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TITLE: The Use of "Substitution" As A Creative Thinking Tool

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GRADE LEVEL/SUBJECT: 1-6, creative thinking

OVERVIEW: The following is part of a six week unit designed to teach the seven creative thinking techniques represented by the acronym, "SCAMPER."

SCAMPER provides students with a mini "toolbox" of techniques to use in virtually any situation requiring the production of creative ideas.

The unit begins with a brief discussion of the value of creative thinking. This is followed by a visualization in which students create their own "thinking place." In their thinking place is a box which they open and explore. The first time they open the box they find one piece of red paper with the word, "Substitute," written on it. At that point, they "return" from their thinking place and the substitute lesson (below) begins.

In each succeeding lesson, students return to their thinking place, open their thinking box and find new slips of paper with additional SCAMPER thinking techniques written on them.

The SCAMPER technique used in this unit are:

- S - substitute
- C - combine
- A - associate
- M - magnify/minify
- P - put to other uses
- E - elaborate
- R - rearrange

PURPOSE: The purpose of the unit is for students to realize that creative thinking is a skill that can be learned. It doesn't just happen "magically." Each SCAMPER technique is taught with a "shotgun" approach - that is, students learn to apply each technique in a wide variety of ways rather than concentrate on one activity that exemplifies each technique. The reason for this is to demonstrate that each of the SCAMPER techniques is a multipurpose tool and that the activities used to exemplify each technique are just examples of the endless array of uses for that technique.

Even though the lesson below was designed as part of a total unit it can be used as an independent lesson to teach the specific creative thinking technique of substitution.

OBJECTIVES: As a result of the Substitute lesson, students will:

1. Substitute body movements in a rhythm activity.
2. Substitute words in a familiar song.
3. Substitute words in a sentence.
4. Suggest substitutions for the chocolate center of M&M candies.
5. Generalize from the specific activities presented in this lesson to other applications of the Substitute technique.

RESOURCES/MATERIALS: chart with familiar song written on it - e.g. Old MacDonald, Hush Little Baby, On Top of Old Smoky; M&M candies, at least one for each student

ACTIVITIES AND PROCEDURES:

1. Brief discussion of the meaning of substitution, as used in this lesson - to replace one thing with another, while keeping the basic structure the same - e.g. a substitute teacher replaces the regular teacher, but the structure of the day remains basically the same.
2. Emphasize that substitution, as a creative thinking tool, can be used in an ENDLESS variety of ways.
3. SUBSTITUTING MOTIONS IN A RHYTHM GAME
 - a. Demonstrate the following 4-beat rhythm game - clap hands once, slap both hands on thighs, snap fingers on each hand one time.
 - b. Have students join in, until the whole class is doing rhythm in unison.
 - c. Substitute one motion (e.g. tap head instead of clapping hands) and have students follow along.
 - d. Have students take turns demonstrating ways to substitute other body movements while keeping the rhythm the same. Have the class follow along with each "leader."
4. SUBSTITUTING WORDS IN A SONG
 - a. Show a chart of a familiar song. (e.g. Hush Little Baby)
 - b. Have the students sing the song.
 - c. Identify rhyming pairs of words - bird-word, brass-glass, broke-goat. Ask students to suggest other words for the end of the sentence, "If that mockingbird don't _____ (e.g. fly, talk, run).
 - d. Have them choose a rhyming word to substitute in the next line.
 - e. Have students sing their new version of the song. Continue substituting rhyming pairs in the remaining verses.

5. Write the sentence, "Jim is a big boy." Have students suggest substitutions for the words big and boy.
6. CREATING A NEW CANDY
 - a. Give each student and M&M candy. Have them take a small bite.
 - b. Then have them take another bite, but this time, ask them to imagine they are tasting something else beside the chocolate in the center of the candy shell. List students' chocolate substitutions on the board (e.g. ice cream, marshmallow, orange juice, vitamin, etc.) Encourage wild and wacky responses.
 - c. Have them suggest name for their new candy.
7. Review ways the substitute technique was used in this lesson - create a new rhythm game, new song, more interesting sentence, new candy.

TYING IT ALL TOGETHER: Have student work in pairs or groups of four and brainstorm other ways the Substitution technique might be used to generate new ideas. If they have difficulty thinking of ideas, suggest that they mentally review their day and think of situations in which substitution could be used - e.g. instead of brushing their teeth in the morning, how might they clean their teeth; instead of arguing with their brother or sister, what actions might be substituted; instead of a written book report, what reporting method might be substituted; instead of watching TV when they get home, how might they entertain themselves, etc. Encourage multiple responses to each situation.