

CONCEPT ATTAINMENT MODEL

THINGS THAT FLOAT

Susan Talkmitt, Texas Tech University T-STEM Center/CISER

The concept attainment strategy inspires students to use critical thinking strategies to find critical attributes of a given concept. It seems like a game to students, but it actually requires higher level thinking skills.

Show pictures with words or actual objects to present the concept attainment strategy. (Make images legible from a distance.) Sequence the items in the order provided. Always start with a “yes” example. Follow with a “no” example. The additional examples should be given in random order. Do avoid giving too many “no” examples at one time. They are given to help clarify what the “yes” examples have in common.

Finally, never give the concept name to the students. Pull it from them. Also, have them give “yes” examples to verify they know the concept. If they know you have a method to communicate their understanding of the concept without giving the answer, they can communicate they know the pattern. Do not let them give the answer until you ask for it at the end.

Procedure:

1. Give the examples in the order listed.
2. During the strategy, ask for additional “yes” examples to verify that students are getting the concept.
3. Provide a “twist” to promote higher-level thinking. (Students are lead to think a concept until an example stumps them and causes them to regroup.)
4. Once most students seem to have the concept, ask for critical attributes that describe the concept.
5. List these critical attributes on the board for students to see.
6. Pull for the concept. (If they do not know the name, you can give it; however, if they do know the name, pull for it from the class.)
7. Have students discuss their thinking processes throughout the strategy as they worked to derive the concept. This meta-cognitive step is not just extra; it is important in the critical thinking process.

Examples:

YES

1. Basketball
3. Volleyball
5. Beach ball
6. Tennis ball
9. Balloon
11. Log
14. Sailboat
16. Rubber duck

NO

2. Golf ball
4. Hockey puck
7. Bowling ball
8. Pool billiard
10. Marble
12. Brick
13. Car
15. Anchor



TEXAS TECH UNIVERSITY

CISER: Center for the Integration
of Science Education & Research