

Duncker's candle problem



Module IV



Course 2



T1



L3

Activity

- **Short Description:** Fix the candle to the wall in such a manner that when you light the candle, wax won't drip on the floor
- **Methodology:** Resolve a challenge
- **Duration:** 15 minutes
- **Difficulty (high - medium - low):** medium
- **Individual / Team:** Individual or teams less the 5 participants
- **Classroom / House:** Classroom
- **What do we need to do this activity?**
 - candle
 - Box of stacks
 - Book of matches

Description

To illustrate fixedness in the creative process, we can go through a classic creativity problem called Duncker's Candle Problem.

This is a test in **functional fixedness**, which is the ability to see objects for purposes beyond their intended use.



Exercise: Duncker's Candle Problem



Things needed:

- candle,
- a box of tacks
- book of matches

Goal: fix the candle to the wall in such a manner that when you light the candle, wax won't drip on the floor.

How would you solve this?

Instructions

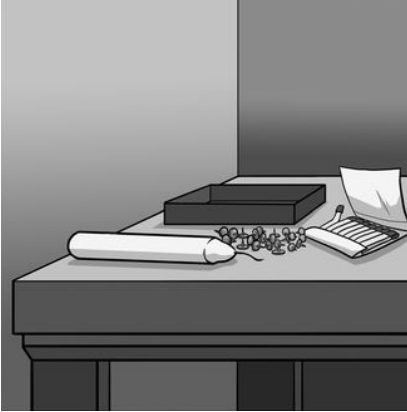
1. Step 1: Prepare materials for the activity
2. Step 2: Give challenge to the students: fix the candle to the wall in such a manner that when you light the candle, wax won't drip on the floor.
3. Step 3: Indicate time to solve the problem. 15 minutes
4. Step 4: Measure for each group the time in solving the exercise and if they have really solved it. Measure the percentage of the students that have solved the problem
5. Step 5: Final panel Discussion

Expected outcomes

The proper solution to Duncker's Candle Problem is to see the box of tacks as a box and tacks, dumping out the tacks, putting the candle in the box and tacking it to the wall.

The creative problem-solving involved in this exercise is to see the box for use beyond its original purpose.





Alternative Use

It is more easy to solve the problem if the components of the problem are shown separately where the box and the tacks are given separately.

As Duncker demonstrated in 1962, the control group with the elements given separately (as shown in the nearby figure) solved the problem faster and almost all the people reached the goal.

It is because, this layout help to think about the box as a component in the solution.

This activity can be used in other (module, course, topic, lesson):

- IV. 2 Creativity / L2: motivation

References:

- The candle Problem, karl Duncker's Experiment. <http://whatismotivation.weebly.com/the-candle-problem.html>

