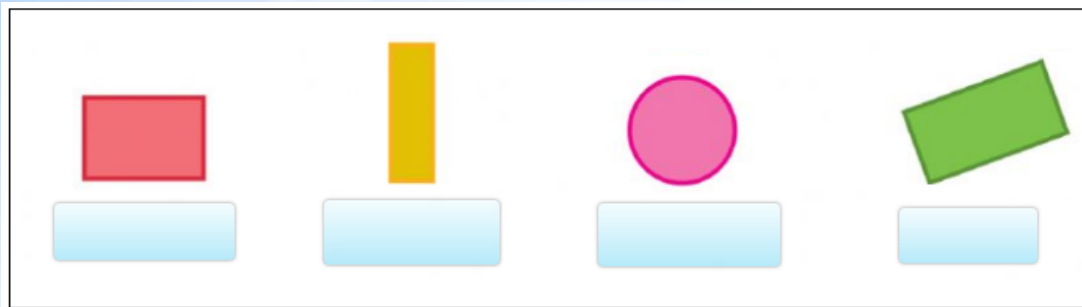




Students' Scaffolding Series PROBLEM SOLVING

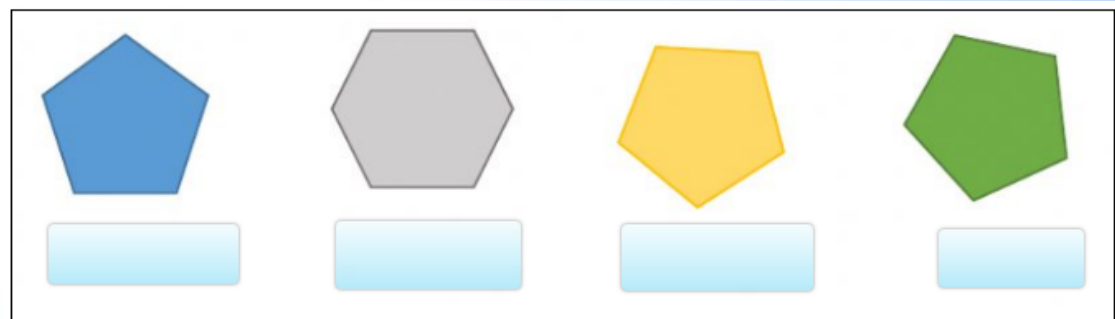
Pre-Session Activity

Look at each group of shapes. Think and draw a cross below the one which does not match with others in the group!



GROUP A

GROUP B



Pre-Session Activity (contd..)

Now make pairs and discuss the points given below:

1. What was the problem?
2. How did you find the 'odd' one in Group A*?
3. How did you find the 'odd' shape in Group B**?
4. Did you follow step-by-step process to 'solve this problem'?
5. Did you think for the same solution in both the cases?

(Hint: * Shape of objects; ** Number of sides in objects)

Learning Outcomes

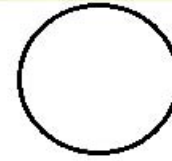
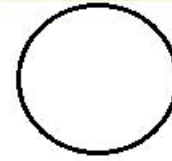
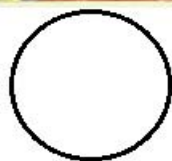
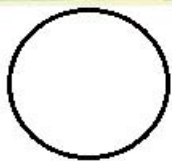
- **Stating a ‘problem’**
- **Steps involved in solving a problem**

Icebreaking Activity



Have you heard of the 'Thirsty Crow' story?
Here are some pictures from the same story. Number them from 1 to 4
in the correct sequence.

THIRSTY CROW प्यासा कौआ



Reflection on the Activity

In this activity, which is the correct problem statement?

- The crow is thirsty and needs water to drink.
- The crow is thirsty and wants to drink water from the container.
- The crow is thirsty and wants to drink water from the container, but the level of water is very low.

Do you think understanding the problem well helps in solving it?

Case Study 1: When Problem is Well-defined!

Here are given three fractions. Arrange them in increasing order.

$$\frac{1}{3}$$

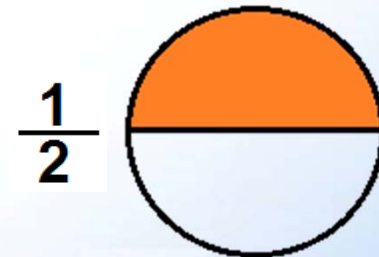
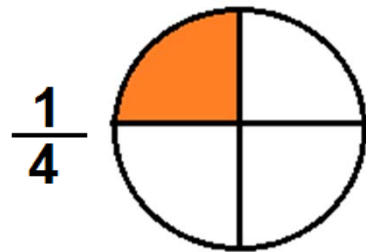
$$\frac{1}{4}$$

$$\frac{1}{2}$$

- *Do you think the problem given above is clear and well-defined?*
- *How will you solve the above problem?*

One of the students thought of an interesting way to solve the said problem. Here it is.

- He drew three circles of same size and divided each as per the given fractions.
- Then he coloured one portion as per the given fractions.
- From visuals, he was clear that which fraction is the largest and which is the smallest.



$$\frac{1}{4} < \frac{1}{3} < \frac{1}{2}$$

Case Study 1: Discussion Forum

- *When the problem is well-defined, it is easy to solve.*
- *Solving a well-defined problem takes less time.*
- *There can be many ways to solve a well-defined problem.*



**a problem well-defined
is a problem half-solved**

John Dewey

Steps involved in Solving a Problem

**1.
Define the
problem.**

**2.
Think of
possible
solutions.**

**3.
Evaluate
and select
solutions.**

**4.
Implement
the solution
and assess.**

Case Study 2: Problem Solving in Real Life!

Kartik's father has been transferred to a new place.

Kartik has been admitted to a new school.

It has been a week since he has been coming to the school.

He is facing a problem that he is not able to adjust in this new school.

Had you been in his place how would you have tried to solve this problem? Write it on a paper.



Case Study 2: Discussion Forum

1. *What is the problem in this case?*
2. *Below are some possible solutions.*
 - (a) Try to find if there is any student who comes to the school from the same locality as you, and start making friend with him.
 - (b) Try to start talking with your desk partner and share your lunch with him.
 - (c) Try to involve yourself in group plays during the recess time.
 - (d) Try to approach the student of your class and start talking about the school and other things in general.

At times, we need to take an initiative in a problem, because others might not be aware of it.

Tasksheet

PROBLEM <i>(Think of any problem you faced)</i>	THOUGHTS <i>(What did you think during that time?, that is, what was going in your mind)</i>	POSSIBLE SOLUTIONS <i>(What possible solutions came to your mind in this problem?)</i>	SOLUTION <i>(what did you do finally?)</i>



Any Questions