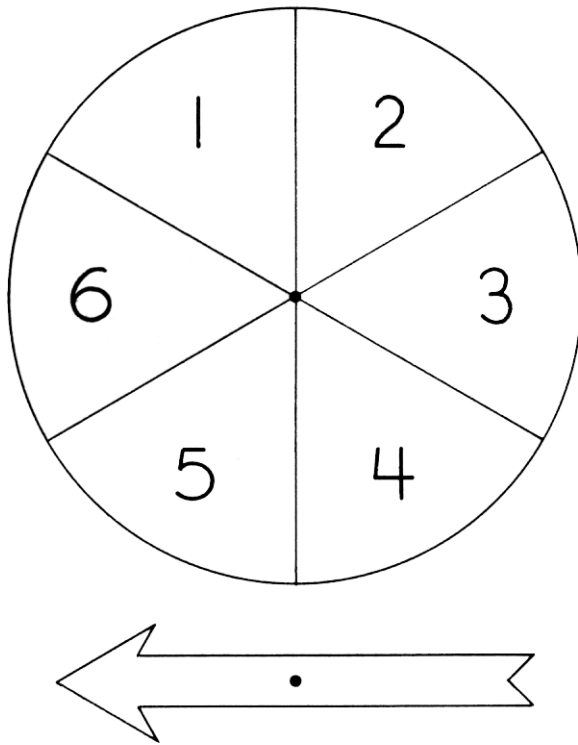
Students will have little difficulty completing the People and Places columns. However, they may need some help in completing the Actions column. For those who have difficulty, suggest that they think of action verbs or of things that people do when they are working or pursuing leisure-time activities. Slower students may need some specific suggestions to get started on this column.

In order to carry out this activity, you will need a die or a spinner that is numbered from one through six. (Directions for making a spinner are given at the end of this section.) If students want to select their own ingredients without using of the die or spinner, discourage them from doing so because the element of randomness is essential to the success of this activity. Students will develop unusual or uncommon plots only if they base their stories on ingredients that are not logically related.

When students present their stories to the class, they should first list their three ingredients on the chalkboard. During group discussions, encourage students to suggest their own ideas for stories that they might build around each person’s ingredients.

Directions for Making a Spinner

Cut out two figures like those illustrated in this section and paste them on pieces of cardboard. The circle should be about six inches in diameter, and the arrow should be about five inches long. Trim the cardboard to the shape of the figures and place the arrow on top of the number wheel. Push a thumbtack through the bottom of the number wheel and the arrow so that it passes through the two dots.



Follow-up Activities

- You can develop an interesting variation of the Creative Story Generator by using three sets of pictures clipped from magazines and newspapers. Approximately ten pictures (number each of them) should be placed in each of three folders as follows:

Set A: pictures of people (Select several types of interesting people.)

Set B: pictures of places (Select several unusual locations, such as mountains, the moon's surface, an operating room in a hospital.)

Set C: pictures of things (Select unusual as well as common objects, such as a telephone, a sling shot, an aardvark.)

Using a die or a spinner, students should randomly select one picture from each folder. The students can use the three pictures as the basis for a short story.

24 Hidden Figures

Type of Activity

Figural Transformations

Objectives

To develop the ability to transform meaningful figures into original drawings.

To develop nonverbal originality and elaboration.

Teaching Suggestions

You may wish to introduce this activity by writing the number eight in a large square on the chalkboard and decorating the number so that it looks like a snowman (face, buttons, arms, hat, pipe, broomstick). Ask if anyone else would like to come to the board and try to "hide" the number eight in a drawing. Since the object of this activity is to have students develop clever ways of hiding figures in their drawings, you should stress the part of the directions that asks them to conceal the figure so that it cannot be recognized in its original form. The number in the example has been written in heavy lines so that students can discern it; however, the remaining figures have been written in thin lines so that they will not stand out after the drawings have been completed. Allow students to use colored pencils or crayons and suggest that they color the numbers and letters so that they blend into the drawing.

After students have finished their drawings, suggest that they initial each one. Then have them cut their drawings out and randomly place them on the bulletin board so that other students can guess which figure is hidden in each drawing.

Follow-up Activities

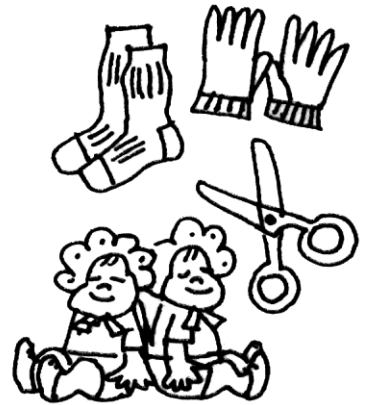
- One variation of this activity is to ask students to write their initials in block capital letters and attempt to hide them in a drawing. Students can also use other numbers and letters or symbols with which youngsters are familiar, such as those used in mathematics. Whenever possible, allow students to prepare exercises for class use.
- Students with artistic talent should study the hidden picture puzzles that are frequently found in children's magazines (e.g., *Highlights for Children*) and attempt to develop their own hidden pictures for classmates or the school newspaper.

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1 Thinking about Things (a)

When you are in a supermarket, have you ever noticed that all foods of a certain type are grouped together? You will find all the breakfast cereals in one place and all the dog foods in another place. For some reason, people like to group together things that have certain characteristics in common. In this activity, see how many things you can think of that have the same characteristics.



List all the things you can think of that come in pairs. A few examples are given to help you get started. If you need more space, continue your list on the back of this page.

shoes	_____	_____
twins	_____	_____
scissors	_____	_____
earrings	_____	_____
a doubleheader	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

List all the ways you can think of that people use water. Use the back of this page if you need more space.

shower	_____	_____
drink	_____	_____
cook	_____	_____
plants	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

1 Thinking about Things (b)

List all the things you can think of that are round and that you can hold in your hand. Use the back of this page if you need more space.



_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

List all the things you can think of that people do in their spare time. Use the back of this page if you need more space.



_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

2 Fun with Words (a)

The Fun with Words exercises will help you get into the habit of making several responses rather than just one or two. Fill in as many of the blanks as you can. Keep in mind that there are no correct answers. When you have finished, compare your lists with those of your classmates to see who thought of the most words and to see if you put down some words that no one else listed.

Write as many words as you can think of that begin or end with the letters indicated on each line below. A few examples are given to help you get started. If you need more space, continue your lists on the back of this page.

v _____	m _____	_____ r	b _____ e
v _____	m _____	_____ r	b _____ e
v _____	m _____	_____ r	b _____ e
v _____	m _____	_____ r	b _____ e
v _____	m _____	_____ r	b _____ e
v _____	m _____	_____ r	b _____ e
v _____	m _____	_____ r	b _____ e
v _____	m _____	_____ r	b _____ e
v _____	m _____	_____ r	b _____ e
v _____	m _____	_____ r	b _____ e
v _____	m _____	_____ r	b _____ e
v _____	m _____	_____ r	b _____ e
v _____	m _____	_____ r	b _____ e
v _____	m _____	_____ r	b _____ e
v _____	m _____	_____ r	b _____ e
v _____	m _____	_____ r	b _____ e
v _____	m _____	_____ r	b _____ e
v _____	m _____	_____ r	b _____ e
v _____	m _____	_____ r	b _____ e
v _____	m _____	_____ r	b _____ e
v _____	m _____	_____ r	b _____ e
v _____	m _____	_____ r	b _____ e
v _____	m _____	_____ r	b _____ e

2 Fun with Words (b)

Write as many words as you can think of that begin and/or end with the letters indicated on each line below. If you need more space, continue your lists on the back of this page.

q _____	_____ w	c _____	l _____	v _____	e _____
q _____	_____ w	c _____	l _____	v _____	e _____
q _____	_____ w	c _____	l _____	v _____	e _____
q _____	_____ w	c _____	l _____	v _____	e _____
q _____	_____ w	c _____	l _____	v _____	e _____
q _____	_____ w	c _____	l _____	v _____	e _____
q _____	_____ w	c _____	l _____	v _____	e _____
q _____	_____ w	s _____	t _____	r _____	m _____
q _____	_____ w	s _____	t _____	r _____	m _____
q _____	_____ w	s _____	t _____	r _____	m _____
q _____	_____ w	s _____	t _____	r _____	m _____
q _____	_____ w	s _____	t _____	r _____	m _____
q _____	_____ w	s _____	t _____	r _____	m _____
q _____	_____ w	s _____	t _____	r _____	m _____
q _____	_____ w	p _____	e _____	d _____	y _____
q _____	_____ w	p _____	e _____	d _____	y _____
q _____	_____ w	p _____	e _____	d _____	y _____
q _____	_____ w	p _____	e _____	d _____	y _____
q _____	_____ w	p _____	e _____	d _____	y _____
q _____	_____ w	p _____	e _____	d _____	y _____
q _____	_____ w	p _____	e _____	d _____	y _____

3 What's in a Name? (a)

Have you ever wondered how people get their last names? Years ago a person's last name often told the kind of work he or she did. For example, a person with the last name of Smith may have been a blacksmith or silversmith and a person with the last name of Thatcher probably made thatched roofs for houses.

Pretend that you have been given the job of creating last names for people based on the kind of work that those people do. For each of the occupations listed below, see if you can create two last names that are related to the type of work that people in that occupation do.

Makes candy

Ms Sweet

Repairs television sets

Drives racing cars

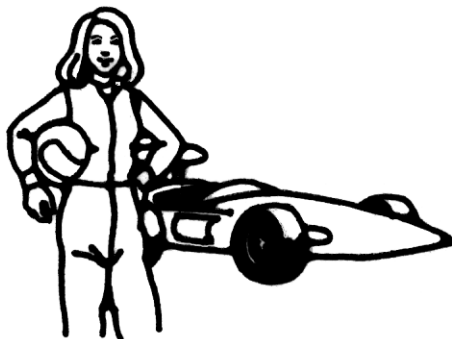
Builds solar houses

Trains seeing-eye dogs

Reports the movements of hurricanes

Tests parachutes

Paints lines on highways



3 What's in a Name? (b)

Have you ever thought about how the heroes of comic strips got their names? Comic-strip characters often have unusual names that tell us something about the kind of people or animals that they represent. For example, Dennis the Menace is a little boy who is always getting into trouble and Snoopy is an unusual dog who likes to act like a human being.

Pretend that you are going to write a comic strip about each of the characters below. See if you can think of two names for each of these characters. Try to think of interesting and colorful names that will make people want to read about them.



A cowhand

An invisible girl

A detective

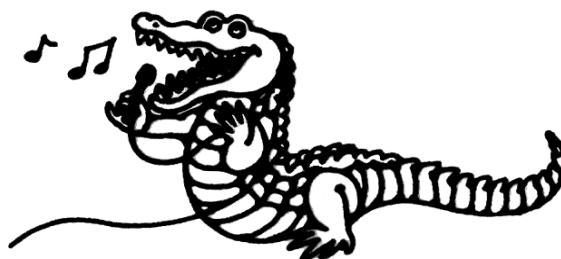
A silly elephant

A singing crocodile

An absentminded astronaut

A talking bulldozer

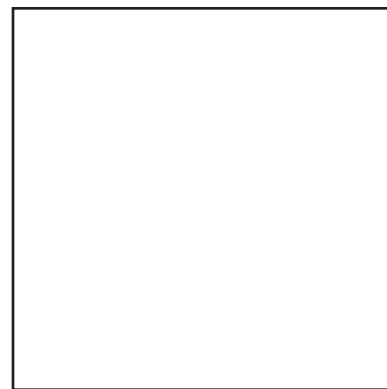
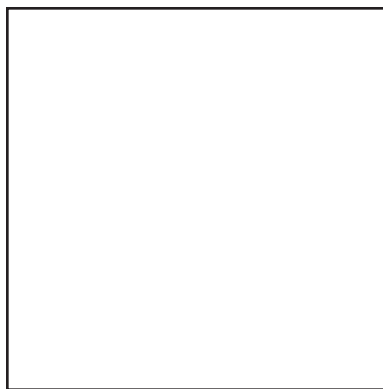
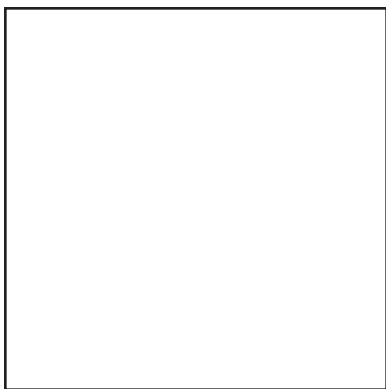
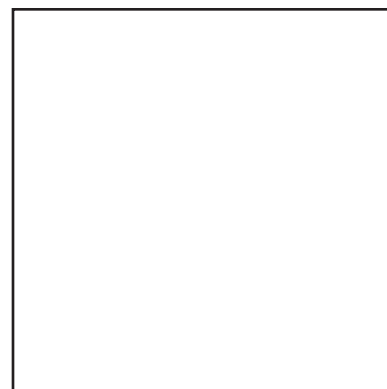
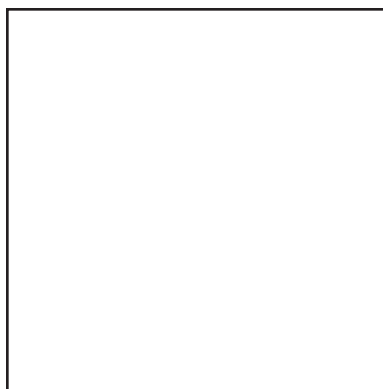
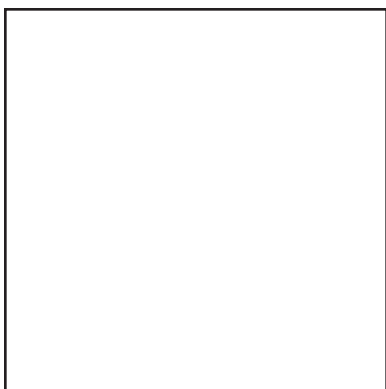
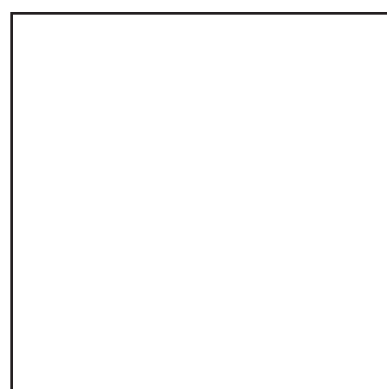
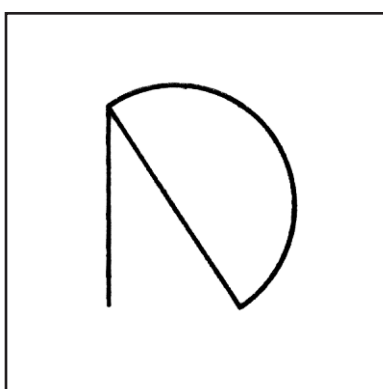
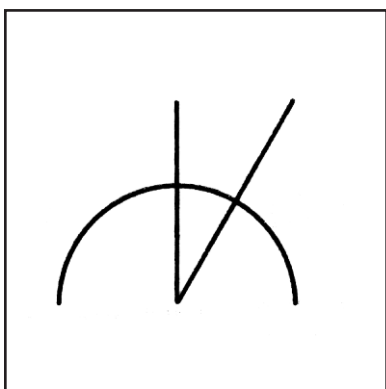
A medieval knight



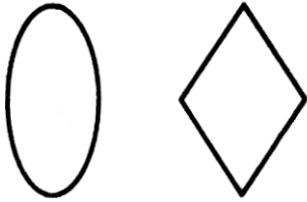
4 Fun with Figures (a)



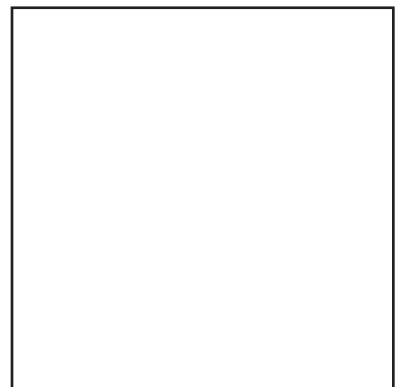
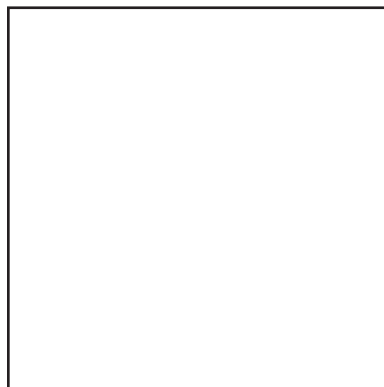
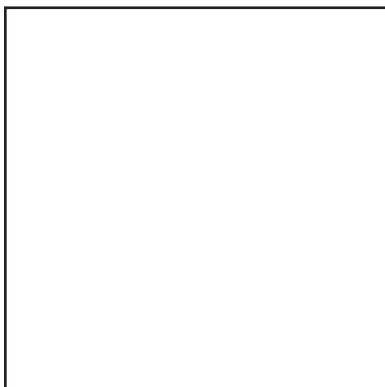
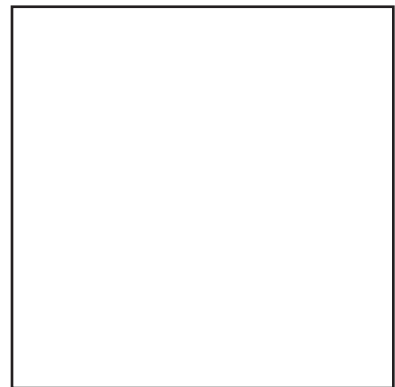
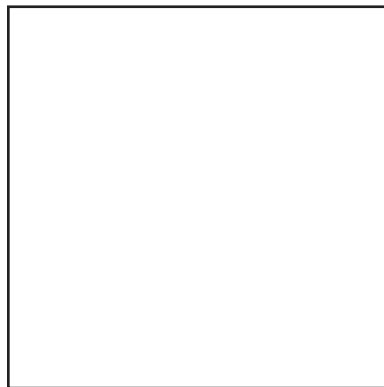
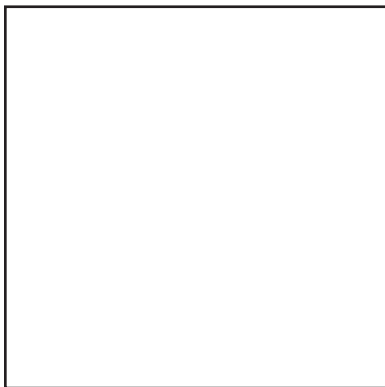
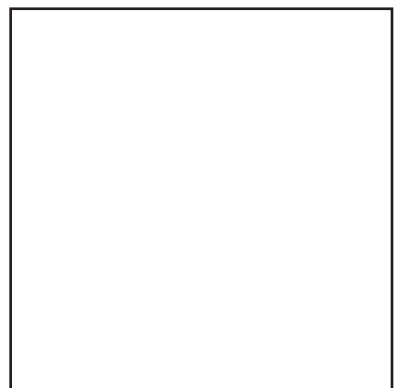
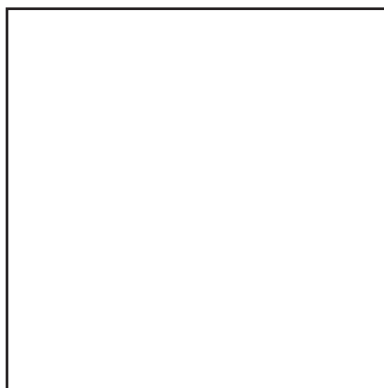
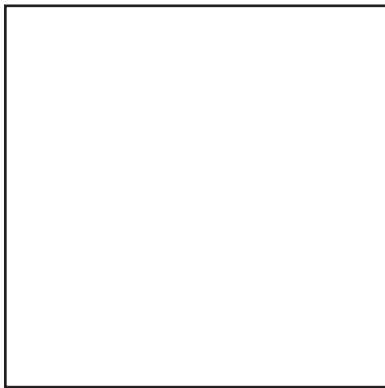
See how many different ways you can combine the above two figures to produce a new figure. The two examples should help you think of other combinations. Use the back of this page if you need more space.



4 Fun with Figures (b)



See how many different ways you can combine the above two figures to produce a new figure. Use the back of this page if you need more space.



5 Sentence Skeletons (a)



A sentence skeleton is a sentence in which only the first letters of some of the words have been provided. In this activity, you are going to construct four- and five-word sentences in which the first letters of some of the words have been specified. For example, the first word of the first sentence skeleton below must begin with *S*, and the last word must begin with *f*. The other two words can begin with any letters you choose.

See how many sentences you can think of that will complete each of the following sentence skeletons. Try to make your sentences as different and as original as possible. Use the back of this page if you need more space.

S _____	_____	_____	f _____.
S _____	_____	_____	f _____.
S _____	_____	_____	f _____.
S _____	_____	_____	f _____.
S _____	_____	_____	f _____.
S _____	_____	_____	f _____.
S _____	_____	_____	f _____.

R _____	d _____	_____	_____.
R _____	d _____	_____	_____.
R _____	d _____	_____	_____.
R _____	d _____	_____	_____.
R _____	d _____	_____	_____.
R _____	d _____	_____	_____.
R _____	d _____	_____	_____.

U _____	_____	j _____	a _____.
U _____	_____	j _____	a _____.
U _____	_____	j _____	a _____.
U _____	_____	j _____	a _____.
U _____	_____	j _____	a _____.
U _____	_____	j _____	a _____.
U _____	_____	j _____	a _____.

5 Sentence Skeletons (b)

See how many sentences you can think of that will complete each of the following sentence skeletons. Try to make your sentences as different as possible. Use the back of this page if you need more space.

Y _____ o _____ _____ l _____.
 Y _____ o _____ _____ l _____.
 Y _____ o _____ _____ l _____.
 Y _____ o _____ _____ l _____.
 Y _____ o _____ _____ l _____.

_____ c _____ f _____ s _____.
 _____ c _____ f _____ s _____.
 _____ c _____ f _____ s _____.
 _____ c _____ f _____ s _____.
 _____ c _____ f _____ s _____.

A _____ m _____ e _____ n _____.
 A _____ m _____ e _____ n _____.
 A _____ m _____ e _____ n _____.
 A _____ m _____ e _____ n _____.
 A _____ m _____ e _____ n _____.

F _____ a _____ t _____ t _____ g _____.
 F _____ a _____ t _____ t _____ g _____.
 F _____ a _____ t _____ t _____ g _____.
 F _____ a _____ t _____ t _____ g _____.
 F _____ a _____ t _____ t _____ g _____.

6 What Would You Call It? (a)

Although our language contains thousands of words, additional words must sometimes be created to describe new inventions or things that did not exist before. For example, *launch pad*, *lunar module*, and *astronaut* are words that were created to help us describe various aspects of our space program.

Pretend that you have been given the responsibility for creating new names for each of the imaginary things listed below. See if you can think of two names for each thing.

Shoes that enable people to walk on water
aquaboots

A pen that never runs out of ink

A breakfast cereal made from dandelions

A dance that you do on your hands and knees

A book that you can eat when you are finished reading it

A piece of clothing that you wear to keep your nose warm in winter



6 What Would You Call It? (b)

Pretend that you have been given the responsibility for creating new names for each of the imaginary things listed below. See if you can think of two names for each thing.

An animal that has the body of a giraffe and the head of a lion

A machine that does your homework for you

A new game that is played by knocking over plastic bottles with lemons

A machine that converts garbage into fertilizer

A pill that will make you smarter in arithmetic

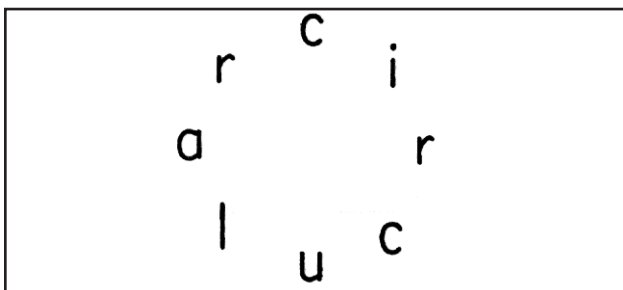
A tree that produces fruit that is a combination of cherries and oranges

A house that automatically turns so that it is always facing the sun

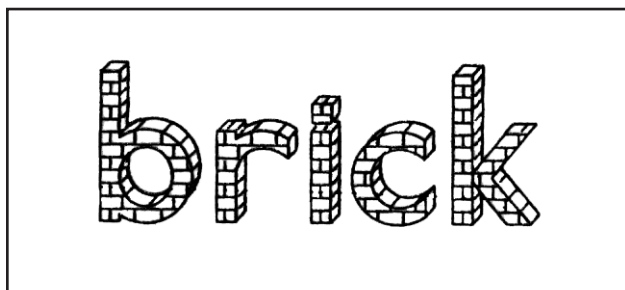


7 Way-out Words (a)

Words can sometimes be written in ways that make them look like their meanings. See if you can write each of the following words so that it will look like its meaning. Examples of how the first words might be written are shown below.



circular



brick



flat



snake



mirror



tilt



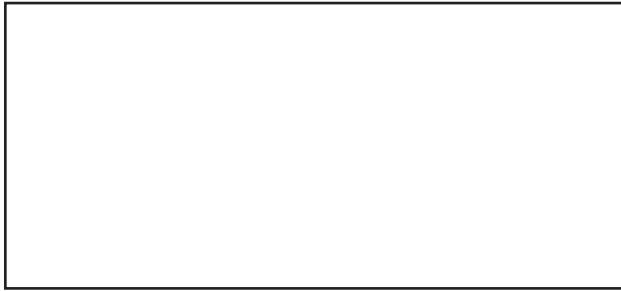
trampoline



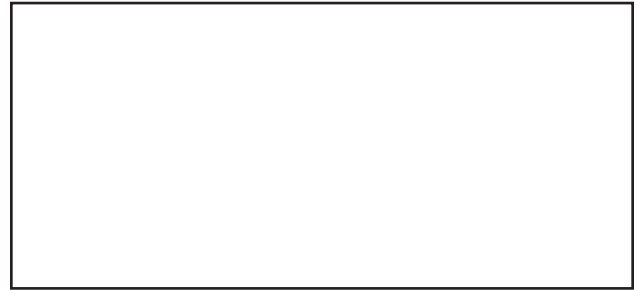
stretch

7 Way-out Words (b)


See if you can write each of the following words so that it will look like its meaning.



knife



wooden



skinny



broken



decrease



hot



split



water

8 The Headline Cutter (a)

Most large newspapers have a person on their staff called a “headline cutter.” This person’s main job is to think up headlines that will attract the reader’s attention to the articles that appear in the paper. For each of the newspaper articles below, see if you can think of two short, interesting headlines.

BETHANY - What would you do if you saw a full-grown gorilla on the side of a highway holding a sign that read “Morocco”?

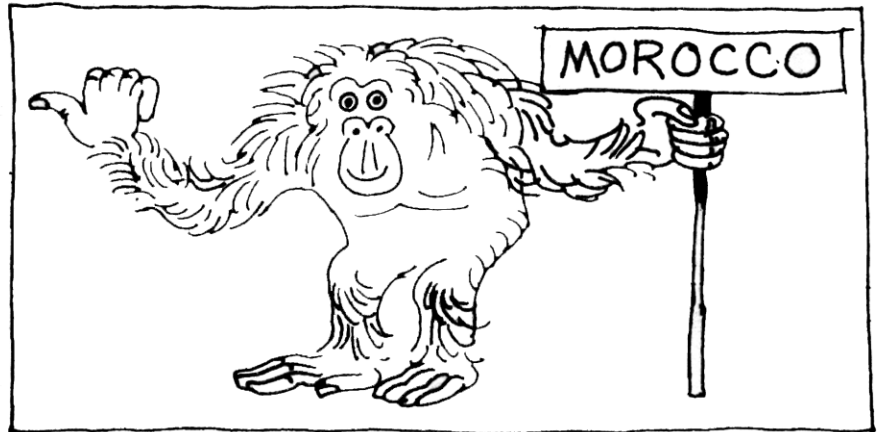
Chances are you’d hit the gas and turn on the radio for news of an escaped simian from a nearby circus or carnival.

But if you were a seasoned state police trooper en route to duty in Bethany from your home in Meriden, you would stop your cruiser to check out the unusual hitchhiker.

And as Trooper May Chang walked toward the gorilla standing alongside the Wilbur Cross Parkway, she was quite relieved to hear the brute speak good English.

As it turned out, beneath the hairy hide was a 21-year-old college student by the name of Raul Ramos, of Hamden.

Ramos explained that the caper was to photograph expressions of motorists as they spotted the gorilla. It was to be part of a home movie.



JUNEAU, Alaska (AP) - It’s a well-known fact that piggies say “oink” and cows say “moo,” but the latest thing in animal jargon these days is the moose’s “err-aaaaaaanh.”

Sometimes, however, the moose cuts loose with a healthy “err-orh-rrr.”

Studies on “calf behavior and the cow-calf bond in moose” by a University of Alaska graduate student confirmed these latest additions to animal talk.

Conducted at the Moose Research Center on the Kenai National Moose Range, the study also determined that when disturbed to a greater degree, a young moose calf will say “err-aaaaaaanh” or “aaa-aaaaanh.”

The report explains that as more anxiety is blended into fright, the “aaa” components become more predominant.

NEW YORK (UPI) - Benjamin Franklin, Thomas Jefferson, John Hancock, and John Adams, all received free dinners and rides at Coney Island over the Independence Day holiday weekend.

They were the only persons to show up in response to an announcement by Coney Island officials promising a day on the house to anyone with names the same as those of the 56 signers of the Declaration of Independence.

8 The Headline Cutter (b)

Read the following newspaper articles and see if you can think of two interesting headlines for each article. Each headline should be short and should attract the reader's attention.

BOSTON (AP) - The New England Aquarium has added 50 octopuses to its supply of marine life.

The growth came Thursday night when 50 octopus eggs hatched. The babies are a half-inch in diameter, are eating brine shrimp and showing ability to change color and to discharge protective ink clouds.

Grace Satiacum, curator, said approximately 1,000 octopus

eggs are waiting to hatch.

She said they were laid in the aquarium Feb. 16. The aquarium received two female octopuses from southern California the month before, and Ms. Satiacum said both apparently were carrying fertilized eggs.

She said the species is that of an octopus native to southern California that grows to about two feet in diameter.

Finding a new twist to an animal story isn't easy but occasionally a bear cooperates. Here's the report, according to a recent Associated Press dispatch from Maple Heights, Ohio:

The first customer at a self-service laundry almost put his dirty clothes in a washing machine with a dozing bear. Instead, he jumped back and called the manager. She in turn called the dog catcher who proceeded to put a leash around the animal.

Then it dawned on them all. A pet shop was only three stores away.

The 50-pound bear had escaped its cage in the shop and took quite a trip. It had crawled up some bookshelves, moved acoustical ceiling tiles, climbed into an air space between the ceiling tiles, climbed into an air space between the ceiling and the roof and walked through it until it dropped into the laundromat.

At daybreak, it curled up in the washing machine and dozed off.

WASHINGTON (AP) - Mice on the loose kept a Washington-bound jet airliner on the ground at Dayton, Ohio, airport for almost two hours Monday.

Travelers aboard a Trans World Airlines 727 reported that after the plane landed at Dayton, on arrival from Indianapolis, they were informed that the flight would be delayed because a cage full of mice had broken open in the cargo compartment.

They said the airline served drinks to the passengers during the hour and 45 minutes it took to round up the estimated 50 mice hiding in the air freight.

BRECON, Wales (UPI) - Town authorities have ordered a gas station to remove its "talking" self-service gas pumps because they kept neighbors up at night.

But neighbors still are not satisfied. They say they are awakened at night by noisy motorists shouting and slamming doors.

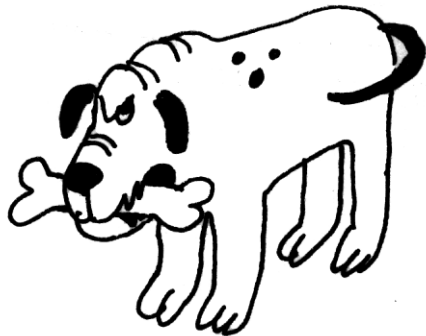
9 Saying It Nicely (a)

Have you ever read the want ads in the newspaper? When people try to sell things by placing an advertisement in the want ads, they usually try to make the things appear as attractive as possible. Pretend that you are trying to sell each of the things pictured below by placing an advertisement in the want ads. How would you make the things sound more attractive than they actually are? Use your imagination and don't be afraid to stretch the truth a little bit.



An old shack in the middle of a swamp

Vacation Cottage for Sale



An evil-tempered dog

Pet Dog for Sale

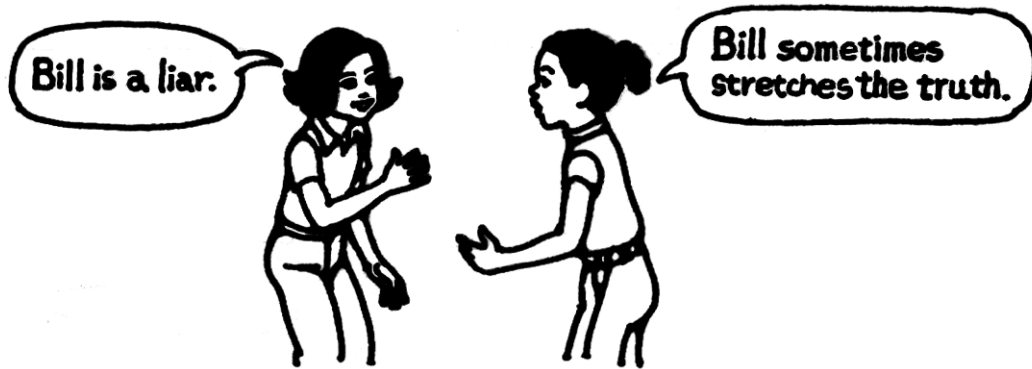


A broken-down old clock

Antique Clock for Sale

9 Saying It Nicely (b)

The two girls in the drawing are both saying the same thing about Bill, but the second girl is using an indirect expression that is less harsh than the first girl's statement. See if you can rewrite each of the statements below so that it sounds nicer or less harsh.



Sam is a gossip. _____

Mr. Cahora is fat. _____

Ms. Lopez is a penny pincher. _____

Kevin is a bully. _____

Elston was a coward. _____

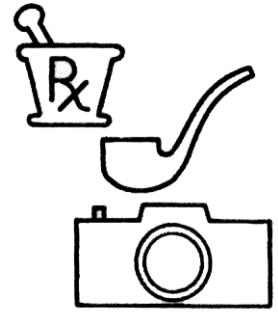
Kumi is very skinny. _____

Robin is very selfish. _____

Sal is rude. _____

10 Say It with Symbols (a)

Stores and businesses often use symbols to help people recognize the products they offer to the public. A good business symbol should enable people to recognize instantly the type of products that a particular store is selling. Imagine that you are a designer who has been asked to create a symbol for each of the stores below. Draw your symbols in the spaces provided.



A store that sells athletic equipment

A store that sells musical instruments

A store that sells furniture

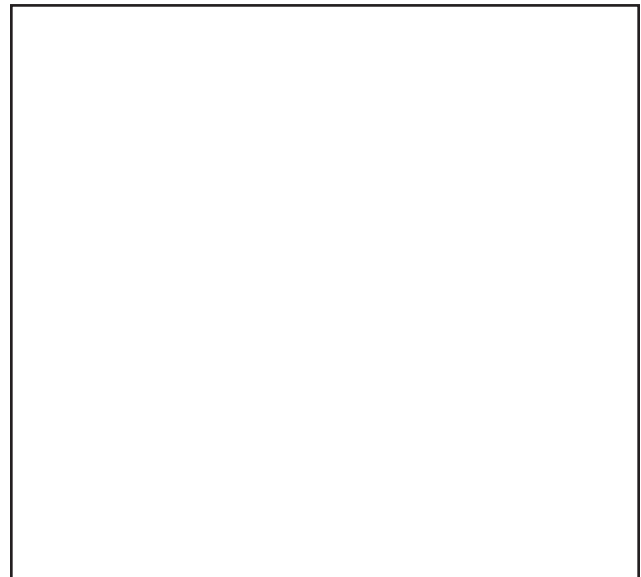
A store that sells pets and tropical fish

10 Say It with Symbols (b)

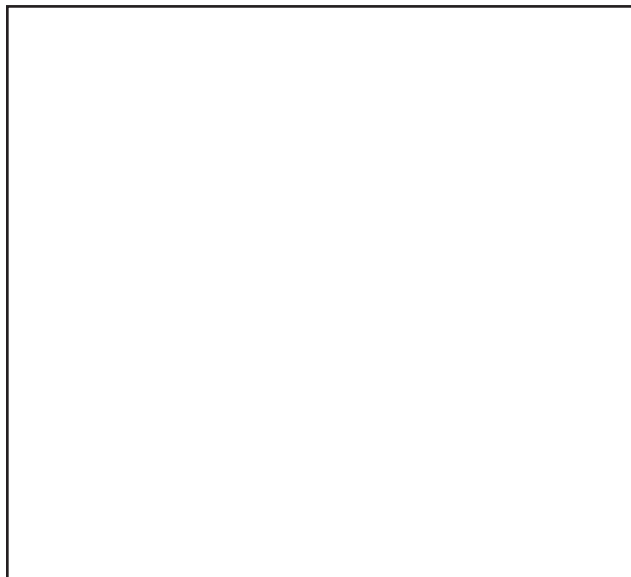
Pretend that you live in a country where there are no such things as written words. The store owners and shopkeepers must use symbols to advertise the kinds of services that they perform. See if you can design a symbol that will help people recognize the service that is offered by each of the stores or shops below.



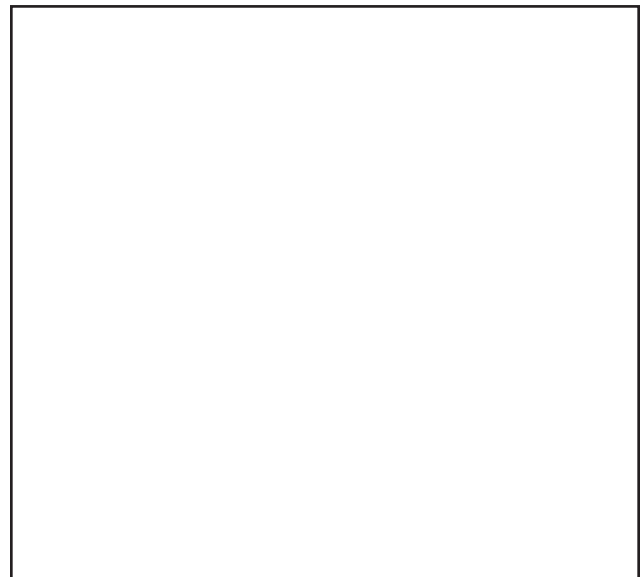
An automobile repair shop



A tailor shop



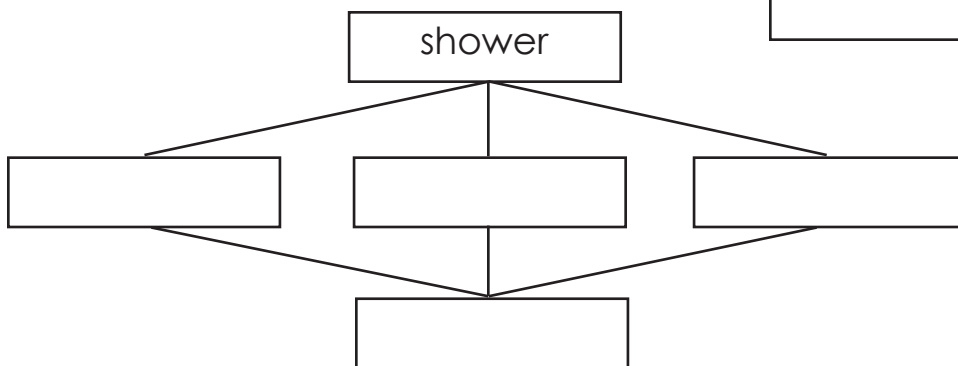
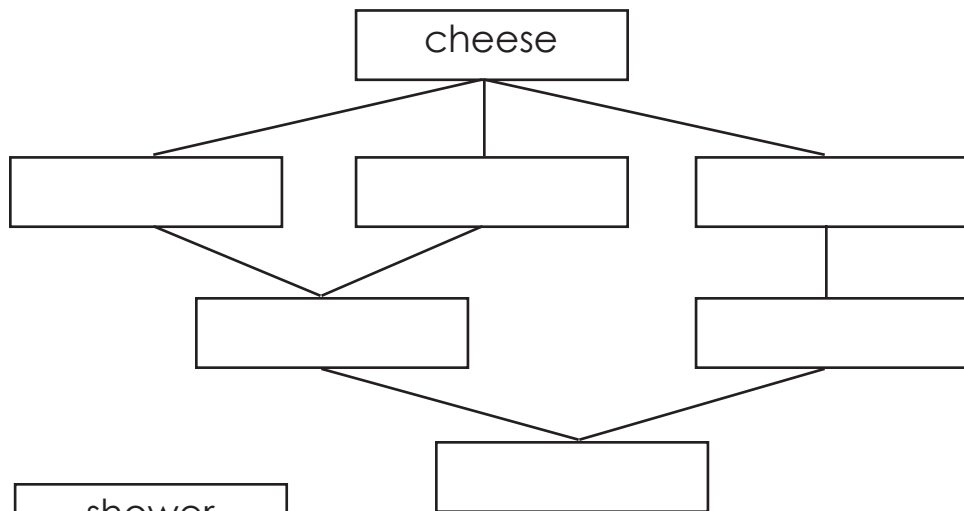
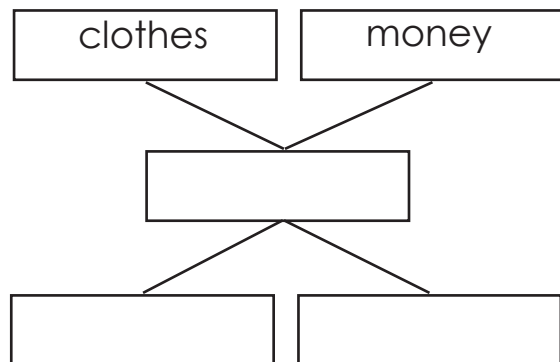
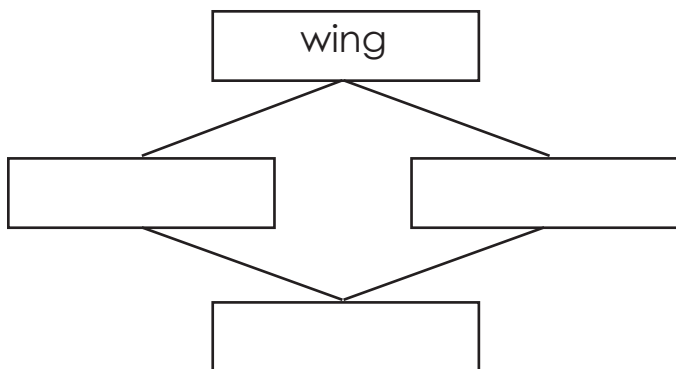
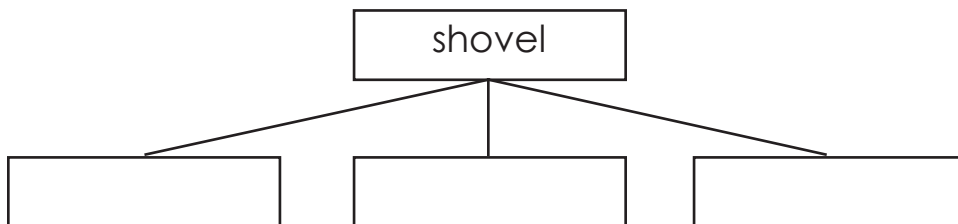
A store that repairs watches and clocks



A store that makes false teeth

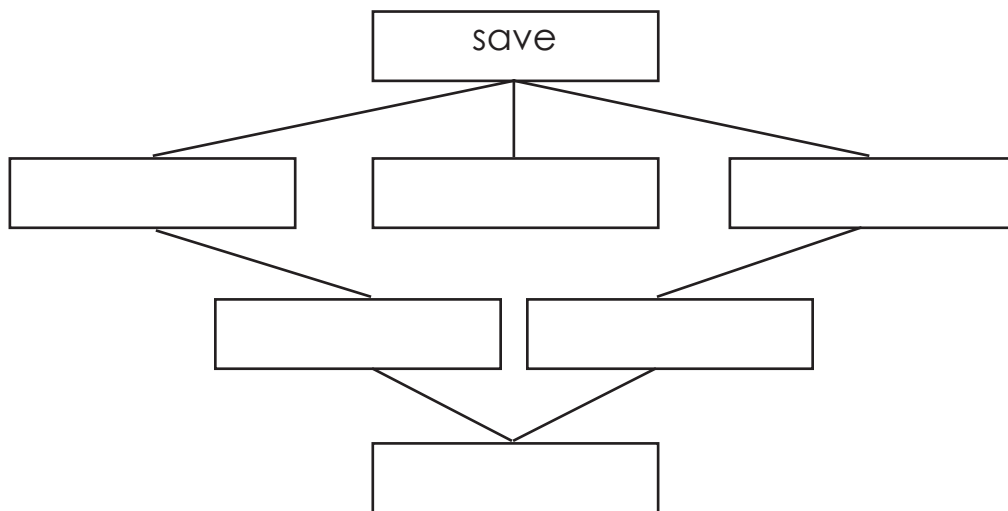
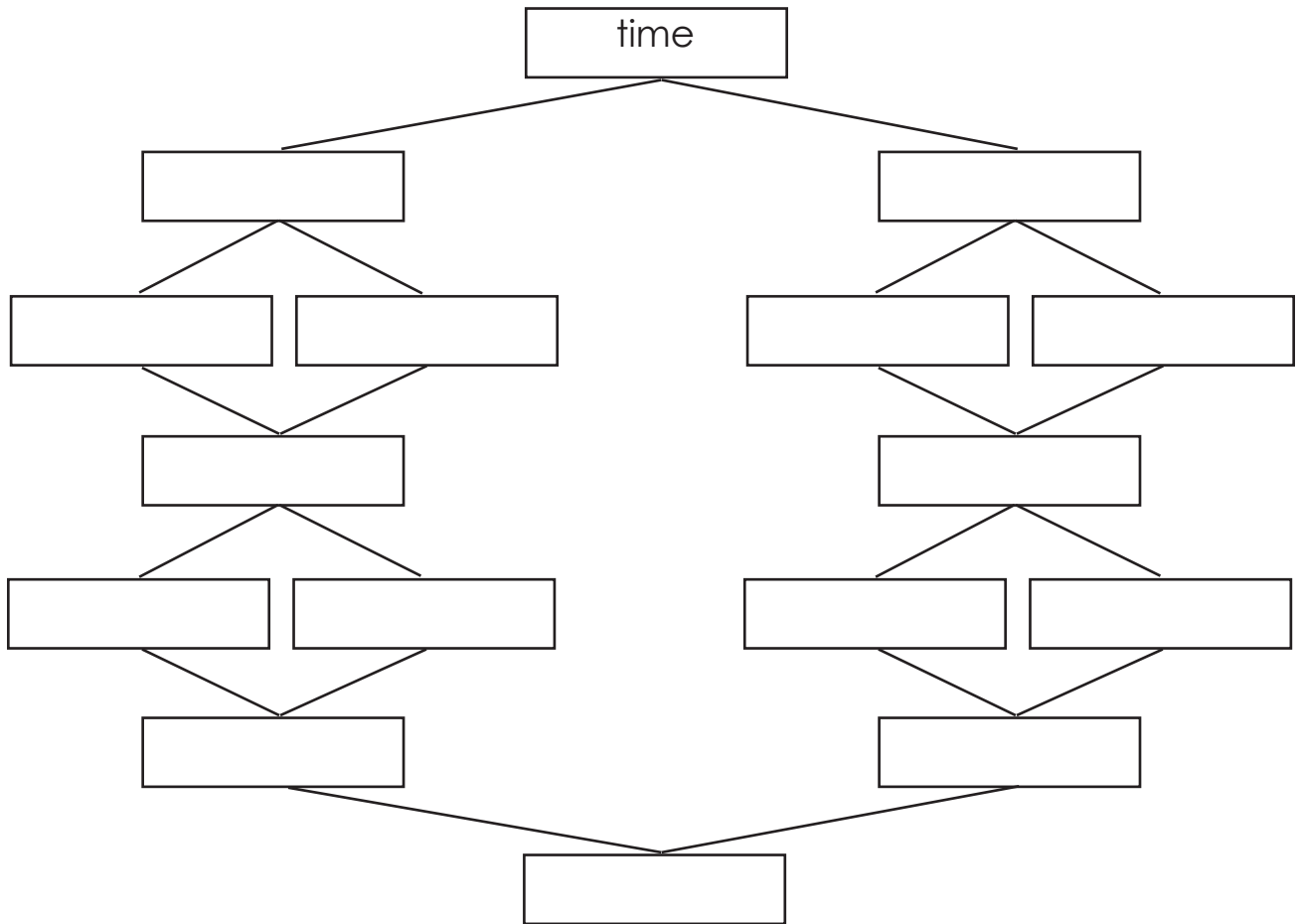
11 Word Trees (a)

What words can you think of to complete the following Word Trees?



11 Word Trees (b)

What words can you think of to complete the following Word Trees?



12 A Message from Planet X (a)

Imagine that you are a space explorer who has been sent to visit a newly discovered planet. As you explore the planet, you are supposed to send radio messages back to Earth. Write your messages by completing the following statements. Use your imagination and make your messages as interesting and as exciting as you can. Use the back of this page if you need more space.



When I landed on Planet X, I was greeted by strange-looking people. They looked something like people on Earth, except they had _____

They also had _____

The people on Planet X eat food that is very different from ours. Their favorite meal is called _____,

and it is made of _____

The people on Planet X live in strange-looking buildings. The buildings are made of _____

and they look like _____

The people on Planet X do not have any _____

because _____

12 A Message from Planet X (b)

Imagine that you are a space explorer who has been sent to visit a newly discovered planet. As you explore the planet, you are supposed to send radio messages back to Earth. Write your messages by completing the following statements. Use your imagination and make your messages as interesting and as exciting as you can. Use the back of this page if you need more space.

The people on Planet X have an unusual game called _____.

The game is played by _____

Today I explored a place on Planet X called the Valley of the Monsters. The biggest monster was called a _____,

and it looked like _____

Another monster was called a _____,

and it looked like _____

When I saw the monsters, I felt like _____

13 Wandering Words (a)

See how many four-letter words you can make by changing one letter at a time in the words below. You may change one letter in the given word, then one letter in the word you made, and so on. All of the letters except the one you change must keep its own place in the new words you make. One complete example is done for you. Use the back of this page if you need more space.

b	e	a	t
b	o	a	t
b	o	a	r
r	o	a	r
r	o	a	m
r	e	a	m
r	e	a	l
r	e	e	l

t	a	l	l

s	a	c	k

f	a	c	e

b	o	o	k

n	a	m	e

13 Wandering Words (b)

See how many five-letter words you can make by changing one letter at a time in the words below. You may change one letter in the given word, then one letter in the word you made, and so on. All of the letters except the one you change must keep its own place in the new words you make. Use the back of this page if you need more space.

l	e	a	v	e

s	t	a	i	r

c	h	e	s	t

g	u	i	d	e

b	l	a	n	k

n	a	i	l	s

14 Alternate Uses (a)

We can often find uses for things that were originally intended for some other purpose. For example, people sometimes make candle holders from used tin cans. For each of the following objects, list as many interesting and unusual uses as you can. Let your mind wander and try to think of ideas that come to mind, even if they seem silly or impractical. You may change the objects to suit your purposes. Use the back of this page if you need more space.



Brown paper bags

Cut holes in them and paint them to make Halloween masks.

Elves could use them as parachutes.

Wire coat hangers

14 Alternate Uses (b)

See how many interesting and unusual uses you can think of for the following things. Use the back of this page if you need more space.

Empty plastic jugs

Sea shells

Empty thread spools

15 Comparisons (a)

Comparisons help us make our written and spoken language more interesting and colorful. By trying to create several comparisons for a particular situation, we will be stretching our imaginations and developing new ways to look at the world around us.

In this activity, make your comparisons as different and as colorful as you can. After you have completed these sentences, see how many comparisons you thought of that are completely different from the ones developed by your classmates.

The wind was as cold as a polar bear _____.

The soup was as hot as a dragon's breath _____.

When I got into bed, the sheets were as cold as _____

The sun was as hot as _____

The mashed potatoes were as cold as _____

The sand at the beach was as hot as _____

He had a temper that was as hot as _____

The game was duller than _____

Her stories are always as exciting as _____

She rushed into the room as excited as _____

The blade of the old axe was duller than _____

15 Comparisons (b)

Complete the following sentences by writing interesting and colorful comparisons.

The pillow was as soft as _____
_____.

After about an hour, the bench I was sitting on felt as hard as _____
_____.

The baby's skin was softer than _____
_____.

The wood Elena was trying to saw was harder than _____
_____.

The soles on their shoes were worn as thin as _____
_____.

The old dog looked fatter than _____
_____.

After three weeks in the desert, the survivors were as thin as _____
_____.

The lump on that player's head looked fatter than _____
_____.

The runner dashed across home plate as fast as _____
_____.

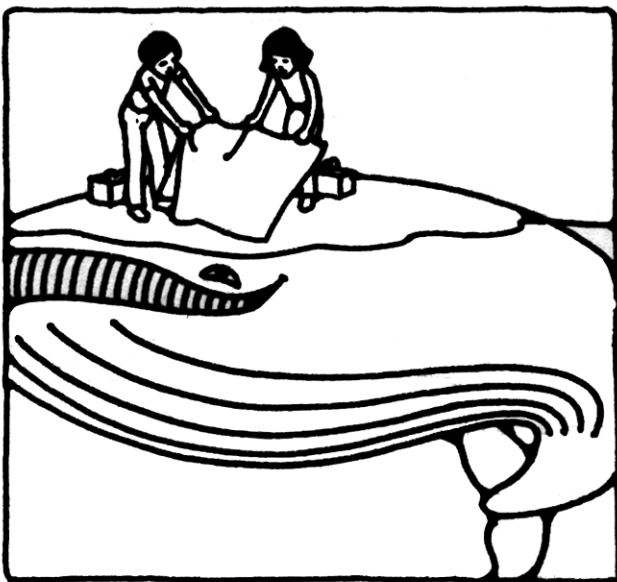
Otis said his turtle was slower than _____
_____.

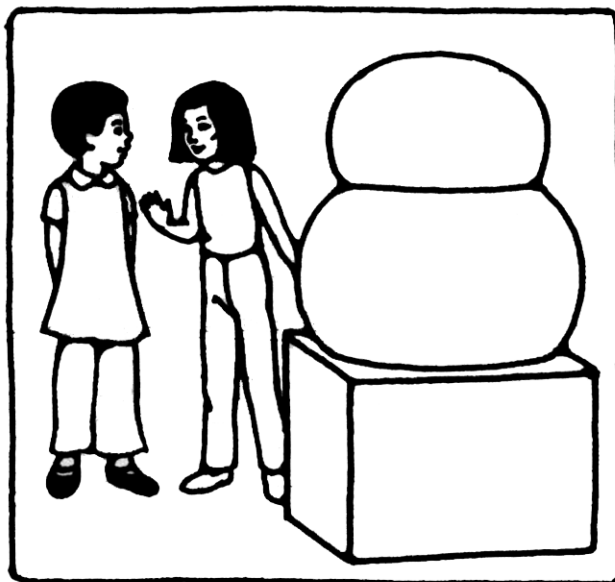
The arrow flew through the air faster than _____
_____.

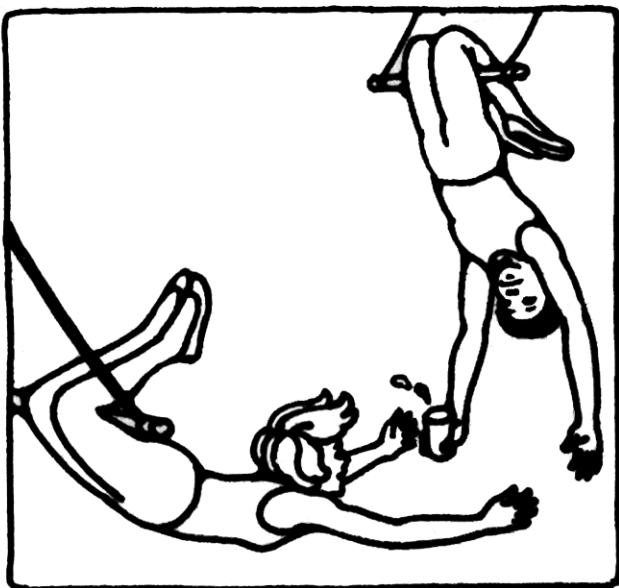
The water trickled from the faucet slower than _____
_____.

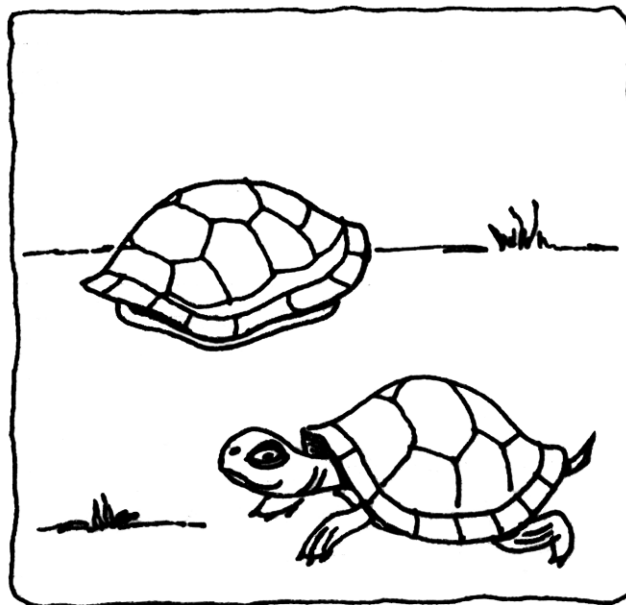
16 Cartoon Captions (a)

For each cartoon on this page, write two captions that will help make the cartoon humorous.



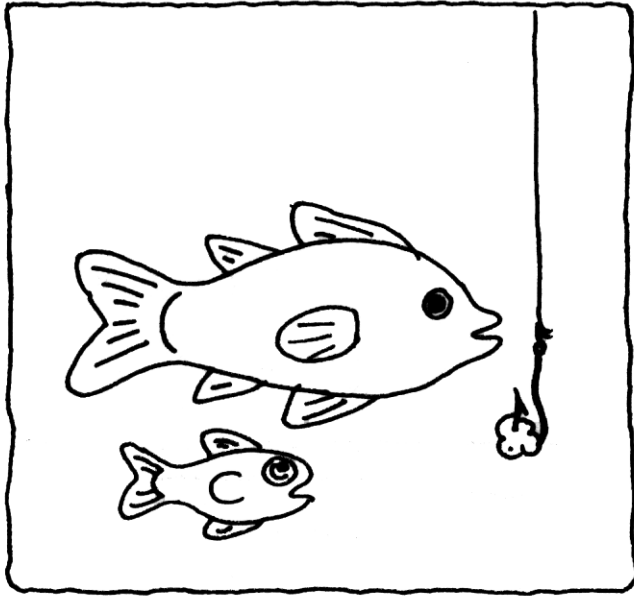


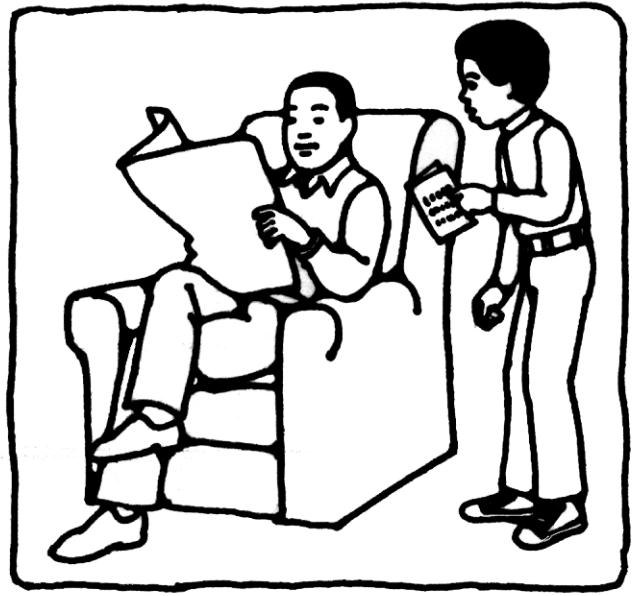


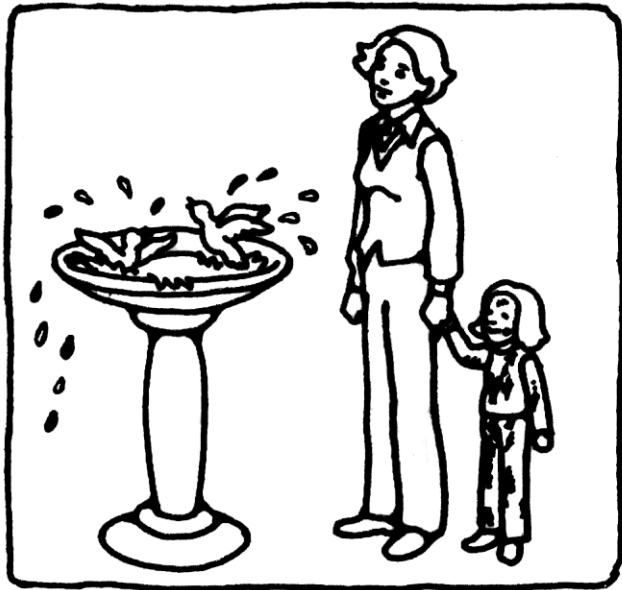


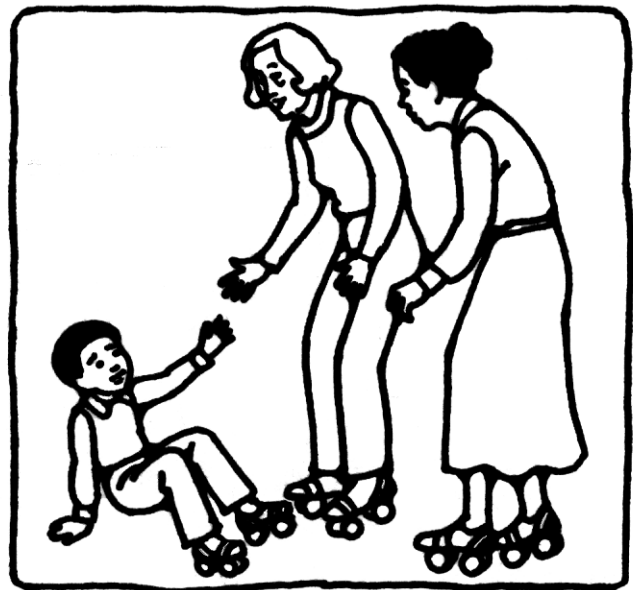
16 Cartoon Captions (b)

For each cartoon on this page, write two captions that will help make the cartoon humorous.









17 Words with Feeling (a)

Good writers try to select words that will help them create the kinds of moods that they want to develop in their stories. You can practice creating moods by thinking of words and phrases that describe each of the situations below. See how many words and phrases you can list that will create each mood. Use the back of this page if you need more space.



A haunted house

creaking door

vampire

A rainy day

A baseball game

A stock-car race

A dog fight

A snowstorm

17 Words with Feeling (b)

Good writers try to select words that will help them create the kinds of moods that they want to develop in their stories. You can practice creating moods by thinking of words and phrases that describe each of the situations below. See how many words and phrases you can list that will create each mood. Use the back of this page if you need more space.

A child who is lost

A hunter stalking a deer

An airport

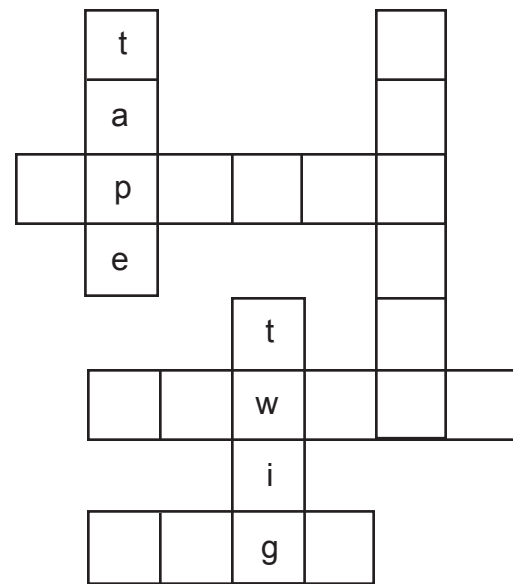
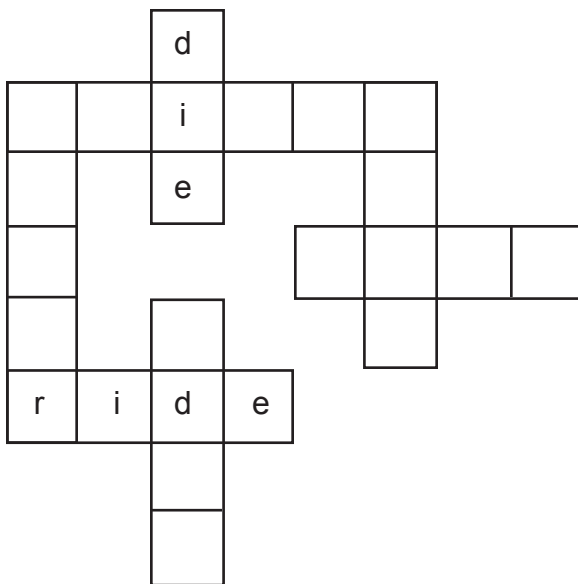
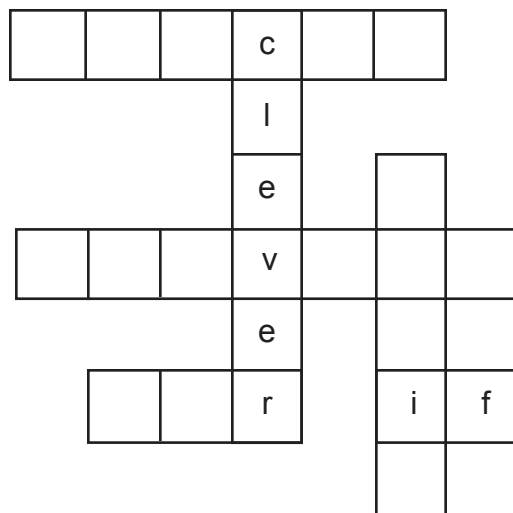
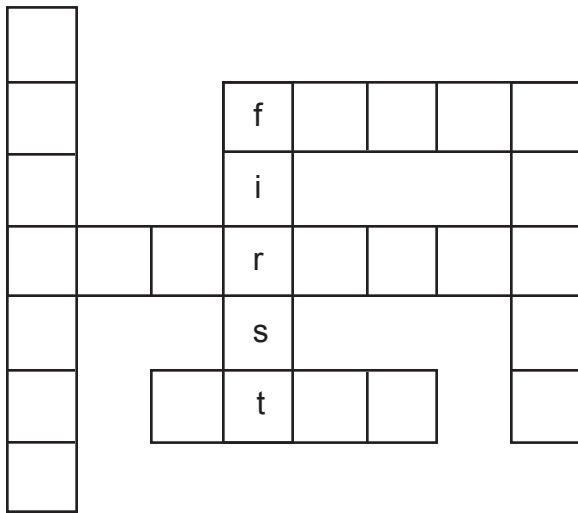
A medieval castle

A circus parade

A symphony orchestra

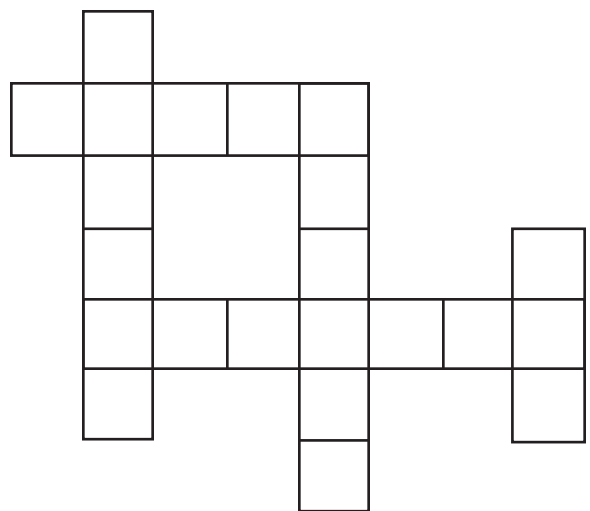
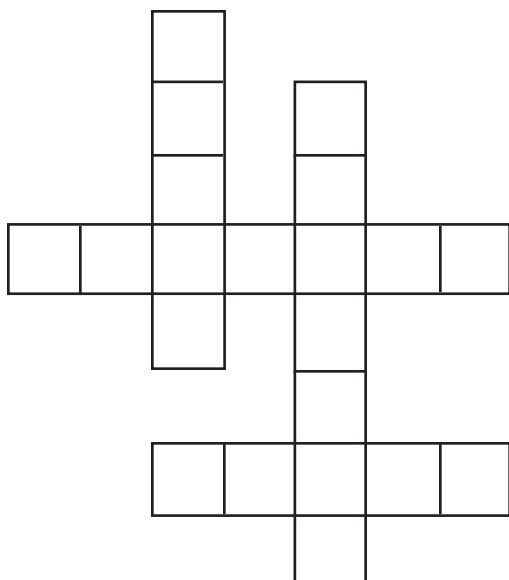
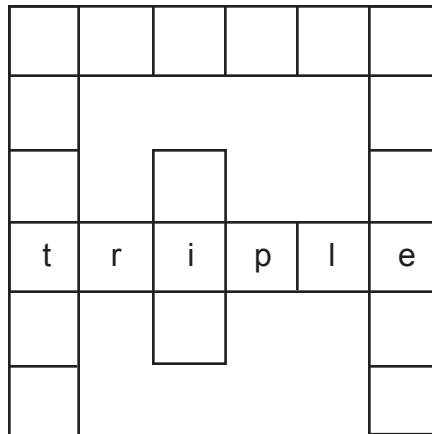
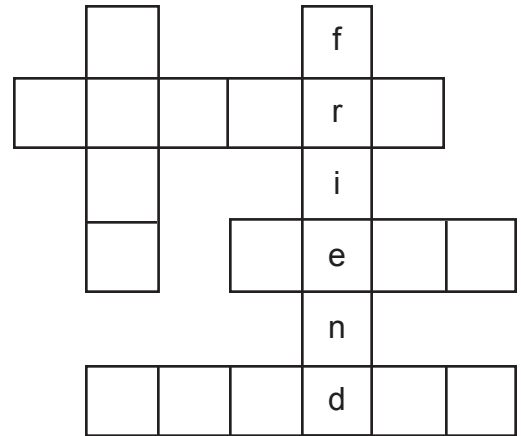
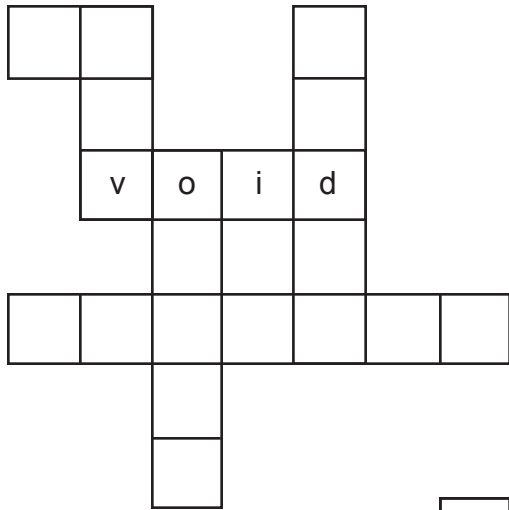
19 Word Boxes (a)

People who write crossword puzzles must think of words that will fit into a certain number of spaces and have certain letters in common with other words. In this activity, try to complete the Word Boxes below by thinking of words that fit in the spaces provided.



19 Word Boxes (b)

Complete the Word Boxes below by thinking of words that fit into the spaces provided.



20 Make-a-Sentence (a)

See how many sentences you can write using the four words listed below in each sentence. You may change the nouns by making them plural and the verbs by changing their tense. You may also change some words by adding suffixes such as *-er*, *-est*, *-ness*. Use the back of this page if you need more space.



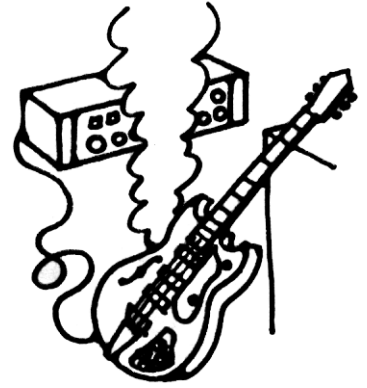
tiger leaves wet number

A number of tigers dashed through the wet leaves.
"The wet tiger is sleeping in Cage Number 5," said the man who was
raking leaves.

puppet tissue how stop

20 Make-a-Sentence (b)

See how many sentences you can write using the four words listed below in each sentence. You may change the nouns by making them plural and the verbs by changing their tense. You may also change some words by adding suffixes.

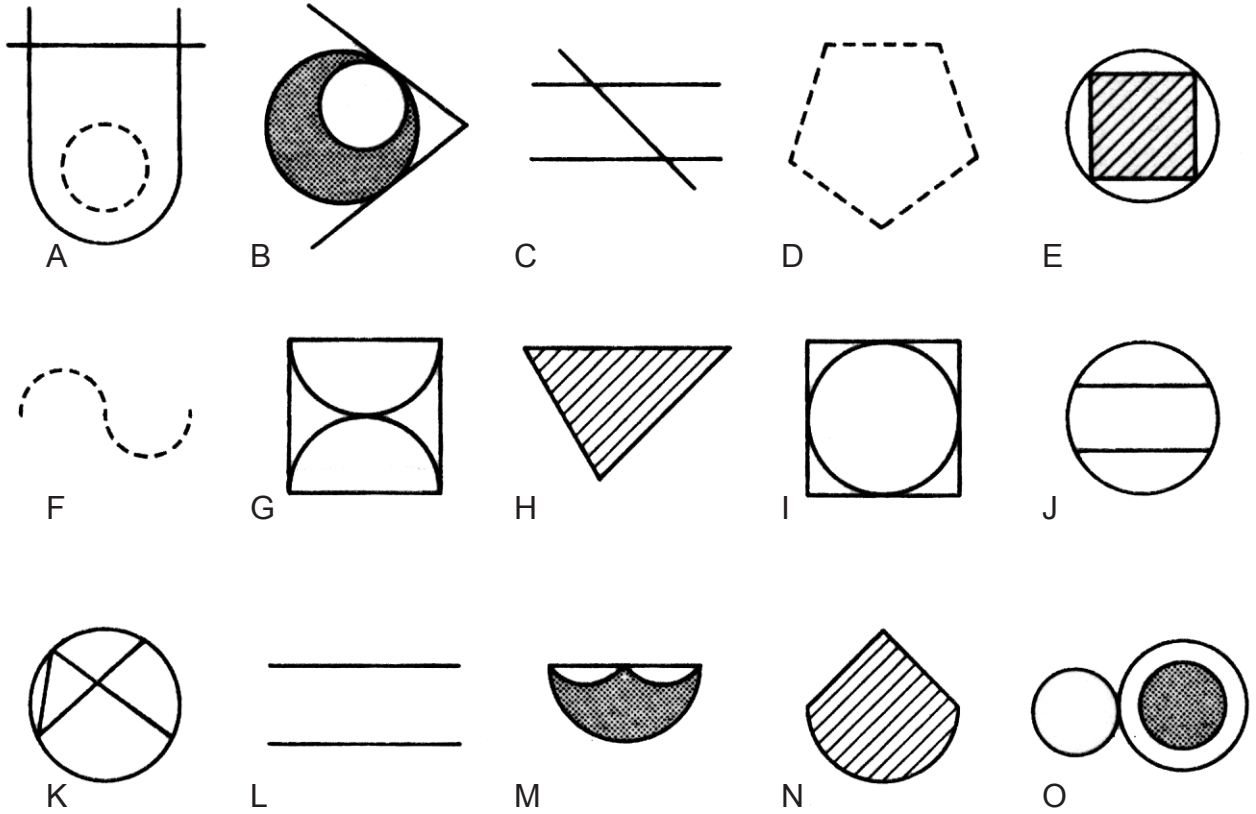


instrument smoke explain busybody

sell teenagers bread statue

22 Figure Families (a)

Study the figures below and see if you can group them together according to characteristics they have in common. You can use each figure as many times as you wish. Some examples of common characteristics are given below.



Common characteristics

Figures

Contain only one circle

A, E, I, J, K

Contain squares

E, G, I

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

22 Figure Families (b)

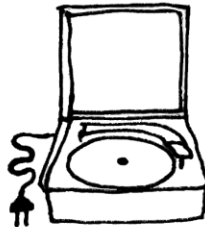
Study the figures below and see if you can group them together according to characteristics they have in common. You can use each figure as many times as you wish. Some examples of common characteristics are given below.



A



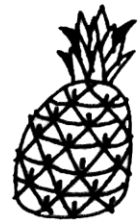
B



C



D



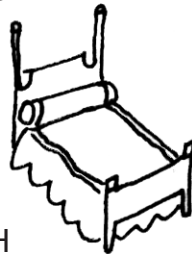
E



F



G



H



I



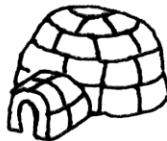
J



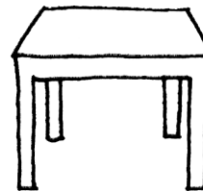
K



L



M



N



O

Common characteristics

Figures

Places where people live

L, M

Things that have legs

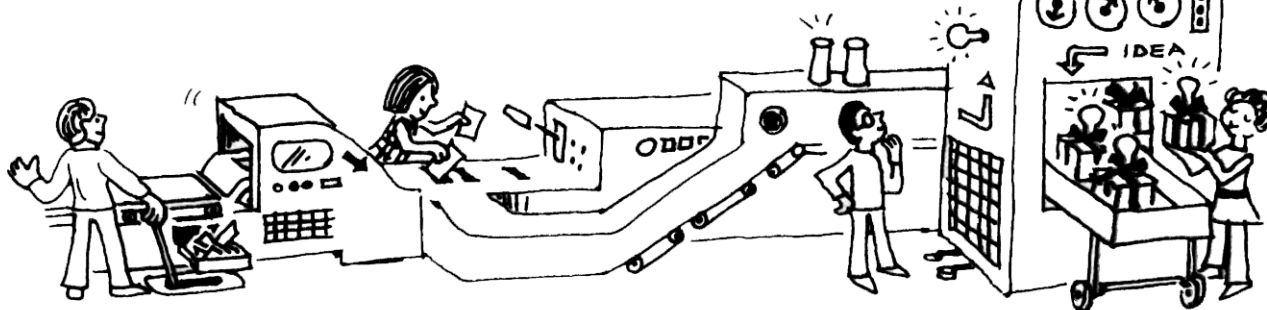
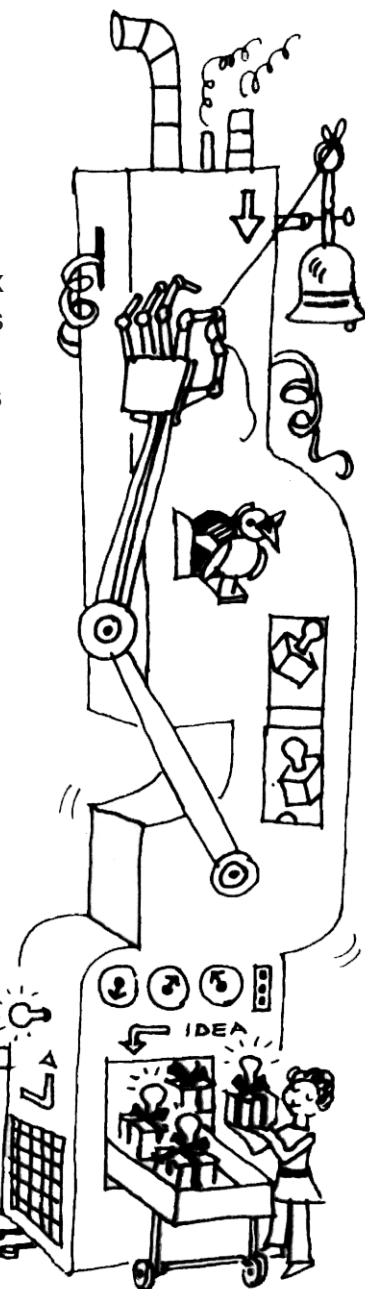
A, B, G, H, I, K, L, N

23 Creative Story Generator (a)

Most stories usually contain three basic ingredients—people, places, and actions. A good way to get some interesting ideas for stories is to use a Creative Story Generator. The first thing you should do to build your own Creative Story Generator is to list six types of people such as explorers, football players, or Indians. Six places should be listed in the second column. Examples of places might be a mountain top, a racetrack, or a kitchen. The third column should contain some of the things that people do, such as swimming, painting, or building a sand castle.

After you have completed the three lists, use a spinner to select one item from each list. For example, if you get a 6 on the first spin, circle the sixth entry in the People column. If you get a 3 on the second spin, circle the third entry in the Places column. If you get a 5 on the third spin, circle the fifth entry in the Actions column. You could also select three items by throwing one die three times.

On a separate piece of paper, write a short story based on the three items you have circled. You can use your Creative Story Generator several times, and you can build a new Generator by making new lists of people, places, and actions.



People

Places

Actions

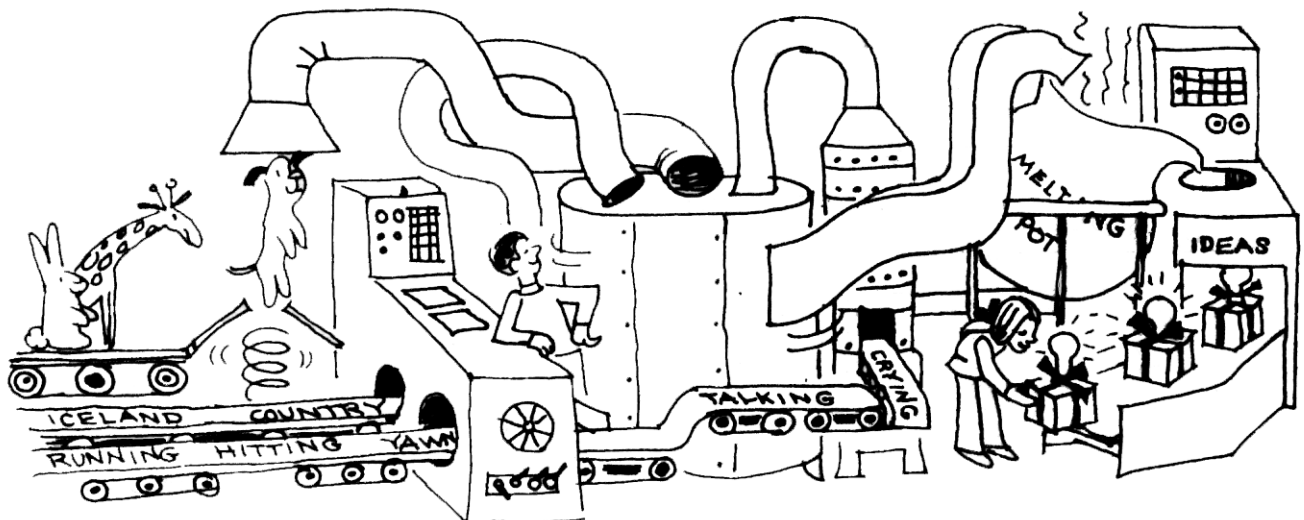
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____

23 Creative Story Generator (b)

This Creative Story Generator will help you write some interesting stories about animals. In the first column below, list six kinds of animals. The list might contain wild animals, household pets, prehistoric animals, or imaginary animals. The second column should contain places, such as a city, a desert, or the inside of a spaceship. The third column should contain actions, such as hunting, bowling, or fixing a flat tire.

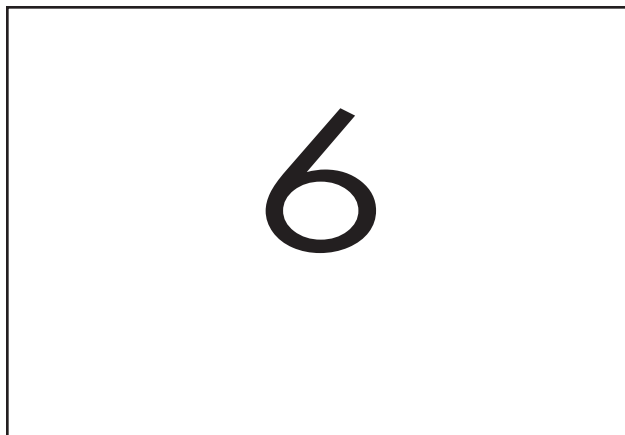
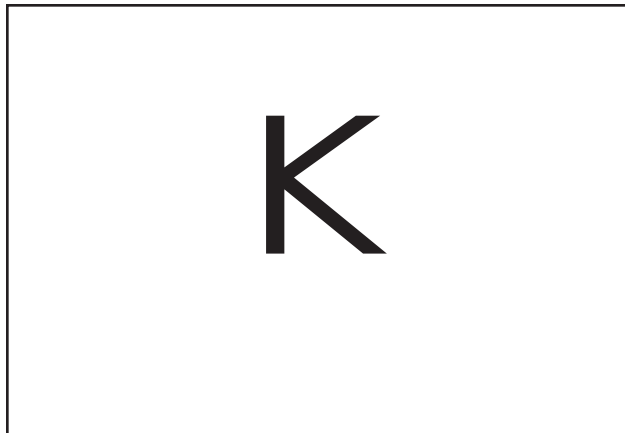
After you have completed the three lists, use a die or a spinner to choose one item from each list. On a separate piece of paper, write a story about the animal that you selected from the first column. Use the place and action you chose from the second and third columns in your story. You can use your Generator several times, and you can build a new Generator by making new lists of animals, places, and actions. Make your stories as interesting as you can.

Animals	Places	Actions
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____



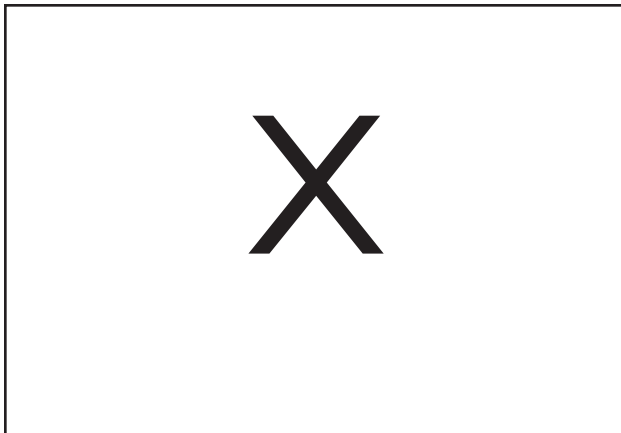
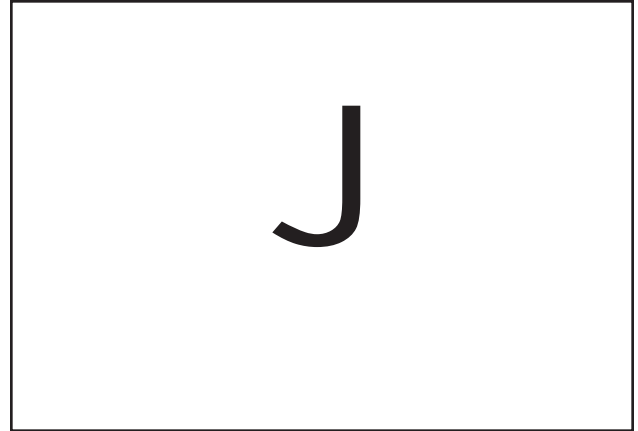
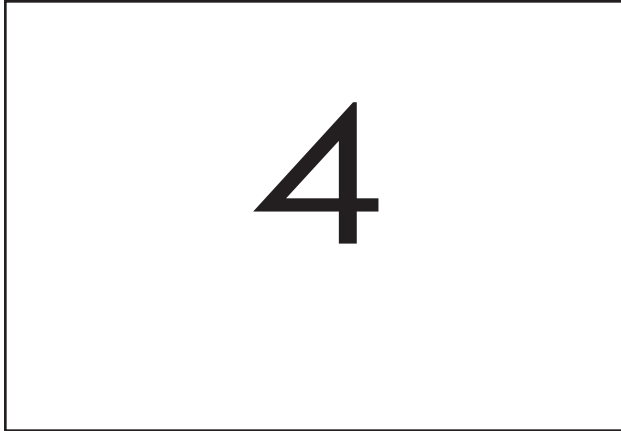
24 Hidden Figures (a)

See if you can build a picture around each of the numbers and letters below so that the figure becomes hidden in your drawing. Try to make the figure blend into your drawings so that it cannot be recognized in its original form. The first drawing is done for you.



24 Hidden Figures (b)

See if you can build a picture around each of the numbers and letters below so that the figure becomes hidden in your drawing. Try to make the figure blend into your drawing so that it cannot be recognized in its original form.



MARK 2: Activity Sheet Record

ACTIVITY	DATE	CLASS REACTION	FOLLOW-UP ACTIVITIES
1 Thinking about Things (a)			
Thinking about Things (b)			
2 Fun with Words (a)			
Fun with Words (b)			
3 What's in a Name? (a)			
What's in a Name? (b)			
4 Fun with Figures (a)			
Fun with Figures (b)			
5 Sentence Skeletons (a)			
Sentence Skeletons (b)			
6 What Would You Call It? (a)			
What Would You Call It? (b)			

MARK 2: Activity Sheet Record

ACTIVITY	DATE	CLASS REACTION	FOLLOW-UP ACTIVITIES
7 Way-out Words (a)			
Way-out Words (b)			
8 The Headline Cutter (a)			
The Headline Cutter (b)			
9 Saying It Nicely (a)			
Saying It Nicely (b)			
10 Say It with Symbols (a)			
Say It with Symbols (b)			
11 Word Trees (a)			
Word Trees (b)			
12 A Message from Planet X(a)			
A Message from Planet X(b)			

MARK 2: Activity Sheet Record

ACTIVITY	DATE	CLASS REACTION	FOLLOW-UP ACTIVITIES
13 Wandering Words (a)			
Wandering Words (b)			
14 Alternate Uses (a)			
Alternate Uses (b)			
15 Comparisons (a)			
Comparisons (b)			
16 Cartoon Captions (a)			
Cartoon Captions (b)			
17 Words with Feeling (a)			
Words with Feeling (b)			
18 Consequences (a)			
Consequences (b)			

MARK 2: Activity Sheet Record

ACTIVITY	DATE	CLASS REACTION	FOLLOW-UP ACTIVITIES
19 Word Boxes (a)			
Word Boxes (b)			
20 Make-a-Sentences (a)			
Make-a-Sentences (b)			
21 Let's Write a News Story(a)			
Let's Write a News Story(b)			
22 Figure Families (a)			
Figure Families (b)			
23 Creative Story Generator(a)			
Creative Story Generator(b)			
24 Hidden Figures (a)			
Hidden Figures (b)			