# People programming

*Please refer to the online lesson plan on the DT Hub to access all website links and additional resources.*

Year Level: F–2 Play a variation of the game ‘Simon Says’ to develop understanding of sequencing and instructions in programming.



PA Images/Alamy Stock Photo

Photograph of a large group of young students with their hands on their heads.

# Suggested steps

1. As a whole class, students work collaboratively to direct a classmate to a specific location in the classroom, eg teacher’s desk, bookshelf, reading corner.
* Teacher records the instructions, eg 'Move forward 6 steps'.
* Teacher assists students to measure the time taken to reach the destination.
1. Working in groups of three, students continue the activity, taking turns giving and following instructions and measuring the time taken to arrive at specific destinations.
2. Provide students with more challenging tasks where pairs of students work together to give and follow instructions, eg blindfolded students are directed to move to a set location within a time limit; students program a robotic toy to arrive at a location within a set time limit.
3. Provide students with printed programming cards with forward/backward arrows and turning left/right arrows. (see link to programming sheet online)

# Discussion

* Discuss why it is necessary to be specific when giving instructions, and explain the importance of order in programming.
* Invite students to suggest why some sets of instructions were more useful than others, leading to a successful outcome, eg instead of saying ‘Move forward’, a more specific instruction would be to say, ‘Move forward five steps’. Instead of saying ‘Turn’, a more specific instruction might be ‘Turn to the left’.

# Why is this relevant?

At the Early Years stage, students develop the skills of computational thinking and algorithm development when they become increasingly familiar with the language and concepts associated with giving and receiving instructions.

This activity promotes these skills, as students familiarise themselves with concepts such as sequence and order. When exploring instructions, students should be given opportunities to engage in fun and relevant activities where they learn the importance of providing specific and precise instructions. This will lead them to understand the importance of specific and precise instructions to the programming of computers and robots.

# Assessment

## Teacher assessment

Observe students as they provide verbal instructions to their peers. Success criteria could include the following observations.

* There was effective and appropriate use of directional language (Excellent, satisfactory, unsatisfactory).
* Instructions were clear and specific.
* Instructions were in the correct sequence.
* Instructions led to a successful outcome.
* The student completed set tasks with confidence.
* The student interacted positively with peers.

# Australian Curriculum Alignment

## Technologies – Digital Technologies

Processes and Production Skills:

* Follow and describe algorithms involving a sequence of steps, branching (decisions) and iteration (repetition) (AC9TDI2P02)

## English

Literacy: Interacting with others:

* Interact in informal and structured situations by listening while others speak and using features of voice including volume levels (AC9EFLY02 )
* Use interaction skills when engaging with topics, actively listening to others, receiving instructions and extending own ideas, speaking appropriately, expressing and responding to opinions, making statements, and giving instructions (AC9E2LY02 )