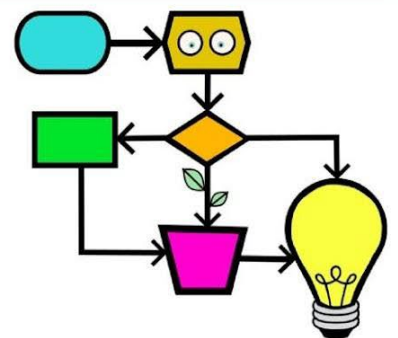
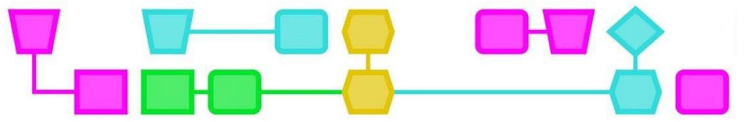


Teacher Training





Teacher Training

Targetgroup: Teachers and educators who want to start with CT and don't have much experience with it.

Duration: ± 3 hours

Learning goals:

- Learn and experience the basics of CT.
- Understand that programming and CT are not synonyms.
- Have an idea on how to start with CT in the classroom.

Program:

- Introduction (20 min)
 - Ice breaker activity (10 min)
 - Intro to CT (10 min)
- The four CT-foundations (50 minutes)
- BREAK
- Roadmap (20 min)
- Training in two activities (60 min)
- Conclusion (5-10 min)

Training structure

Introduction - Ice breaker activity (10 min)

Start the training with one of the General skills activities about creativity or cooperation. Explain at the end of the activity:

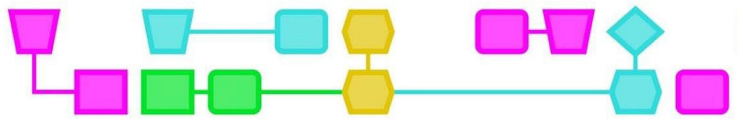
- They worked on a general skill. General skills are used and developed during CT-activities.
- We will talk a little bit more about this later in the training.

Tip: If the group of teachers don't know each other; start with a introductory game like two truth

Introduction - Intro to CT (10 min)

Make a word cloud with the participants about CT; write Computational Thinking on a whiteboard/flip over and let the participants write down what they think of when they think about CT. Take a minute to reflect on the words on the board. Tell them that you will revisit the word cloud at the end of the training.

Explain that simply put, CT is learning how to get a computer to solve a problem for you. It's not just programming, but also, for example, learning how to break down a problem into pieces, or recognizing patterns so you can better solve a problem.



There are four main foundations of CT:

- Decomposition → dividing a problem into small pieces.
- Pattern recognition → looking for similarities or patterns within those small pieces that can help you solve the problem.
- Abstraction → distinguishing the main and secondary issues. What is really important to solve the problem?
- Algorithms → coming up with step-by-step instructions to solve the problem.

Explain that the goal of the training is that everybody has a good understanding of CT and how to use it in the classroom.

Decomposition Take ideas and problems apart	Pattern recognition Look for similarities or trends
Abstraction Removing unnecessary information	Algorithms Create step by step instructions

The four CT-foundations (50 minutes)

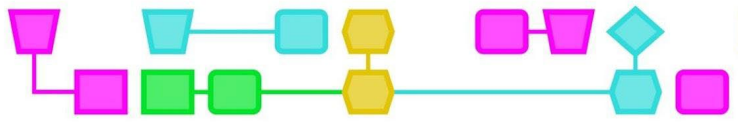
Do the four introductory activities with the participants.

BREAK

Roadmap (20 min)

Hand out the roadmap and explain what the document is about:

- Recap on CT, explain the four foundations of CT based on the activities they just did.
- Show the roadmap schedule and explain why CT is valuable and how it can be used and integrated in schools.
- Show the schedule including the activities and explain:
 This roadmap offers a step-by-step introduction to CT, which gradually builds up the difficulty level:
 - The basis of CT lies in being comfortable with general skills. We have provided a few examples that you can work with in your daily lessons.
 - On top of the general skills, it is important that you become acquainted with the foundations of CT.
 - Once you have mastered both the general skills and foundations of CT, it is time to work on the programming skills. We have provided six creative activities to work on these programming skills, which provide a more creative approach to using CT within your lessons and activities.



Colofon

CTPrimED

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