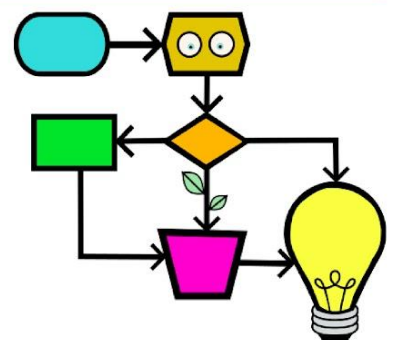
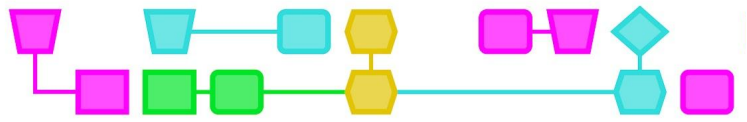


General skills





Introduction

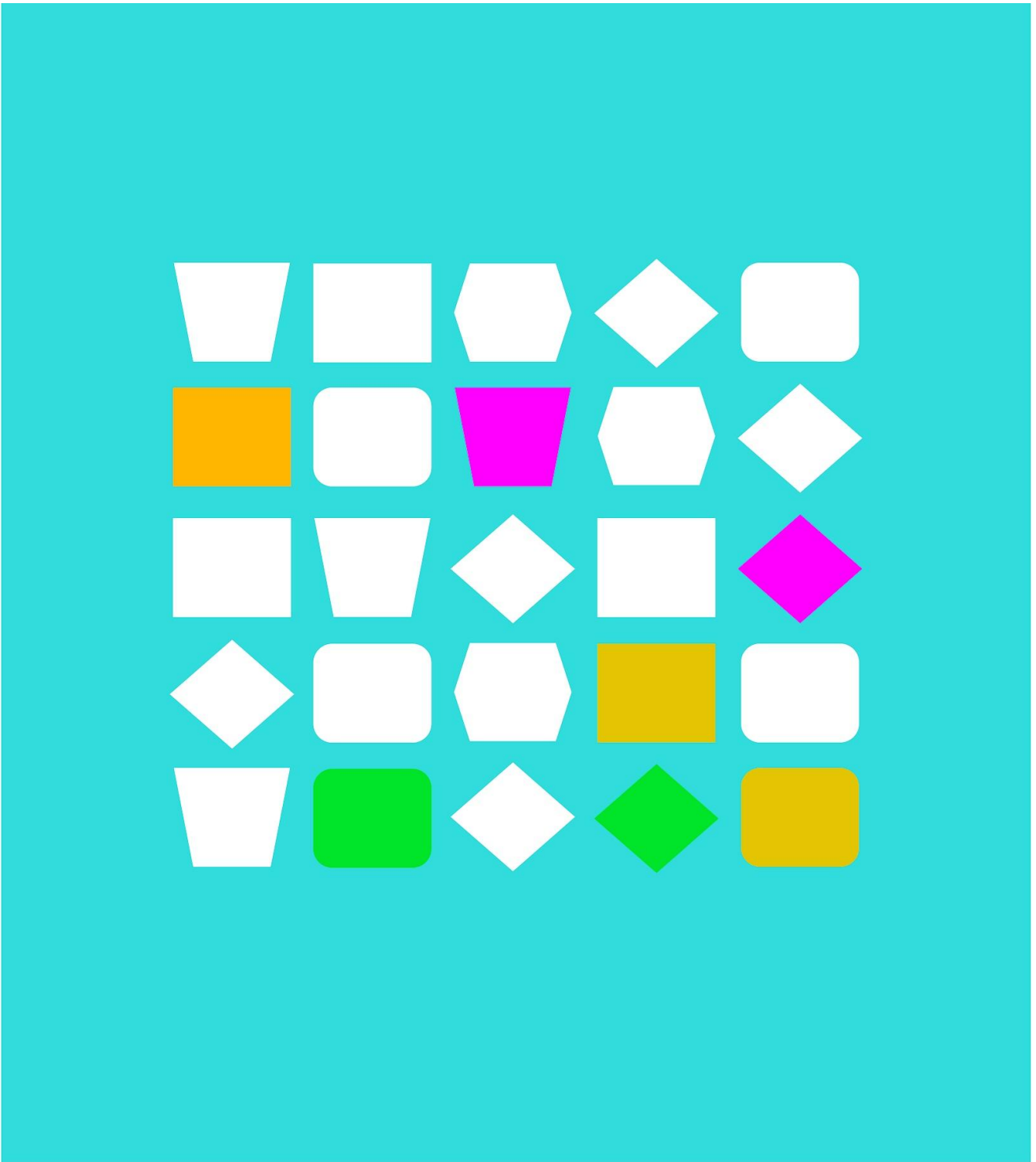
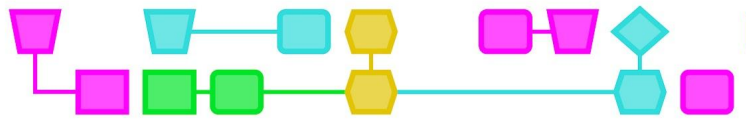
Encouraging children to practice general skills, such as communication, problem solving, and planning, can greatly impact upon their life and help them to effectively deal with any potential issues and problems they might face in their day-to-day lives, both now and in the future.

In activities that promote Computational Thinking, general skills are also developed and required in order to be able to solve problems. It is for this reason that we created 6 offline activities that can help activate these general skills. These can be used either as energizers to start the day or as a way to bring a heavy day to a close. The activities can also be used as a method through which to explain words like creativity and brainstorm, so that they can be more easily used later on in other Computational Thinking lessons.

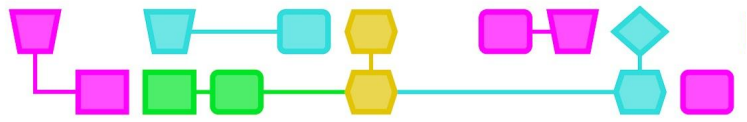
The 6 activities encompass the general skills of teamwork (2), brainstorming (1), creativity (1), and a combination of skills (2).

The following structure containing 9 points of explanation for every activity will be as follows:

1. Title of the activity
2. Summary.
3. Target Audience: Previous knowledge/level the students need to do the activity.
4. Duration: how long it will take to implement this activity.
5. Learning goals: What are the main goals to be achieved by implementing this activity.
6. Particulars:
7. Materials: List of materials needed for this activity.
8. Preparation: Things a teacher needs to prepare in advance in order to facilitate the activity.
9. Description: Description of the activity and the didactic goals of the lesson.



Activities for teamwork



Stack the Cups

Summary: Children must work as a team to pick up the cups without touching them. There must be some distance between the cups and where the stacks have to be made. Each team has to find a way to connect the string and rubber band together into a form that can grasp the scattered cups and stack them in such a way so that there is a bottom row comprising three cups and an upper row made up of 2 cups. The picking-up-the-cup creation has to be managed by both children. Each child must be at one end and work together to pick up the cups and stack them.

Target group: Seven and older. Well-developed fine motor skills, balance

Duration: 15-20 minutes

Learning goals: Students learn to work together as a team and to achieve the goal together.

Online/offline: Offline

Computational thinking:

- General skills: Planning, working together, communication
- CT foundations: Algorithm and Pattern Recognition
- CT-concepts: loops

Particulars: This activity is best done inside, or in a place with little or no wind.

Materials: For each group: 5 non-breakable cups and a rubber band on a string

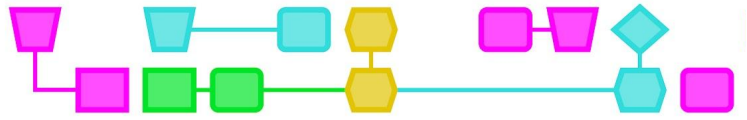
Preparation:

Divide the class into groups of two children. Each group has their own workstation (desk) where they can pick up the cups as well as a desk to build their stack of 5 cups.

Description:

Place five cups for each group on their workstation (desk) after they have made their picking-up-the-cup creation at their table. When the teacher signals to do so, each group then has to pick up one cup and walk together, while keeping the cup tight and then place it on their designated table. The pair who completes this first wins. If a cup drops at any point during the transportation between the tables, then the pair must start again from the beginning.

Start with a stack for younger students and add more rows



Lean walk challenge

Summary: This activity requires students to stand side by side and lean on each other's shoulders pushing against each other's weight and walking beside each other, in order to reach the finish line.

Target audience: 6 and older. Well-developed balance.

Duration: 15-20 minutes.

Learning goals: Students learn to work together and trust each other.

Online/Offline: Offline

Particulars: This activity must take place outside or in a gym hall, because of the space required to walk the necessary distance as pairs.

Materials: With a piece of chalk, draw two lines to mark the start and finishing line.

Preparation: divide the class into 2 groups. Each group must form pairs to part in the shoulder walk.

Description:

Ask the students to form pairs with someone of a similar height to themselves.

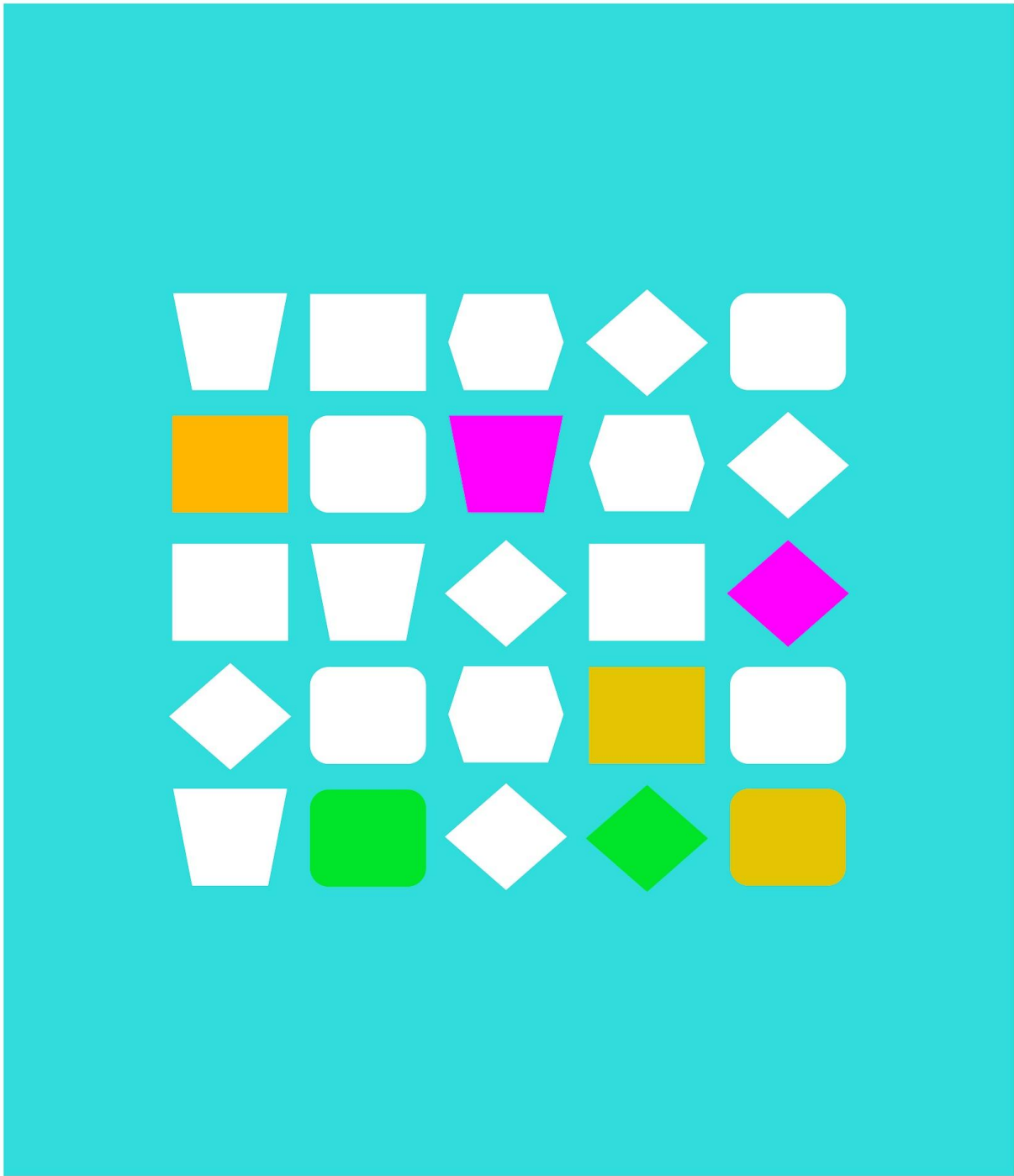
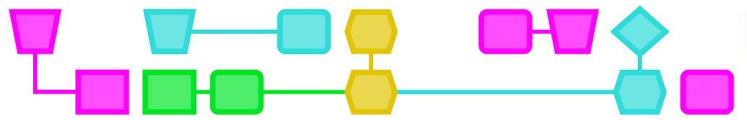
Standing side by side, each child leans sideways towards their partner resting on one another's shoulders.

Ask the pairs to shift their own feet away from their partner as far as they feel comfortable.

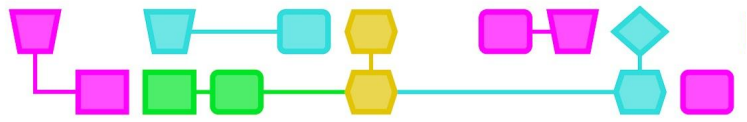
When ready, explain that each pair needs to maintain this leaning stance as they walk together to the finish line.

Each group has the same number of pairs that have to walk and cross the line to win. Once everyone has reached the finish line, they then swap partners and do it again.

This is a game that requires trust, prepare to reassure and guide the students.



Activity for brainstorming



Carrousel

Summary: Write a provocative statement on the whiteboard in the classroom. The students then write down as many solutions as they can think of during a limited period of time. Ultimately, the general idea is to challenge the children to generate as many out of the box, creative and general ideas as possible.

Target audience: 8 and older, reading and writing skills, general knowledge.

Duration: 15-20 minutes.

Learning goals: Students learn to deliberate on a topic, generate and formulate ideas, think quickly on their feet, and to not be afraid to write weird solutions.

Particulars: Best played indoors.

Materials: Five pieces of flip-over paper, 5 different coloured markers, and tape.

Preparation: divide the class into groups of 4 or 5 students. Think and write a few statements.

Possible problem statements (depending on the participants' age):

“Serious statements”

1. Global warming is alarming
2. Too much plastic in the sea kills fishes
3. Junk food produces obese children

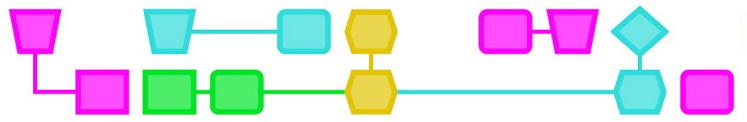
“Cheerful statements”

1. What would we need to create a more fun/active school playground?
2. How can we combat loneliness amongst elderly people?
3. How could we make a school day more fun?

Description of the activity

Write five “problem statements” on five different pieces of flip-over paper and then stick these to the walls in the classroom in a circular manner.

Divide the students into groups of 4 or 5 students. Each group gets a designated piece of flip-over paper to start. Each group gets a different coloured marker to write down their solution. Set the timer at 40 seconds. Each group must read the problem statement and write down as many solutions as they can think of in the allotted time. When the timer goes off, they then switch in a carousel movement to the next piece of flip-over paper. When all the groups have written on each piece of flip-over paper, then the whole group walks around the carousel and evaluates the different solutions that there proposed.



Doodle art

Summary: Beginning with a black or dark blue marker, each child must doodle on the white piece of paper drawing lines, curves, etc. They cannot colour in. After they have filled the paper with lines, the child must then colour the white spots carefully in an effort to discover/create a known or creative object that might appear as a result of colouring the spots.

Target audience: 6 and older

Duration: 15-20 minutes.

Learning goals: Students learn to express their creativity and concentrate.

Particulars: Indoors at a desk.

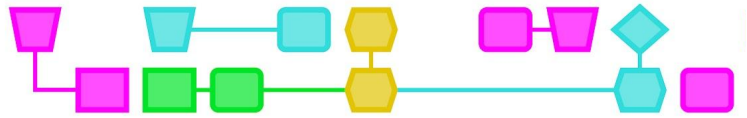
Materials: White A4 paper for each student, black or dark blue markers, fine line colouring pencils or washable fine line markers (for children).

Preparation: Each student gets a piece of A4 white paper, with a black or dark blue marker and a pack of fine line colouring pencils or washable markers.

Description

Beginning with the black or dark blue marker, each student doodles on the white paper drawing lines, curves, etc. They do not colour. After filling in the paper with lines, the student then colours the white spots carefully in an effort to discover/create a known or creative object that might appear as a result of colouring the spots.

When doodling encourage students to leave small spots for coloring!



What is the storyline???

Summary: The students get 3 minutes to start to write a story of which they only know the title. After the three minutes is up, the story is then passed onto another student who then writes further. Together, the students make a full story.

Target audience: 8 and older.

Duration: 15-20 minutes.

Learning goals: Students learn creative thinking and how to formulate sentences.

Particulars: indoors or outdoors.

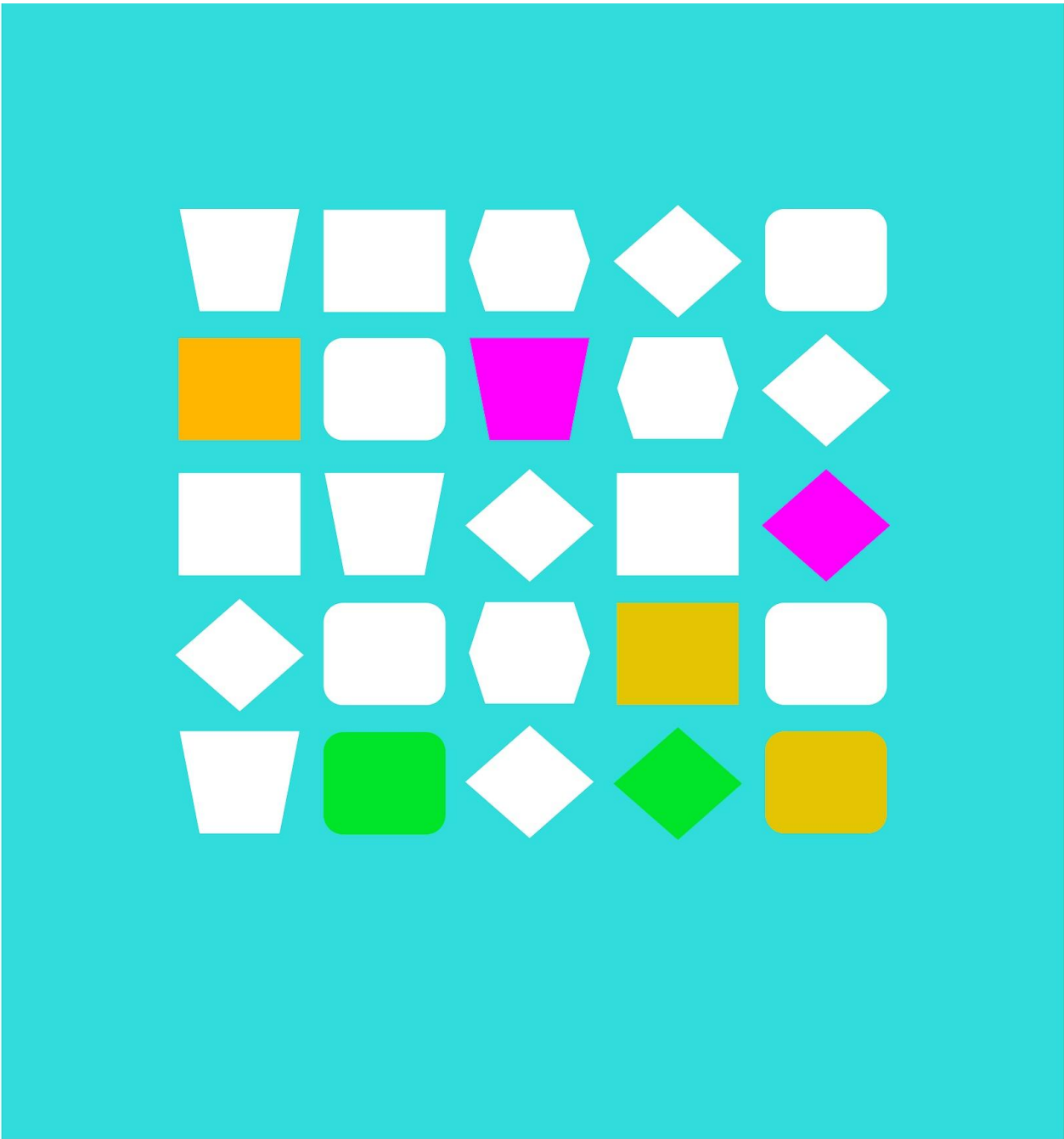
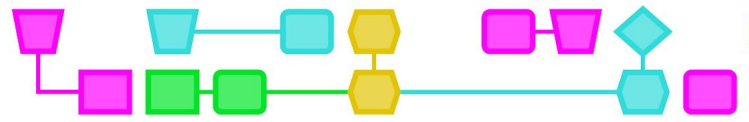
Materials: Big sheets of white paper, pencils, and a timer.

Preparation: Hang five large pieces of white paper on the walls and divide the class into groups of 6 students. Each group then forms a half-circle in front of their own sheet of white paper. Each student receives a pencil.

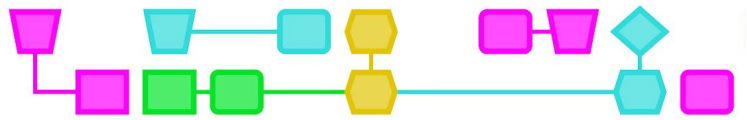
Description of the activity:

Write titles on the white sheets of paper to set the tone for the story. You can either choose the same title for every group or give a different title for each group. Example of titles include: "The crazy bird" or "A beautiful garden."

Set the timer for 3 minutes. The students start to write a piece of the story. Each student can write only two words to add to the story. Each and every student will then add two words to the story until the timer goes off. It is very important that the words form a sentence that makes sense. They can decide how long a sentence should be and where to end and begin a new one. When the timer goes off, the first student that started the story in each group then gets to read out loud what the storyline is!



Activities for multiple skills



Build or create a helping hand

Summary: In groups, students plan and build together a helping hand to grab or pick something up.

Target audience: 7 and older.

Duration: 30 minutes.

Learning goals: explore, design, and create.

Online/offline: Offline activity.

General skills:

- Teamwork: Communication, planning, and working.

Materials: cardboard, straw, fine rope, glue, strings, rings, and bottles.

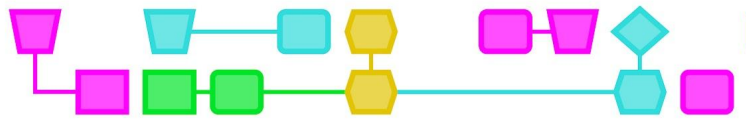
Preparation: classroom has to be divided into groups of 5 children.

Description

In groups, the students plan and build together a helping hand to do a task: a helping tool to grab or pick something up.

Show the students an example of a helping hand and show them the materials they can use. Give the students 20 minutes to work on this activity.

Tip: make an example of a helping hand inspire the students



A car driven by air force

Summary: Each group of students must build a car out of the available materials that must be propelled forward by air force. The car must ride/drive as a result of the force from the air in the balloon, rather than being pushed or pulled by hand.

Target audience: 8 and older.

Duration: one session of 45 minutes.

Learning goals: students learn to explore, design, create and experiment with air force.

General skills: Teamwork: Teamwork Communication, planning, working together, and creating/building.

Materials: recycled popsicle sticks, old DVDs, cardboard, toothpicks, string/rope, glue, ropes, balloons, plastic bags, motors, and wire strings

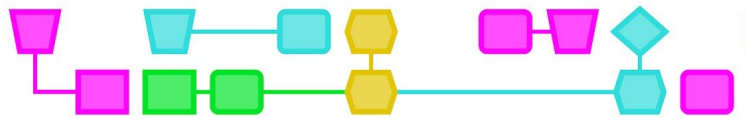
Preparation: classroom has to be divided into groups of 5 children.

Description of the activity: Each group of students builds a car out of the available materials that must be propelled by air force. The car must ride/drive as a result of the force from the air in the balloon, rather than being pushed or pulled by hand.

Prepare a racetrack, which marks out both the starting and finish line. The main goal is for the car to be pushed until it crosses over the line. The teacher decides the distance between the starting and finish line.

Show the students an example of an air force driven car as well as the materials they can use. The students are free to use every available material. Give the students 40 minutes to develop their car.

Tip: make an example of a car inspire the students



Colophon

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