



3D printing technology aims students understanding maths and recycling procedure

O2_2nd Curricula of Maths: Sets

## Outline

- Sets
- Basic Concepts
- Activities
- Videos


## To get started: What is a set?

- Question: Is 'the collection of some toys a set?
- Answer: 'The collection of some toys is not a set;


Set is a group of things classify to type, to shape or to color


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## Remember...

In order to define sets, we have to define a criterion

## Basic Concepts...

Imagine you have twenty chairs of four different colour and of two different shape (armchair or chair) in your classroom. How many sets could you arrange from these chairs?

## We have to define a criterion

We could group chairs based either on colour or on shape

Based on colour
We have four different sets according to colours.
Each set contains both chairs or armchairs of the same colour

Based on the shape


We have two different sets; 1 set with chair and 1 set with armchairs


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## ACTIVITY _1

The teacher should provide with 15 balls of different colors and sizes, as follows:
1 white small ball
3 white big balls
2 green small balls
4 green big balls
2 black small balls and
3 black big balls. The students are asked to perform the following tasks:

```
Students Print
\(\checkmark\) Big \& Small Balls
\(\checkmark\) White Big \& Small Balls
\(\checkmark\) Green Big \& Small Balls
\(\checkmark\) Black Big \& Small Balls
```

1. Create the set of all green balls
2. Create the set of all big balls
3. Create the set of all balls that are not green
4. Create the set of all balls that are green and big
5. Create the set of all balls that are white and not big
6. Create the set of all balls that are not white, not green and not black

Teachers with students from 6-10 years old should skip the theoretical part, start with the activity and just present the game of applying a criterion

## ACTIVITY

Let's say that Antonio and Rena, have
2 lemons
2 apples
2 carrots
3 bananas
4 oranges
1 tomato

Classify the objects based on their colour and based on their type

## Students Print

$\checkmark$ lemons
$\checkmark$ apples
$\checkmark$ carrots
$\checkmark$ Bananas
$\checkmark$ Oranges
$\checkmark$ tomatos


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## ACTIVITY

Do numbers $1,7,10,34, \ldots$ consist a set? Justify your answer

Do Numbers $3,6,9,12, \ldots$ consist a set? Justify your answer

## Videos


https://www.youtube.com/watch?v=FGlgtywypcw
https://www.youtube.com/watch?v=9uGpcuL5wGw
https://www.youtube.com/watch?v=Zg5AAxgf9qg


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