

Session 2 - Making Roamer Move Forward

Activities for Class or Group (in a large circle)

ICT – To understand common language. To develop skills in controlling and modelling.

Key idea- that Roamer can be moved by pressing keys/giving instructions

Numeracy - To develop skills in estimating distance. To understand what unit is being used for measurement and to be able to visualise that unit.

Resources: Roamer with a face drawn on it to help children realise which way it will move when going forward.

Chalk and masking tape to mark the floor.

Cards made from Roamer key Symbols          downloaded from: <http://www.valiant-technology.com/freebies/free8.htm> and used to record the sequence of instructions that the children are learning to carry out.

★ shared copies of the control panel downloaded from this site would be helpful so that the children can more easily look for/see the keys you are referring to.

Introduction Tell the children that today they are going to find out how to make Roamer move forward in a straight line. Can anybody guess what to do?

Do they remember how to turn Roamer on? To clear memory? Can they see a key that they think might make Roamer move forward? What does it look like? ★

Some children will be able to transfer what they have previously learned to the new task and suggest keys to press. Invite children to make and try suggestions before showing them the  forward key.

NB. Train the children to always stand behind Roamer so that they are looking at the keys the right way up. This is important as it will help them when they have to decide which direction Roamer has to go in.

Learning to move forward

Invite a child to turn Roamer on. Ask them what they should remember to do next (CM x 2) and choose a different child to clear memory.

Record this sequence (on the easel, using the downloaded Roamer key symbol cards) as you go along so that the children get the idea of using sequences of symbols to record instructions. Some children will notice what you are doing but there is no need to explain this to the children yet - unless they ask.

Ask a third child to press the forward key. What happened? The children might remember that they need to press GO, let them try. What happened?

Explain that Roamer can only move if it is given all the instructions it needs. The forward key tells Roamer **which way** it has to go but Roamer doesn't know **how far** so they have to tell it how far they want it to go.

Giving the right instructions so that Roamer understands

Tell the children that they have to tell Roamer how far to go. Ask for suggestions. What would you say to Roamer? They will of course use normal language. Model one of their ideas by speaking the child's words to Roamer. What happened? Did Roamer understand? Explain to the children that Roamer can't hear us; it only understands its own special language. If we want it to do something the only way we can tell it what to do is by pressing the keys on the control panel. If we press the wrong keys or miss some out Roamer won't know what to do.

 Can they guess which keys they could use to tell Roamer how far to go? If not point out the number keys.

Roamer steps - Tell the children that Roamer moves in steps (Roamer units). Ask a child to demonstrate moving forward one (child) step. Do they think Roamer's steps will be as big or smaller/longer or shorter? Tell the children they need to know how big/long Roamer's steps are so that they can work out how far they want it to go forward.

One Roamer Step or unit

Tell the children that they are going to find out how far Roamer moves when it is told to go forward one step. Demonstrate one Roamer step by drawing round Roamer on the floor. Invite a child to continue the sequence of instructions by pressing the forward key followed by number one. Ask another child to press GO.

When Roamer has completed its move leave Roamer in place so that they can see that 1 step equals the length of 1 Roamer. Then...

Move Roamer to a new area of carpet but next to the circle. Mark the carpet at the back of Roamer with tape and talk a child through the pressing of the correct keys to move Roamer forward one step. (see below) When Roamer has stopped moving mark the back of Roamer with tape. Remove Roamer and show the children that the 'steps' are the same length - that Roamer has moved one Roamer length.

Repeat this second activity (starting in different places on the carpet) by asking different children to place a mark where they think the back of Roamer will be when it stops. Once the children begin to understand this they can move onto the next step.

Estimating how far

Mark the floor at the back of Roamer and ask the children how far they think Roamer will have moved after it has moved 2 steps. Invite a child to put a mark where they think the back of Roamer will be when it stops. Repeat using other numbers.

Sequencing instructions

Explain to the children that they have made Roamer move forward by giving it a sequence of instructions. Show them the sequence (of Roamer key symbol cards) made during the lesson and relate these to what they were doing to make Roamer move.

Point to each symbol and 'read' the instructions with the children as a chant.

     (clear memory/clear memory - forward - one - go)

Remind them that those instructions made Roamer move forward one step. How could they make Roamer move forward two steps? Ask them to look carefully at the sequence of instructions and ask what would they change? Prompt until they realise that they would have to change the number but everything else stays the same.

If time allows

Choose different children to change the number and program Roamer to move in a straight line.

 Make sure that the children have realised that in order for Roamer to respond they need to give it instructions by pressing keys on the control panel and are beginning to realise that the correct keys need to be pressed in the correct sequence.